



2026 ANNUAL REPORT

July 1, 2025 - June 30, 2026

**General VPDES Permit for Small Municipal
Separate Storm Sewer Systems No. VAR040057**

**General VPDES Permit for
Small Municipal Separate Storm Sewer Systems
Permit No. VAR040057
Year 3 Annual Report
July 1, 2025 – June 30, 2026**

In compliance with the “General VPDES Permit for Discharges of Stormwater from
Small Municipal Separate
Storm Sewer Systems” VAR040057

City of Alexandria, Virginia



Submitted by
City of Alexandria
Department of Transportation and Environmental Services
1800 Limerick Street, Alexandria, VA 22314

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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."



Division Chief, Stormwater
Management, Transportation
and Environmental Services

9/30/2026

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Name

Title

Date

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**General VPDES Permit for
Small Municipal Separate Storm Sewer Systems
Permit No. VAR040057**

Year 3 Annual Report
July 1, 2025 – June 30, 2026
City of Alexandria, Virginia

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ACRONYMS

AWL – Animal Welfare League
BMP – Best Management Practice
C&I – Construction and Inspection
CSS – Combined Sewer System
CRM – Customer Relations Management
DEQ – Virginia Department of Environmental Quality
E&SC – Erosion and Sediment Control
EIU – Environmental Industrial Unit
EMO – Environmental Management Ordinance
EPC – Environmental Policy Commission
GI – Green Infrastructure
HOA – Home Owners Association
LID – Low Impact Development
MCM – Minimum Control Measure
MS4 – Municipal Separate Storm Sewer System
NMP – Nutrient Management Plans
NVRC – Northern Virginia Regional Commission
OEQ – Office of Environmental Quality
PCB – polychlorinated biphenyls
PSA – Public Service Announcement
PY – Permit Year
RPCA – Department of Recreation, Parks and Cultural Activities
SEAS – School Environmental Action Showcase
SWCB – State Water Control Board
SWM – Stormwater Management Division
SWPPP – Stormwater Pollution Prevention Plan
SWWG – Stormwater Work Group
T&ES – Department of Transportation and Environmental Services
TMDL – Total Maximum Daily Load
VCA – Veterinary Centers of America
VESCL – Virginia Erosion and Sediment Control Law
VESCR – Virginia Erosion and Sediment Control Regulations
VESMP – Virginia Erosion and Stormwater Management Program
VPDES – Virginia Pollutant Discharge Elimination System
VSMP – Virginia Stormwater Management Program

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1 Introduction

This 2025 – 2026 MS4 Annual Report is prepared by the City of Alexandria (City) Department of Transportation and Environmental Services (T&ES) in accordance with the requirements of the General VPDES (Virginia Pollutant Discharge Elimination System) Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (9VAC25-890-40 *et seq.*). The City was originally issued General Permit VAR040057 on July 8, 2003, under the program. DEQ reissued the current five-year permit effective November 1, 2023.

Under the terms of the General Permit, the City has developed a Municipal Separate Storm Sewer System (MS4) Program Plan to implement six minimum control measures aimed at reducing the discharge of pollutants to the “maximum extent practicable.” Minimum control measures are:

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illegal Discharge Detection and Elimination
4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management for New Development and Development on Prior Developed Lands
6. Pollution Prevention and Good Housekeeping for Facilities Owned or Operated by the Permittee within the MS4 Service Area

The General Permit requires that the City submit annual reports no later than October 1st covering the reporting period of the preceding July 1st through June 30th. This annual report covers the period of July 1, 2025, through June 30, 2026. The 2023-2028 General Permit outlines the requirements for the annual report in Part I E and Part II B. As indicated in the General Permit (Part I.D.6.), the *Chesapeake Bay TMDL Implementation Annual Status Report* is provided as a separate document from this report.

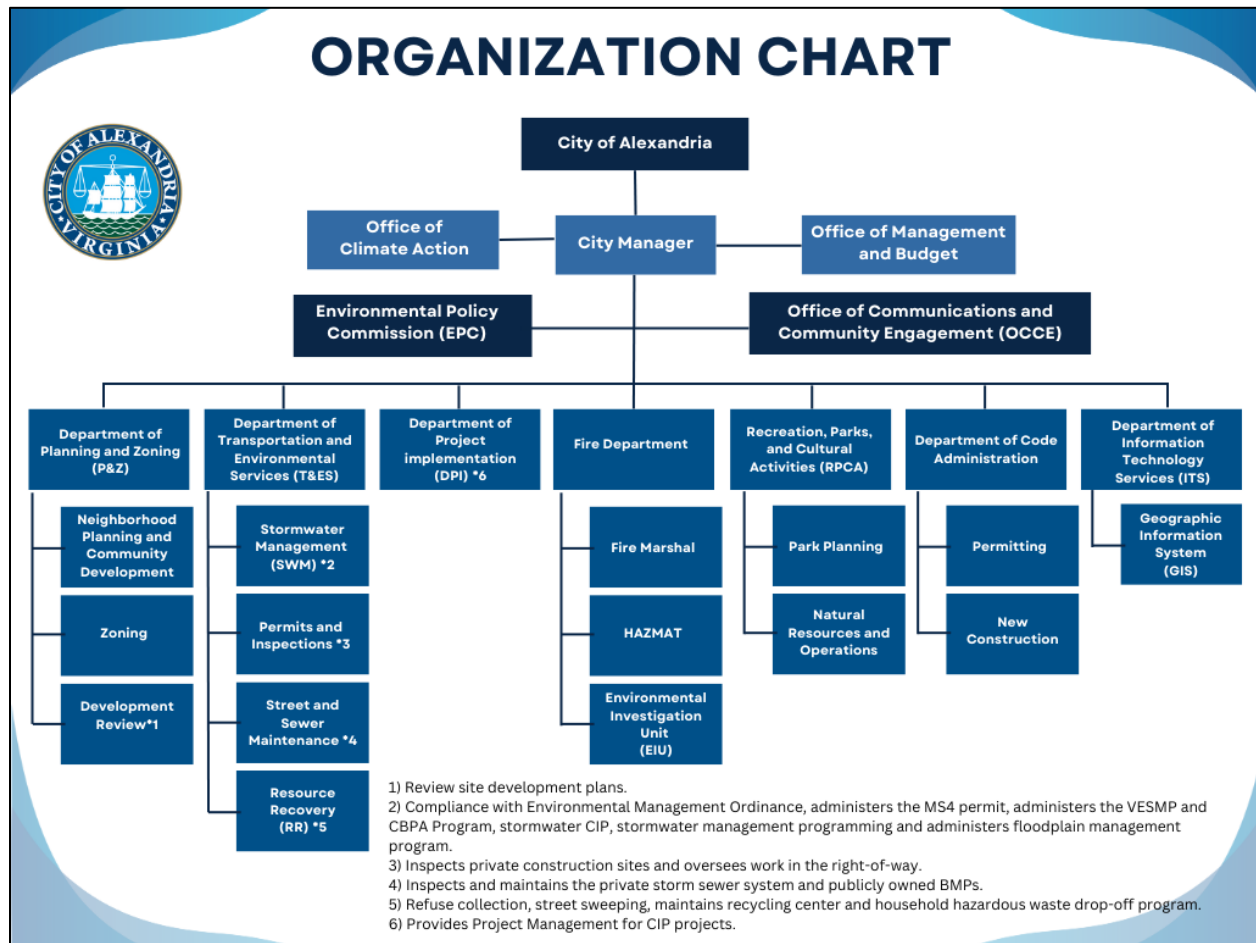
2 General Information

This section provides general information as required in Part I D 2 of the General Permit.

Name of Permittee:	System Name:	Reporting Period:	Permit Number:
City of Alexandria	City of Alexandria MS4	2025-2026	VAR040057
Modifications to Roles and Responsibilities: None.			
6th Order HUC:	Potomac River (PL28)	Cameron Run (PL26)	Four Mile Run (PL25)

The organizational chart outlines major stormwater activities and functions divided among several different departments and divisions. Additional information about each department is found in the MS4 Program Plan. Beginning in 2016, the Stormwater Management Division (SWM) in Transportation and Environmental Services has the primary responsibility for coordinating permit compliance, in addition to other duties.

Stormwater Management Organizational Chart – Roles and Responsibilities



3 2025 – 2026 Permit Conditions Compliance Status

The following provides the status of best management practices for each of the six minimum control measures (MCMs) during the 2025 – 2026 reporting period or Permit Year 3 (PY3). The MS4 Program Plan is up to date based on the requirements in the 2023-2028 General Permit and will continue to be revised throughout the permit cycle as applicable. This annual report is organized to reflect the City's current MS4 Program Plan – BMPs under each MCM follow the format for the Program Plan. Each section in this report begins with a summary table describing the task, the implementation year, the measurable goal as described in the City's MS4 Program Plan, and task status. Following the summary table is a more detailed discussion of the implementation status of each task. Additional support materials are found in the appendices.

3.1 Public Education and Outreach (MCM #1)

MCM #1: Public Education and Outreach (Permit Reference: Part I.E.1.g.)

The annual report shall include the following information:

- (1) A list of the high-priority stormwater issues the permittee addressed in the public education and outreach program;*
- (2) A summary of the public education and outreach activities conducted for the report year, including the strategies used to communicate the identified high-priority issues;*
- (3) A description of any changes in high-priority stormwater issues, including, strategies used to communicate high-priority stormwater issues or target audiences for the public education and outreach plan. The permittee shall provide a rationale for any of these changes; and*
- (4) A description of public education and outreach activities conducted that included education regarding climate change.*

Table 1 summarizes activities associated with Minimum Control Measure #1 and their completion status. Additional details are provided after the table and in Appendix A.

Table 1. Summary of Activities for MCM #1

Strategy	BMP	Measurable Goal	Status
1A – Traditional Written Materials	Distribute pamphlets and other written materials about proper fertilization, pet waste, household hazardous waste, and other water quality topics at outreach events.	Dates and location of outreach events with the approximate number of attendees.	✓ Complete
1B – Alternative Materials	Distribute promotional items (giveaways) at education and outreach events. Include the Eco-City Alexandria Clean Waterways logo on these items, where possible.	Dates and location of outreach events with the approximate number of attendees.	✓ Complete
1C - Signage	Place BMP identification signs at surface structural stormwater BMPs (bioretention, swales, green roofs, etc.)	The total number of BMPs within the City.	✓ Complete
1C - Signage	Installation, maintenance, and restocking of pet waste stations with appropriate signage.	Number of existing and new pet waste stations. Number of pet waste bags used and distributed to refill stations.	✓ Complete
1C - Signage	“Poop Fairy” yard signs	Number of “Poop Fairy” yard signs distributed	✓ Complete
1C - Signage	Install storm drain markers.	Number of markers placed.	✓ Complete
1C - Signage	Install and maintain stream crossing signs.	Number of existing signs and number of signs added or replaced.	✓ Complete

Strategy	BMP	Measurable Goal	Status
1D – Media Materials	Use eNews (City electronic news distribution system), social media (Instagram, Facebook, and/or X), television, and/or websites to convey message.	The number of individuals signed up to receive the City's eNews. The number of Facebook Page followers and X followers. The number of visits to the Stormwater Management webpage. Clean Water Partners Only Rain Summary Report of Findings.	✓ Complete
1D – Media Materials	Have a reporting mechanism on the City's website so that residents can report potential illicit discharges.	The number of stormwater pollution related complaints received.	✓ Complete
1D – Media Materials	Use social media (Instagram, Facebook, and/or X), website, and/or television including airing the City's stormwater pollution prevention video on the government/community access channel.	The number of individuals signed up to receive the City's eNews and the number of Facebook Page, Instagram, and X followers. The number of visits to the Stormwater Management webpages including the TMDL, MS4, and What You Can Do to Protect Stormwater webpages.	✓ Complete
1E – Speaking Engagements	Present at no less than 2 events per year and include messages about excess nutrients, pet waste, illicit discharges and other stormwater quality issues.	Dates and locations of presentations with the approximate number of attendees.	✓ Complete

*The City uses Alexandria eNews, which is a service that allows users to receive information through email on nearly 100 topics (including stormwater related messages).

Public Education and Outreach Plan Development

The Public Education and Outreach Program identified (1) Chesapeake Bay Nutrients (phosphorus and nitrogen), (2) Pet Waste; and (3) Illicit Discharges, as high-priority water quality issues as part of the update to the Program Plan and created three distinct sets of BMPs to address these issues. A summary of specific strategies chosen from General Permit Table 1 and implemented during this reporting period for each of the high-priority water quality issues is provided at the end of this BMP section. The City also continues to implement BMPs associated with other aspects of water quality and has included these in the updated Public Education and Outreach Plan.

Clean Water Partners

The City continues to participate in the Northern Virginia Regional Commission (NVRC) Clean Water Partners, a regional educational partnership among other MS4 permittees: Fairfax County, Loudoun County, Arlington County, Stafford County, Prince William County, Fairfax Water, Loudoun Water, George Mason University, City of Falls Church, Town of Herndon, City of Manassas, City of Manassas Park, City of Fairfax, Town of Vienna, Town of Leesburg, Town of Dumfries, Doody Calls, Northern Virginia Regional Commission, Virginia Coastal Zone Management Program, Prince William County Public Schools, and Prince William Water. For the 2025 – 2026 reporting period, the Clean Water Partners used television, print, internet advertising and the “Only Rain” website (www.onlyrain.org) to distribute messages linked to specific stormwater problems associated with high-priority water quality issues, such as proper pet waste disposal, not bagging lawn clippings, planting native plants, and proper disposal of waste.

For 2026, the Northern Virginia Clean Water Partner’s campaign issues were nutrients (phosphorus and nitrogen); bacteria; salt; and illicit discharges (e.g., pesticides, motor oil, etc.), which includes the City’s identified issues.

Included in Appendix A and referenced under BMP 1D measure of effectiveness is the annual report on the Clean Water Partners program efforts with information on the effectiveness of the program based on the results of the program’s annual survey. Specifically, the program conducted an online poll survey of 523 Northern Virginia residents to determine the effectiveness of on-line efforts and a series of TV, Facebook, and X ads to reveal any changes in behavior, and to aid in directing the future efforts of the campaign. In 2020, the Partners contracted with a digital communications firm to develop and implement a social media campaign on Facebook and X; Instagram came online in 2022. The results so far have shown that these platforms are an effective way to engage with the target audiences. During PY3, the survey instrument used was updated to try and better understand the impact of advertainments. In total, 523 residents were surveyed, with approximately half of them men (49.7%), half women (49.7%), and 0.6% identifying as non-binary or gender non-conforming, and all were 21 years or older, with 12.8% of the survey respondents from Alexandria. The survey was broken down into three categories: behaviors and behavioral drivers, knowledge, and campaign awareness, perceptions, and impact.

Approximately 65.7% of Alexandrians responding to the survey recalled seeing the “Only Rain Down the Drain” logo and 37.3% recalled seeing water pollution reduction campaigns.

The annual survey found that due to seeing the reducing water pollution advertisements:

- 94.7% of respondents reported they have a greater understanding of pet waste;
- 79.8% of respondents pick up pet waste more often;
- 92.7% of respondents have a greater understanding of fertilizer on water quality;
- 91.6% of respondents have a greater understanding of the impact of motor oil on water quality; and
- 88.8% of respondents now properly dispose of motor oil.

The survey also documented the following regarding respondent Alexandrians:

- 73.1% are familiar with the term “watershed”;
- 81.3% always pick up dog waste on walks;
- 57.4% use a garage or oil change service;
- 56% wash their car in grass, gravel, or dirt; 56% use eco-friendly detergent; 24% don’t use soap (water only); and 62.2% wash their car at a commercial car wash;
- 73.1% know the term “watershed” and 47.8% believe stormwater ends up in the Chesapeake Bay or Potomac River watershed;
- 67.2% know where to drop off household hazardous waste;
- 32.8% had heard of water quality activities in the past 12-months; and
- 50% said that they participated in a cleanup activity in the last 12-months.

BMP 1A Traditional Written Materials

Traditional written materials are a proven and reliable strategy. The City has created stormwater educational flyers/brochures that are distributed at various outreach events. The brochures are included in Appendix A.

In November 2022, the City updated the Stormwater Utility Fee Credit Program to add mature trees and flood mitigation efforts as new ways to achieve credit reductions. Further, the total amount of fee reductions was increased from 30% to 50%. To help further engage the public with this program, an updated [Credit Manual](#) was released and two brochures were developed in October 2023; these brochures are included in Appendix A.

Measure of Effectiveness

Dates and locations of outreach events where these brochures were made available with the approximate number of attendees can be found in the table under [BMP 2C](#). No changes to the MS4 Program Plan were deemed necessary.

BMP 1B Alternative Materials

Promotional items, or alternative materials, such as giveaways that include the City’s Eco-City Clean Waterways logo also are distributed at outreach events. T&ES-SWM prioritizes selection of promotional items that are useful and related to stormwater while the logo brings awareness of the City’s goal of improved water quality and clean waterways.

Measure of Effectiveness

Dates and locations of outreach events where these promotional items were distributed with the approximate number of attendees can be found in the table under [BMP 2C](#). No changes to the MS4 Program Plan were deemed necessary.

BMP 1C Signage

The City continues to require all new and redevelopment projects to provide signage or labeling to identify new surface structural stormwater BMPs as part of the site plan approval process.

Additionally, the City has installed stream crossing signs at locations where hike and/or bike trails cross major waterways. The City maintains and replaces these signs as needed. No additional signs were installed during this reporting period. The City maintains 20 signs at 18 road crossings and five signs at three trail crossings. The signs promote awareness of Alexandria's surface water resources, water bodies, drainage basins, and location in the Chesapeake Bay Watershed.

The City was one of the first localities in Northern Virginia to implement a storm drain marking program. The City continues to require new development and redevelopment to mark storm drain inlets within the development and located within 50 feet of the project with information on the drainage destination of waters entering the structures. In addition, City staff continue to promote the storm drain marking program at community outreach events and to work with interested residents to implement storm drain marking.

The City created and distributed "Poop Fairy" yard signs to residents to help promote cleaning up after dogs across the City, especially in highly trafficked areas.

Measure of Effectiveness

- BMP signage is required for surface structural stormwater BMPs installed and a photo of the BMP sign and a copy of a final site plan sheet calling for the BMP signage can be found in Appendix A. See Appendix E for a list of all stormwater BMPs installed in this permit cycle.
- The City continues to maintain the stream crossing signs so that they are in good condition. A photo of one of the stream crossing signs can be found in Appendix A.
- Storm drain markers were installed as a requirement of development or redevelopment and a sample plan sheet with this requirement is provided in Appendix A. During FY26, 610 new drain markers have been placed by developers and volunteer efforts.

No changes to the MS4 Program Plan were deemed necessary.

BMP 1D Media Materials

The City continues to host a stormwater quality webpage, located at www.alexandriava.gov/Stormwater. The page includes information about the City's Stormwater Management Program, the Chesapeake Bay Action Plan, the City's Virginia Stormwater Management Program (VSMP), the MS4 Program – to include the Program Plan and annual reports – and provides information for residents to learn how they can protect local streams and rivers. In addition, pages linked to this main page contain external links for the Chesapeake Bay Preservation Act, VSMP requirements, and the Construction General Permit. It also contains information and links to the City's Environmental Management, and Erosion and Sediment Control ordinances. Staff continue to add new content to the site and update existing content.

In addition, the City highlights upcoming events or important information, and posts information on the T&ES Facebook, Instagram, and X accounts. These tools are used to promote water quality events such as volunteer stream cleanups, build your own rain barrel workshops, and pre-made rain barrel sales events, and raise awareness of water quality topics.

The City also uses *Alexandria eNews* to distribute information through email on nearly 100 topics (including stormwater related messages). Users sign up for these email alerts and choose to receive specific informational topics. For example, individuals may choose to receive news with a specific focus on environmental and water quality issues, and/or information on volunteer opportunities, tips, and workshops. T&ES and the Office of Communications & Community Engagement (OCCE) work closely together to widely distribute eNews messages and other Citywide information. Example eNews distributed during FY2026 is included in Appendix A.

The City maintains its online resident reporting capabilities (See [BMP 3A](#)). The City's Alex311 system information is prominent on the City's main page and subordinate pages.

Measure of Effectiveness

See the tables under the High Priority Issues for the following:

- The number of individuals signed up to receive the City's eNews.
- The number of Facebook Page followers, Instagram followers, and X followers.
- The number of visits to the Stormwater Management webpage.

See Appendix A for the following:

- Sample eNews, Facebook posts, Instagram posts, and X posts
- The Clean Water Partners Only Rain Summary Report of Findings

No changes to the MS4 Program Plan were deemed necessary.

BMP 1E Speaking Engagements

T&ES-SWM staff often present at various meetings and events including rain barrel workshops, homeowner association meetings, community events, and stream clean-ups. These activities all create awareness regarding the importance of preventing stormwater pollution. Table 3 provides an overview of Outreach activities including speaking engagements.

Measure of Effectiveness

The events were virtual, with dates and approximate number of attendees at each speaking engagement can be found in the table under General Stormwater Pollution Prevention Public Education and Outreach. No changes to the MS4 Program Plan were deemed necessary.

High-Priority Issues

#1 – Chesapeake Bay Nutrients

Chesapeake Bay nutrients (nitrogen and phosphorus) have been identified as the as the first high-priority water quality issue. The following strategies were implemented in accordance with the MS4 Program Plan and as described in the BMPs 1A, 1C, 1D, and 1E above. Documentation of each activity is found in Appendix A.

1. Distributed proper fertilization brochures and other written materials at outreach events, where applicable.
2. Used eNews (City electronic news distribution system), social media (Instagram, Facebook, and X), television, and/or websites to convey messages regarding Chesapeake Bay Nutrients. Message addressed seasonally specific stormwater pollution prevention tactics for nutrients and pointed readers back to the City's website with additional information on the topic.
3. Maintained and updated a "Stormwater Management" webpage at www.alexandriava.gov/Stormwater related to the proper application and use of fertilizers to protect water quality. Also, a link to the NVRC www.onlyrain.org website was included.
4. Placed BMP identification signs at surface structural stormwater BMPs (bioretention, swales, green roofs, etc.) as each BMP is installed.
5. Presented at events and included a message about excess nutrients in stormwater.
6. Continued to participate in the NVRC Clean Water Partners program. The Partners used television, print, internet advertising and the Only Rain website to distribute messages such as over fertilization of lawns and gardens. The Clean Water Partners 2026 Summary and Survey may be found in Appendix A.

The goal of these strategies is to reach a wide audience with a message regarding the potential impact of nutrients on the Chesapeake Bay as well as specific actions that can be taken to reduce pollution. The table below provides the potential reach of different media used in the City's Public Education and Outreach Plan.

For a list of public education and outreach events, please see the table under [BMP 2C](#). In addition, Appendix A contains examples and supporting materials for these best management practices.

#2 – Pet Waste

The second high-priority water quality issue identified is bacteria from pet waste. The following activities were implemented during this permit cycle in accordance with the MS4 Program Plan to address pet waste.

1. Distributed pet waste pamphlets and other written materials at all appropriate outreach events where applicable. Shared outreach materials with local animal welfare league.
2. Distributed 19 "Poop Fairy" yard signs to promote residents to pick up after their pets.
3. Used eNews (City electronic news distribution system), social media (Facebook, Instagram, and X), television, and/or websites to convey message of the importance of picking up after pets and disposing of the waste properly.
4. Continued to maintain City pet waste stations and supply bags for stations. Thirty-five thousand one hundred (35,100) pet waste bags were provided during this permit cycle.

Additional stations will be installed, as needed, to help make pick-up and disposal more convenient. Also, there are many residential communities in the City that install and maintain their own pet waste stations.

5. Distributed “dog bone” pet waste bag dispensers and refills at outreach events.
6. Continues to participate in the NVRC Clean Water Partners regional efforts, with the survey found in Appendix A.

The goal of these strategies is to reach a wide audience with the pet waste message and specific actions to reduce pollution.

The Clean Water Partners annual survey found that 79.8% of respondents picked up pet waste more often after seeing the advertisements.

For a list of public education and outreach events, please see the table in Section [BMP 2C](#). In addition, Appendix A contains examples and supporting materials for these best management practices.

#3 – Illicit Discharges

The third high-priority water quality issue identified is illicit discharges. The following activities were implemented in accordance with the MS4 Program Plan during the permit year to address illicit discharges.

1. Used eNews (City electronic news distribution system), social media (Facebook, Instagram, or X), television, and/or websites to convey messages regarding illicit discharges.
2. Maintained the www.alexandriava.gov/Stormwater webpage which includes a page specifically related to illicit discharges for the targeted businesses and the general public, and included a link to the NVRC www.onlyrain.org website.
3. Continued to participate in the NVRC Clean Water Partners regional efforts. During FY2026, the Partners focused on bacteria, pet waste, illicit discharges, and salt. The Northern Virginia Clean Water Partners 2026 Summary and Survey can be found in Appendix A.

The goal of these strategies is to reach a wide audience with an illicit discharge message and specific actions to reduce pollution.

Table 2 provides strategy, potential target reach, and estimated reach information for the high-priority issues.

Table 2. Estimated Reach of High-Priority Issues

Media	Potential Target Reach	Estimated Permit Year Reach
eNews message	Environmental eNews Subscribers – 8,926	100% of Environmental eNews Subscribers
Social Media Message	Instagram, Facebook, and X Followers	T&ES Facebook Page has 3,473 followers. T&ES has 2,777 X followers. Instagram has 2,310 followers.
Stormwater Webpage	2,204 unique page views	100% of unique page views
Clean Water Partners Premium Digital TV Impressions	1,521,694 Impressions	100% of Impressions
Clean Water Partners Social Media Impressions	2,358,930 Impressions	100% of Impressions

General Stormwater Pollution Prevention Public Education and Outreach

The City implemented the following activities during the permit cycle in accordance with the MS4 Program Plan.

1. Distributed other written materials about water quality and stormwater pollution prevention at outreach events. For FY2026, this information was shared during in-person and virtual events; the City continued to update and refine its online stormwater presence, including the Stormwater Quality [webpage](#).
2. Used social media (Facebook, Instagram, and X), webpages, and/or television including airing the City’s stormwater pollution prevention video on the government/community access channel.
3. Maintained stream crossing signs to promote awareness of Alexandria’s surface water resources, water bodies, and drainage basins.
4. Presented at events to include messages about water quality and stormwater pollution prevention.

The goal of this BMP is to reach a wide audience with a general pollution prevention message as well as specific actions that can be taken to reduce pollution. The following table summarizes the City’s public education and outreach activities and events where information on pollution prevention and water quality were distributed. Appendix A contains examples from the City’s general education program.

City staff continued to work to engage with and reach out to diverse economic and ethnic groups in the City. During FY2026, staff participated in two “STEM Night” events in a predominantly non-English speaking, lower income community. Based on these outreach events, the City developed outreach materials (brochures) in Spanish, Amharic languages, and other languages spoken in the City. The City participated in a variety of outreach events in various locations throughout the City in order to reach different audiences. In-person outreach at local events targets residents who may not have access to a

computer, social media or email blasts. The City will continue its efforts to engage all community members to educate them on water quality to help prevent stormwater pollution.

Public Education and Outreach Activities Focused on Changing Environmental Conditions

When discussing stormwater management with the public, the topic of climate change, and flood mitigation and resilience, is at the forefront of all conversations. The City is currently engaging with the Office of Climate Action to help the public understand the impacts of changing environmental conditions on our community. The City also launched the Flood Action Alexandria effort in FY2021 to help mitigate the impacts of flooding across the community through capital infrastructure projects and other programs. These topics were discussed with the public as described in Table 3.

Energy and Climate Change Action Plan and Office of Climate Action

The City's Stormwater Management Division supported the development of the [Energy and Climate Change Action Plan 2023](#) in coordination with Department of General Services and the Office of Environmental Quality, with input from the public and the City's Environmental Policy Commission. This Plan focuses on both climate change mitigation and resilience, specifically in the areas of heat island impacts and flooding, which ties into the Flood Action Alexandria initiative described below. During FY2023, the City announced the development of the new Office of Climate Action in the City Manager's Office.

Flood Action Alexandria

During PY3, the City continued implementation of the [Flood Action Alexandria](#) initiative. Launched in early calendar year 2021, Flood Action Alexandria brings together experts from the Department of Transportation and Environmental Services Stormwater Management, Public Works Services, and Sanitary Infrastructure divisions, as well as Code Enforcement, Planning and Zoning, the Department of Project Implementation and the [Stormwater Utility and Flood Mitigation Advisory Committee](#) to address stormwater flooding issues across the City. The City has experienced more frequent and severe storms due to climate change and is working through Flood Action Alexandria to accelerate stormwater capital infrastructure improvements, conduct education and outreach, support monitoring and emergency operations, and help improve the City's overall resilience.

As part of this effort, the City added to its "Early Warning" system by installing additional rain gauges throughout the City in May 2021 to increase data gathering capacity, which are tracked by local watershed. Also in 2021, the City launched a new "[Locate Your Watershed](#)" built on a ArcGIS platform to help educate residents on which local watershed they live in. A Project Dashboard, also built on an ArcGIS platform, provides details on flood mitigation infrastructure projects. The Advisory Committee participates in frequent meetings to learn and discuss issues pertaining to the City's storm sewer infrastructure, flooding, and the Stormwater Utility fee. The City received funding from the Virginia Department of Conservation and Recreation to enhance hardened infrastructure projects aimed at reducing flood impacts and incorporating green infrastructure.

The Flood Mitigation Grant Program – the first in Virginia – was launched in August 2021 as part of the new Flood Action Alexandria Program as a partnership between the City and property owners to incentivize property owners to implement eligible flood mitigation measures on their property. The

grant provides a matching 50/50 reimbursement grant up to \$5,000 (\$25,000 for common areas) spent on implementing eligible flood mitigation practices, with cleanup and damage repair not constituting eligible practices. The grant incentivizes property owners to implement these small-scale flood mitigation practices in the near term to protect their property while staff works on Large Scale Capacity and Spot Improvement projects which take longer to deliver.

Staff worked with the City's Legislative Director and a local state Senator to introduce a bill to revise the Code of Virginia effective July 1, 2021, to allow for the use of public funds on private property for the purpose of the grant program. Staff from T&ES worked with the City Attorney's Office, Planning and Zoning, and Code Administration to develop the requirements of the Flood Mitigation Pilot Grant Program and worked with ITS staff for the application process.

Table 3. Summary of Public Education and Outreach Activities

Activity	Date	Activity	Event Details
Volunteer Storm Drain Marking Event – Four Mile Run	7/10/2025	Volunteers installed 130 storm drain markers at storm drain inlets along the Del Ray neighborhood of Alexandria.	15
Volunteer Storm Drain Marking Event – Taylor Run	8/6/2025	Volunteers installed 110 storm drain markers at storm drain inlets near the Angel Park area of Alexandria.	12
Volunteer Storm Drain Marking Event – Four Mile Run	10/4/2025	Volunteers installed 130 storm drain markers at storm drain inlets along the Arlandria neighborhood of Alexandria.	12
International Coastal Cleanup, Stream Clean up Event	10/11/2025	Volunteers came out to pick up litter along the Holmes Run waterway.	25
Meaningful Watershed Educational Experience (MWEE) for ACPS 7 th Graders	10/09/2025; 10/10/2025; 10/14/2025; 10/15/2025; 10/21/2025; 10/22/2025; 10/28/2025	Provided a hands-on demonstration of water quality testing equipment and hosted a watershed walk at Ben Brenman stormwater pond for 7 th grade students at ACPS.	1,000+
Macroinvertebrate Monitoring – Taylor Run	10/25/2025	City of Alexandria Stormwater Management hosted a macroinvertebrate monitoring session at Taylor Run to assess the health of the stream and educated participants on pollutant indicators.	15
Macroinvertebrate Monitoring – Holmes Run	11/1/2025	City of Alexandria Stormwater Management hosted a macroinvertebrate monitoring session at Holmes Run to assess the health of the stream and educated participants on pollutant indicators. This activity improved water quality directly through education.	16
Career Day	11/3/2025	Talk with high school students about careers in water quality and what the City is doing to protect water quality through the MS4 program.	50

Activity	Date	Activity	Event Details
Civics Day	11/7/2025	Talk with high school students about what the City is doing to protect water quality through the stormwater program and discuss ways that they can help improve the community.	50
Water and Benthic Ecology Experience	11/25/2025	Educated 5th Grade Students of ACDS on benthic macroinvertebrates and their value in determining water quality of water bodies.	15
Stormwater Utility Fee Credit Program Update	2/4/2026; 2/5/2026	Held a virtual information for community members to learn more about the stormwater utility fee credit program.	18
Ferdinand T. Day Elementary School STEM Night	2/12/2026	Participated in STEM night and provided outreach and education on how to prevent stormwater pollution.	124
Macroinvertebrate Monitoring – Taylor Run	3/28/2026	City of Alexandria Stormwater Management hosted a macroinvertebrate monitoring session at Taylor Run to assess the health of the stream and educated participants on pollutant indicators.	20
Alexandria City Public Schools (ACPS) Spring Break Out of School Time at Charles Houston Recreation Center	3/30/2026	Provided a hands on demonstration of the Enviroscope™ to children participating in ACPS spring break activities. This included an overview of sources of stormwater pollution and ways to protect water quality.	40
Alexandria City Public Schools (ACPS) Spring Break Out of School Time at William Ramsey Recreation Center	3/31/2026	Provided a hands on demonstration of the Enviroscope™ to children participating in ACPS spring break activities. This included an overview of sources of stormwater pollution and ways to protect water quality.	40
Volunteer Storm Drain Marking Event – Backlick Run	4/9/2026	Volunteers installed 100 storm drain markers at storm drain inlets along the Alexandria West neighborhoods of Alexandria.	18
Stream Cleanup	4/11/2026	Volunteers came out to pick up litter along the Holmes Run waterway.	150
Macroinvertebrate Monitoring – Holmes Run	4/25/2026	City of Alexandria Stormwater Management hosted a macroinvertebrate monitoring session at Holmes Run to assess the health of the stream and educated participants on pollutant indicators.	19
Del Ray Gardenfest	4/26/2026	Provided educational information on the Eco-City Alexandria initiative and included information and brochures on water quality and pet waste bag dispensers, tire pressure gauges, and rain gauges. Information on Flood Action Alexandria and climate change also was included.	540

Activity	Date	Activity	Event Details
Build Your Own Rain Barrel Workshop	4/28/2026	In partnership with the Northern Virginia Rainbarrel Partners program, the City hosted a build-your-own rain barrel workshop at the Beatley Library. Staff presented on stormwater management in the City and things they could do to help keep local waterways clean.	40
STEM Night	4/29/2026	Participated in STEM night and provided outreach and education on how to prevent stormwater pollution.	400
Chesapeake Bay Cleanup at the Potomac River	5/2/2026	Volunteers came out to pick up litter along the Potomac River waterway. This activity improved water quality directly through litter cleanup.	20
Volunteer Storm Drain Marking Event – Potomac River	5/2/2026	Volunteers installed 50 storm drain markers at storm drain inlets along the Old Town neighborhood of Alexandria.	25
Bike To Work Day	5/15/2026	Provided educational information on the Eco-City Alexandria initiative and included information and brochures on water quality and pet waste bag dispensers, tire pressure gauges, and rain gauges. Information on Flood Action Alexandria and climate change also was included.	250
Chesapeake Bay Awareness Week, Stream Cleanup	6/6/2026	Volunteers came out to pick up litter along the Potomac River waterway. This activity improved water quality directly through litter cleanup.	15

3.2 Public Involvement/Participation (MCM #2)

MCM #2: Public Involvement and Participation (Permit Reference: Part I.E.2.i.)

The annual report shall include the following information:

- (1) A summary of any public comments on the MS4 program received and how the permittee responded;*
- (2) A summary of stormwater pollution complaints received under the procedures established in Part I E 2 a (1), excluding natural flooding complaints, and how the permittee responded;*
- (3) A webpage address to the permittee's MS4 program and stormwater website;*
- (4) Federal and state nontraditional permittees with security policies preventing the MS4 program and stormwater pollution prevention webpage from being publicly accessible utilizing an internal staff accessible website, such as intranet, shall provide evidence of the current internal MS4 program and stormwater pollution prevention webpage; (Not applicable)*
- (5) A description of the public involvement activities implemented by the permittee, including any efforts to reach out and engage all economic and ethnic groups;*
- (6) A description of public education and outreach activities conducted that also included education regarding climate change;*
- (7) A report of the metric as defined for each activity and an evaluation as to whether or not the activity is beneficial to improving water quality; and*
- (8) The name of other MS4 permittees with whom the permittee collaborated in the public involvement opportunities.*

The following table is a summary of activities for Minimum Control Measure #2 and their completion status. Additional detail is provided after the table and in Appendix B.

Table 4. Summary of Activities for MCM #2

BMP	Measurable Goal	Status
2A Public Reports, Input, and Participation Procedures		
Maintain the City's web-based reporting (Alex311) and call center systems.	Provide a hyperlink to Alex311 and phone number for T&ES Stormwater management.	✓ Complete
Post MS4 Program Plan on webpage and document input/feedback.	Document that the program plan has been placed on the webpage and any input received on the plan.	✓ Complete
2B MS4 Program and Stormwater Pollution Prevention Webpage		
Maintain the City's MS4 and Stormwater Pollution Prevention Webpage	Provide the address of the webpage and a hyperlink for the webpage.	✓ Complete
2C Local Activities Public Involvement		
Implement at least two clean-ups per year	Document sponsorship and participation in clean-up events	✓ Complete

BMP	Measurable Goal	Status
	including approximate participation	
Participate in at least two educational events per year	Document sponsorship and participation in educational events, including approximate participation	✓ Complete
Continuously implement the storm drain marker program and maintain City owned pet waste stations.	Document the number of individuals marking storm drains and the maintenance of City owned pet waste stations	✓ Complete

BMP 2A Public Reports, Input, and Participation Procedures

The City implemented the following BMPs during this permit year in accordance with the MS4 Program Plan.

1. Maintained Alex311 web-based problem reporting/service request and call center (311) that can be used by residents and others to report suspected illicit discharges (including improper disposal or spills), complaints (including ones regarding land disturbing issues), and other input. During this reporting period, no public input on the MS4 program was received. Input pertaining to stormwater illicit discharges is included in Section 3 of this report.
2. The MS4 Program Plan for the 2023-2028 MS4 General Permit was posted on April 1, 2024, to the City's Stormwater MS4 Program webpage (<https://www.alexandriava.gov/stormwater-management/municipal-separate-storm-sewer-system-ms4-permit>). The plan was revised and reposted 7/1/2024, 12/16/2024, 2/12/2025, and, most recently, 5/8/2025. The plan was updated based on revisions to the Construction General Permit and Stormwater Regulations, updates to the organizational chart, updates to the Chesapeake Bay TMDL Action Plan were incorporated, IDDE Policy & Procedures were updated, the outfall/point of discharge table was updated, and the two local TMDL Action Plans were updated. The webpage includes a general email address (MS4ProgramPlan@alexandriava.gov) and the main phone number for T&ES-SWM for the public to use to submit input and feedback on the plan.

Measure of Effectiveness

1. A hyperlink to the Alex311 webpage is provided in Appendix B. Potential illicit discharge complaints, some which were received through Alex311, may be found in Appendix C.
2. The updated MS4 Program Plan was posted April 1, 2024, and most recently updated in May 2025. No comments were received on the plan.

BMP 2B MS4 Program and Stormwater Pollution Prevention Webpage

The City maintains a website dedicated to stormwater pollution prevention, water quality and the MS4 Program at www.alexandriava.gov/Stormwater that has links to other aspects of the stormwater management program. The site provides information about the program, serves as a forum to distribute educational materials, includes information on where to report suspected illegal dumping, and makes documents accessible to the public for review and comment.

In accordance with Part I.E.2.b, the City's MS4 Program and Stormwater Pollution Prevention webpage contains the following:

1. Current MS4 permit and coverage letter;
2. Most current MS4 Program Plan;
3. Annual reports from FY2015 to current;
4. T&ES-SWM main phone number and Alex311 link through "Contact Us" at the top of the page for reporting illicit discharges or other potential stormwater pollution concerns; and
5. Email address (MS4ProgramPlan@alexandriava.gov) for providing input on the MS4 Program Plan and other general inquiries about the program.

Measure of Effectiveness

The address to the City's MS4 Program webpage is <https://www.alexandriava.gov/stormwater-management/municipal-separate-storm-sewer-system-ms4-permit>. No updates to the MS4 Program Plan were deemed necessary.

BMP 2C Local Activities Public Involvement & Engagement of All Economic and Ethnic Groups

The City sponsors, promotes, and participates in numerous local events to encourage participation of people living and working in Alexandria to learn more about the importance of preventing stormwater pollution. During FY2026, the City held many activities to enable participation in stormwater awareness and water quality including those listed below and those presented in Table 5.

- The City hosted four clean up events during FY2026, as indicated in Table 5.
- The City hosted four Macroinvertebrate Monitoring events during FY2026, as indicated in Table 5.
- The City's Stormwater Management Division consistently attends and engages with the Stormwater Utility & Flood Mitigation Advisory Committee on a bi-monthly basis, as well as the Environmental Policy Commission periodically.
- The City hosted two "Build-Your-Own Rain Barrel" workshop events.

2025 Launch of Green Team

In 2022, with authorization from the Virginia General Assembly, the City passed a “Plastic Bag Fee”. The program is managed by the City’s Resource Recovery Division and revenue generated by this fee may be spent on litter campaigns and similar activities. During the program year, the City’s Stormwater Management Staff reached out to Resource Recovery to launch a new individual litter cleanup program called “[Green Team](#)”. The program has attracted close to 80 participants since it launched in May. The program is intended to complement existing litter-removing efforts, including the City’s Clean Team, the Department of Recreation, Parks, and Cultural Activities (RPCA) PARKnership Program, and the Adopt-a-Block Program. Because litter can easily flow through storm sewers and into local waterways, the Green Team program is designed to recognize the ongoing efforts of current volunteers and assist new residents in joining the Citywide effort to protect the Potomac River and Chesapeake Bay. All registrants are encouraged to track and log their litter cleanup activities and close to 40-bags of litter have been reported picked up since the program launch.

Measure of Effectiveness

The T&ES-SWM organized, coordinated, and participated in several virtual activities focused on water quality where staff had the opportunity to educate participants about stormwater pollution and prevention and provide online resources focused on education and outreach (see Table 5). These activities all create awareness regarding the importance of preventing stormwater pollution and are all beneficial to pollution prevention and fostering water quality awareness. Specific water quality benefits are included in Table 5 in italics. No updates to the MS4 Program Plan were deemed necessary.

Public Education and Outreach Activities Focused on Climate Change

When discussing stormwater management with the public, the topic of climate change is on the forefront of all conversations. The City is currently engaging with the Office of Climate Action to help the public understand the impacts of climate change on our community. The City also launched the Flood Action Alexandria effort in FY2021 to help mitigate the impacts of flooding in the community. Finally, the City kicked off the development of a comprehensive Flood Resilience Plan to support future efforts of the Flood Action Alexandria initiative which works to help mitigate flooding across our community. The new plan will include hazard identification, flood mitigation, flood preparedness and response, policies and regulations, funding strategies, and communication and information dissemination. These topics were discussed with the public during public participation events as described in Table 5.

Table 5. Public Stormwater Involvement/Participation Events during PY3

Activity	Date	Participants	Event Details
International Coastal Cleanup, Stream Clean up Event	10/11/2025	25	Volunteers came out to pick up litter along the Holmes Run waterway. <i>This activity improved water quality directly through litter cleanup.</i>

Activity	Date	Participants	Event Details
Meaningful Watershed Educational Experience (MWEE) for ACPS 7 th Graders	10/09/2025; 10/10/2025; 10/14/2025; 10/15/2025; 10/21/2025; 10/22/2025; 10/28/2025	1,000+	Provided a hands-on demonstration of water quality testing equipment and hosted a watershed walk at Ben Brenman stormwater pond for 7 th grade students at ACPS. <i>This activity improved water quality directly through education and awareness of pollution prevention activities.</i>
Macroinvertebrate Monitoring – Taylor Run	10/25/2025	15	City of Alexandria Stormwater Management hosted a macroinvertebrate monitoring session at Taylor Run to assess the health of the stream and educated participants on pollutant indicators. <i>This activity improved water quality directly through education and awareness of pollution prevention activities.</i>
Macroinvertebrate Monitoring – Holmes Run	11/1/2025	16	City of Alexandria Stormwater Management hosted a macroinvertebrate monitoring session at Holmes Run to assess the health of the stream and educated participants on pollutant indicators. <i>This activity improved water quality directly through education and awareness of pollution prevention activities.</i>
Career Day	11/3/2025	50	Talk with high school students about careers in water quality and what the City is doing to protect water quality through the MS4 program.
Civics Day	11/7/2025	50	Talk with high school students about what the City is doing to protect water quality through the stormwater program and discuss ways that they can help improve the community.
Water and Benthic Ecology Experience	11/25/2025	15	Educated 5th Grade Students of ACDS on benthic macroinvertebrates and their value in determining water quality of water bodies. <i>This activity improved water quality directly through education and awareness of pollution prevention activities.</i>
Stormwater Utility Fee Credit Program Update	2/4/2026; 2/5/2026	18	Held a virtual information for community members to learn more about the stormwater utility fee credit program.
Ferdinand T. Day Elementary School STEM Night	2/12/2026	124	Participated in STEM night and provided outreach and education on how to prevent stormwater pollution.
Macroinvertebrate Monitoring – Taylor Run	3/28/2026	20	City of Alexandria Stormwater Management hosted a macroinvertebrate monitoring session at Taylor Run to assess the health of the stream and educated participants on pollutant indicators. <i>This</i>

Activity	Date	Participants	Event Details
			<i>activity improved water quality directly through education and awareness of pollution prevention activities.</i>
Alexandria City Public Schools (ACPS) Spring Break Out of School Time at Charles Houston Recreation Center	3/30/2026	40	Provided a hands on demonstration of the Enviroscope™ to children participating in ACPS spring break activities. This included an overview of sources of stormwater pollution and ways to protect water quality. <i>This activity improved water quality directly through education and awareness of pollution prevention activities.</i>
Alexandria City Public Schools (ACPS) Spring Break Out of School Time at William Ramsey Recreation Center	3/31/2026	40	Provided a hands on demonstration of the Enviroscope™ to children participating in ACPS spring break activities. This included an overview of sources of stormwater pollution and ways to protect water quality. <i>This activity improved water quality directly through education and awareness of pollution prevention activities.</i>
Stream Cleanup	4/11/2026	150	Volunteers came out to pick up litter along the Holmes Run waterway. <i>This activity improved water quality directly through litter cleanup.</i>
Macroinvertebrate Monitoring – Holmes Run	4/25/2026	19	City of Alexandria Stormwater Management hosted a macroinvertebrate monitoring session at Holmes Run to assess the health of the stream and educated participants on pollutant indicators. <i>This activity improved water quality directly through education and awareness of pollution prevention activities.</i>
Del Ray Gardenfest	4/26/2026	540	Provided educational information on the Eco-City Alexandria initiative and included information and brochures on water quality and pet waste bag dispensers, tire pressure gauges, and rain gauges. Information on Flood Action Alexandria and climate change also was included.
Build Your Own Rain Barrel Workshop	4/28/2026	40	In partnership with the Northern Virginia Rainbarrel Partners program, the City hosted a build-your-own rain barrel workshop at the Beatley Library. Staff presented on stormwater management in the City and things they could do to help keep local waterways clean. <i>This activity improved water quality directly through education and awareness of pollution</i>

Activity	Date	Participants	Event Details
			<i>prevention activities as well as the implementation of a rain barrel to help reduce runoff.</i>
STEM Night	4/29/2026	400	Participated in STEM night and provided outreach and education on how to prevent stormwater pollution.
Chesapeake Bay Cleanup at the Potomac River	5/2/2026	20	Volunteers came out to pick up litter along the Potomac River waterway. This activity improved water quality directly through litter cleanup. <i>This activity improved water quality directly through litter cleanup.</i>
Bike To Work Day	5/15/2026	250	Provided educational information on the Eco-City Alexandria initiative and included information and brochures on water quality and pet waste bag dispensers, tire pressure gauges, and rain gauges. Information on Flood Action Alexandria and climate change also was included.
Chesapeake Bay Awareness Week, Stream Cleanup	6/6/2026	15	Volunteers came out to pick up litter along the Potomac River waterway. This activity improved water quality directly through litter cleanup. <i>This activity improved water quality directly through litter cleanup.</i>

3.3 Illicit Discharge Detection and Elimination (MCM #3)

MCM #3: Illicit Discharge Detection and Elimination (Permit Reference: Part I.E.3.e.)

The annual report shall include the following information:

- (1) A confirmation statement that the MS4 map and outfall information table have been updated to reflect any changes to the MS4 occurring on or before June 30 of the reporting year;
- (2) The total number of outfalls and observation points screened during the reporting period as part of the dry weather screening program; and
- (3) A list of illicit discharges to the MS4, including spills reaching the MS4 with information as follows:
 - (a) The location and source of illicit discharge;
 - (b) The dates that the discharge was observed, reported, or both;
 - (c) Whether the discharge was discovered by the permittee during dry weather screening, reported by the public, or other method (describe);
 - (d) How the investigation was resolved;
 - (e) A description of any follow-up activities; and
 - (f) The date the investigation was closed.

Table 6 provides a summary of activities for Minimum Control Measure #3 and their completion status. Additional detail is provided after the table and in Appendix C.

Table 6. Summary of Activities for MCM #3

BMP	Measurable Goal	Status
3A Storm Sewer System Outfall Map and Outfall Information Table		
Maintain an up-to-date storm sewer map and outfall information table.	Keep up-to-date storm sewer map and outfall information table available on request.	✓ Complete
Update the storm sewer map and outfall table by October 1 st of each year.	Include PDF of updated storm sewer map and information table in the annual report. Provide a summary of updates.	✓ Complete
Provide GIS shapefiles to DEQ no later than 11/01/2025 (24-months after permit-issuance date)	Include documentation of submittal.	✓ Complete
Notify downstream MS4s of any new physical interconnections.	Include copies of previous notifications and list and provide any notifications from the permit year.	✓ Complete

BMP	Measurable Goal	Status
3B Prohibition on Illicit Discharges		
Enforce prohibition on illicit discharges (Chapter 13 of City Code).	Report number of illicit discharges identified and report how they were controlled or eliminated. Review City IDDE Program Manual and corresponding City Code and make recommendations accordingly.	✓ Complete
3C Illicit Discharge Detection and Elimination Written Procedures		
Maintain, implement and enforce the written procedures found in the City's IDDE Program Manual.	Follow procedures and update as necessary.	✓ Complete
Investigate suspected illicit discharges.	Report number of suspected illicit discharges and provide a narrative on how they were controlled or eliminated.	✓ Complete
Screen at least 50 outfalls annually such that no more than 50 are screened in the previous 12-month period.	Include documentation of the outfall screening completed during the permit year to include results, resolution, and investigation closure. Any follow-up actions will also be included.	✓ Complete
3D Alex311		
Maintain Alex311	Include a screen capture of Alex311. Document the number and types of incidents handled.	✓ Complete
3E Household Hazardous Waste (HHW) Program		
Provide HHW collection services to all residents	Provide copies of the program web site and brochures. Document program participants and the number of equivalent barrels of waste accepted.	✓ Complete
3F Identification of Permitted Stormwater Discharges		
Keep up-to-date permitted discharges information and distribute to field crews.	Provide up-to-date map and list of state-permitted stormwater discharges.	✓ Complete

BMP	Measurable Goal	Status
3G Prohibition of Outdoor Cleaning of Restaurant Equipment		
Enforce prohibition on outdoor cleaning of restaurant equipment.	Document example SUP, if one has been done in the permit year.	✓ Complete

BMP 3A Storm Sewer System Outfall Map and Outfall Information Table

The City has previously developed and continues to maintain a storm sewer system map showing all features required in the MS4 permit, including all stormwater outfalls discharging to the waters of the Commonwealth, as well as pipes, catch basins, and inlets. The map provides a valuable tool to fully understand the storm system and aids in investigating and eliminating possible illicit discharges. The data used to develop this map is continuously updated as new systems are installed and needed refinements to the system area discovered. The updated data is used to create the map which is exported for the annual report each permit cycle. Therefore, data shown on the map reflects all changes and updates to the City's documented storm sewer system as the date on the map.

During FY2024, the City added the MS4 map to the City's online [ArcGIS Sewer Viewer](#) mapping platform which is publicly available.

The City shall continue to identify physical interconnections with other regulated MS4s and notify in writing any downstream regulated MS4 of any new physical interconnections.

Measure of Effectiveness

The storm sewer system map and corresponding outfall information table have been updated to reflect any changes to the MS4 occurring on or before June 30th of the reporting year. Updates to the storm sewer system map are completed as redevelopment occurs and when refinements to the system are realized. The most current storm sewer system map and associated outfall table has been provided in Appendix C.

On July 30, 2020, the City provided an updated letter of adjacent MS4 jurisdictions where likely interconnections exist however, none have been identified. The letters were shared with National Park Service for George Washington Memorial Parkway, Arlington County, Fairfax County, and Virginia Department of Transportation. Copies of these notifications can be found in Appendix C. No updates to the MS4 Program Plan were deemed necessary.

BMP 3B Prohibition on Illicit Discharges

The purpose of this BMP is to ensure that the City has the legal tools necessary to effectively prohibit illicit discharges and to conduct necessary enforcement in the case of an illicit discharge. City Council has adopted appropriate measures, including civil and criminal penalties, to prohibit illicit discharges. The City Attorney has reviewed the City Code and has determined that no additional changes are needed at this time. In recent years, the City did recognize the need for civil penalties for offenses that are not categorized as criminal. As a result, the City updated the Environmental Offenses ordinance to include civil penalties for identified illicit discharges.

Measure of Effectiveness

Appendix C provides a summary of illicit discharge complaints and a narrative on how each complaint was handled, including how any actual discharge was controlled or eliminated as appropriate. No pattern of illicit discharges necessitated a review of policies, procedures, or ordinances. No updates to the MS4 Program Plan were deemed necessary.

BMP 3C Illicit Discharge Detection and Elimination Written Procedures

Pursuant to the 2013-2018 General Permit program plan update requirements, the City developed the Illicit Discharge Detection and Elimination Program manual which includes written policies, procedures, and legal authority for the detection, investigation, and elimination of illicit discharges. Outfall field screening is performed in accordance with the IDDE Program manual which includes the requirement outlined in Part I.E.3.c of the 2023-2028 permit. The City's IDDE Program manual was updated to align with the 2023-2028 permit and to ensure current methodology and compliance with the current permit, including the use of civil penalties. This manual can be found in the City's MS4 Program Plan under Appendix C.

The City continues to maintain, implement, and enforce the written policies and procedures found in the City's IDDE Program manual.

Measure of Effectiveness

A list of illicit discharges to the MS4, including spills reaching the MS4, can be found in Appendix C. In addition, a list of all investigations performed for reported suspected illicit discharges to include results, resolution, and date of investigation closure can also be found in Appendix C.

A total of 50 outfalls were screened during the reporting period as part of the dry weather screening program, with a table summarizing the effort found in Appendix C.

BMP 3D Alex311

Alex311 uses a web-based reporting form, smart phone app, and call center built upon the Salesforce Customer Relationship Management (CRM) system. The Salesforce CRM system is a cloud-based repository for public complaints and service requests. The CRM is integrated with the City's asset management database, Cityworks™, for public submissions requiring asset maintenance or investigation. Illicit discharge and illegal dumping complaints are investigated by T&ES-Stormwater Management Division and the Fire Marshal's Environmental and Industrial Unit (EIU). All public submissions are tracked through the City's CRM database and Cityworks™.

The Alex311 customer service center connects customers to information, services, and solutions using phone (703-746-HELP or 311) and web-based portals to receive and process requests and complaints. Alex311 enables the City to standardize best practices and knowledge base information throughout the City in support of citizen engagement, customer service, service request and case management services. Alex311 provides improved tracking and information updates for customers through the life cycle of the service request, streamlined service request creation and management, and data-driven analytics such as dashboards and maps.

Measure of Effectiveness

The City (through T&ES-Stormwater Management and EIU reporting mechanisms) handled 27 water quality and illicit discharge related complaints or incidents during this reporting period. Appendix C provides a summary of the complaints and a narrative on how each discharge was controlled or eliminated. The T&ES SWM Division receives complaints directly from Alex311 and/or documents the information received via email, phone, or another source. Reports are also made via 911. The EIU is responsible for entering this information into the EnerGov database. The SWM Division receives and enters data into Alex311 for incidents handled solely by their office. During coordinated responses, the EIU and SWM Division maintain both the EnerGov and Alex311 database. Screen shots of EnerGov, Alex311, and Cityworks™ are provided in Appendix C.

BMP 3E Household Hazardous Waste (HHW) Program

Participation in the household hazardous waste (HHW) program continues to be a popular and effective program with approximately 15,248 participants using the program in this permit year. Materials are calculated based on 55-gallon drums or equivalent (barrels). The number of barrels has been tracked since 2008 when the materials were put into the large barrels or drums. As a result, the City continues to track this number as “equivalent” barrels. The webpage alexandriava.gov/19206 includes information on the types of materials that may be left at the drop-off points and the schedule for drop-offs. The following table provides a snapshot of HHW program statistics.

Table 7. HHW Users and Barrels by Fiscal Year (FY)

Year	Users	Barrels (or Equivalent Barrels) of HHW
FY2009	6,067	754
FY2010	7,059	875
FY2011	7,920	822
FY2012	7,698	702
FY2013	8,424	759
FY2014	9,535	516
FY2015	10,476	504
FY2016	9,976	409
FY2017	10,974	359
FY2018	11,431	309
FY2019	12,278	328
FY2020	11,975	298
FY2021	16,359	385
FY2022	14,528	353
FY2023	14,311	250
FY2024	15,066	356

Year	Users	Barrels (or Equivalent Barrels) of HHW
FY2025	15,401	309
FY2026	15,248	413

Measure of Effectiveness

Table 7 shows the quantity of material collected. Hyperlinks to the HHW webpage and the most recent program brochure are provided in Appendices C and A respectively. No updates to the MS4 Program Plan were deemed necessary.

BMP 3F Identification of Permitted Stormwater Discharges

The City continues to obtain updated information annually on state-permitted stormwater discharges within the City limits and maintains a map of these discharges. The purpose of this BMP is to provide field operations staff with a visual tool for identifying permitted and non-permitted discharges.

Measure of Effectiveness

A current map and table of state-permitted stormwater discharges, current as of June 2026 is in Appendix C. No updates to the MS4 Program Plan were deemed necessary.

BMP 3G Prohibition of Outdoor Cleaning of Restaurant Equipment

The City continues to include in the Special Use Permit (SUP) issued for restaurant facilities a standard condition that states: “Kitchen equipment shall not be cleaned outside, nor shall any cooking residue be washed into the streets, alleys, or storm sewers.”

Measure of Effectiveness

A sample of a Special Use Permit (SUP) reviewed during the reporting period with the appropriate language regarding restaurant equipment is found in Appendix C. No updates to the MS4 Program Plan were deemed necessary.

3.4 Construction Site Stormwater Runoff and Erosion and Sediment Control (MCM #4)

MCM #4: Construction Site Stormwater Runoff and Erosion and Sediment Control (Permit Reference: Part I.E.4.e.)

The annual report shall include the following information:

- (1) Total number of erosion and sediment control inspections conducted;
- (2) Total number of each type of compliance action and enforcement action implemented; and
- (3) For nontraditional permittees:
 - (a) A confirmation statement that land disturbing projects that occurred during the reporting period have been conducted in accordance with the current department approved annual standards and specifications for erosion and sediment control; and
 - (b) If any land disturbing projects were conducted without department approved annual standards and specifications, a list of all land disturbing projects that occurred during the reporting period with erosion and sediment control plan approval dates for each project. (Not Applicable)

The following table is a summary of activities for Minimum Control Measure #4 and their completion status. Additional detail is provided in the table below and in Appendix D.

Table 8. Summary of Activities for MCM #4

BMP	Measurable Goal	Status
4A Maintain DEQ Erosion and Sediment Control Program Consistency		
Maintain E&SC program consistency with State regulations.	Document the City program consistency with state law and regulations.	✓ Complete
4B Site Control Implementation		
Ensure that the proper controls are implemented to prevent nonstormwater discharges to the MS4.	Implement City's Policies and Procedures for Construction Site Runoff Control Inspections	✓ Complete
4C Construction General Permit Inspections and Tracking		
Require applicable land-disturbing activities secure coverage under the construction general permit.	Require construction general permits as required in accordance with City ordinance.	✓ Complete
Review and approve SWPPPs and ensure SWPPP implementation.	Review and approve SWPPPs. Document total number of inspections; provide a summary of enforcement actions included number and type.	✓ Complete

BMP	Measurable Goal	Status
Maintain a database log for tracking all land disturbing activities.	Summarize annual land disturbing activities that secured a construction general permit	✓ Complete
Inspect land-disturbing activities in compliance with the E&S ordinance, the EMO and written policies and procedures.	Document total number of inspections; provide a summary of enforcement actions included number and type.	✓ Complete
Ensure inspectors and plan reviewers are certified and keep records on file.	Document certifications held by City staff and ensure they stay up-to-date.	✓ Complete
Utilize legal authority to require compliance with an approved plan or require plan revisions or modifications if the inspection shows an approved plan to be inadequate to control stormwater runoff.	Document total number of inspections; provide a summary of enforcement actions included number and type.	✓ Complete

BMP 4A Maintain Erosion and Sediment Control Program Consistency

The City's construction site stormwater runoff program is implemented in accordance with Part I.E.4.a of the permit.

The City's Erosion and Sediment Control Program continues to be consistent with the Virginia Erosion and Sediment Control Law (VESCL) and attendant regulations. During the 2014 – 2015 permit year, the City reviewed the Erosion and Sediment Control (E&SC) Ordinance for consistency with the Environmental Management Ordinance (EMO) and adopted the appropriate amendments to the E&SC ordinance.

Consistent with the Consolidated Regulations effort at the state level, on April 13, 2024, the City Council adopted the amended Article XIII of the Alexandria Zoning Ordinance (the Environmental Management Ordinance) in accordance with Text Amendment No. 2024-0003 by authority of §§ 62.1-44.15:24 - 62.1-44.15:50, Code of Virginia. On this date the City Council also adopted the amendments to Title 5, Chapter 4 of the City Code (the Erosion and Sediment Control Ordinance). These consolidated regulations combine both the Virginia Erosion and Sediment Control Program and the Stormwater Management Program into one regulatory chapter: Virginia Erosion and Stormwater Management Program (VESMP), 9VAC25-875, as amended.

Updates to ordinances, policies, and procedures to enact the local VESMP were made effective July 1, 2024.

Measure of Effectiveness

The effectiveness of the City's program is measured by consistency with State regulations as determined by staff from the T&ES-SWM. No consistency issues were identified during this permit year. Following review of the E&SC ordinance in the 2014-2015 permit year, the City amended the language for consistency with the EMO. The City Council adopted the amendments on June 10, 2015. Consistent with the Consolidated Regulations effort by the Commonwealth, Article XIII of the Alexandria Zoning Ordinance (the Environmental Management Ordinance) and Title 5, Chapter 4 of the City's Code of Ordinances (the Erosion and Sediment Ordinance) were updated. Effective July 1, 2024, the City began administration of the local VESMP. Additionally, the VESMP Fee Schedule was updated via the June 24, 2026 [Memo to Industry 27-03](#) effective July 1, 2026. Further details will be included in subsequent Annual Report updates.

BMP 4B Site Control Implementation

The City has incorporated language into its plan review checklist, policies and procedures, and Sec. 13-111 of the EMO which requires applicable proposed land disturbing activities to secure coverage under the construction general permit prior to commencing land-disturbance. Proper controls are required to be implemented at these sites to prevent nonstormwater discharges to the MS4. These nonstormwater discharges include wastewater, concrete washout, fuels and oils, and other illicit discharges. To ensure that these controls are in place, the City has developed a policies and procedures document entitled *Policies and Procedures for Construction Site Runoff Control Inspections* which can be found in Appendix D of the City's MS4 Program Plan.

Measure of Effectiveness

Continue to implement City's *Policies and Procedures for Construction Site Runoff Control Inspections*.

BMP 4C Construction General Permit Inspections and Tracking

The City received local VSMP authority approval to administer the Construction General Permit effective July 1, 2014. Since this date, applicable construction sites had to submit stormwater pollution prevention plans (SWPPP) to the City for review and approval in order to secure coverage under the General VPDES Permit for Stormwater Discharges Associated with Construction Activities prior to final site plan release. This requirement is found in Sec. 13-111 of the EMO. The City also revised the plan review checklist and plan review standard conditions to reflect this requirement. A copy of the SWPPP template can be found on the City's website at www.alexandriava.gov/50216.

Part I.E.4.d.5. of the permit requires the City to conduct inspections and have written inspection procedures of land-disturbing activities. The City has developed a policies and procedures document entitled *Policies and Procedures for Construction Site Runoff Control Inspections* as described in BMP 4B and found in the City's MS4 Program Plan.

Land disturbing activities are tracked by T&ES-SWM through the plan review process. The information is recorded and logged when final approved plan mylars and grading plans are released. Reports are sent to T&ES-SWM to provide the data quarterly to DEQ.

In accordance with 9VAC25-850-40, inspectors and plan reviewers are required to maintain the appropriate certification of competency from the state.

The City continues to use its legal authority to require compliance with an approved plan or require plan revisions or modifications if the inspection shows an approved plan to be inadequate to control stormwater runoff. Stormwater staff review each plan set the City receives for compliance with the EMO. If changes to the plans are required, the plans will be reviewed again to ensure compliance.

Measure of Effectiveness

Land disturbing projects that occurred during the reporting period have been conducted in accordance with the department approved standards and specifications for erosion and sediment control. No updates to the MS4 Program Plan were deemed necessary.

The following table provides an annual summary of land-disturbing activities data. This data, broken down quarterly, has been provided to DEQ through the construction general permit process. A total of 53 projects were released; with a total of approximately 38 acres disturbed.

Table 9. Land-Disturbing Activities

Reference #	Address	Disturbed Acres	Release Date
DSUP2025-10003	5000 Fairbanks Avenue	4.76	6.1.2026
DSUP2021-10022	3120 Colvin Street	0.399	7.9.2025
GRD2024-00036	26 W Chapman Street	0.1568	7.15.2025
GRD2025-00017	1007 Oronoco Street	0.1842	7.16.2025
GRD2025-00008	1018 & 1020 Pendleton Street	0.13	7.17.2025
GRD2025-00020	1208 Janney's Lane	0.7895	7.25.2025
GRD2025-00014	1210 Janney's Lane	0.7895	7.25.2025
GRD2025-00002	1200 N Quaker Lane	0.24	7.25.2025
GRD2025-00016	106 E Braddock Road	0.1162	8.8.2025
GRD2025-00004	3107 Mosby Street	0.0401	8.8.2025
GRD2025-00024	3111 Circle Hill Road	0.2269	8.28.2025
GRD2025-00005	1303 Bishop Lane	0.2405	8.29.2025
GRD2025-00028	3400 Saylor Place	0.3286	9.3.2025
GRD2025-00022	24 N Donelson Street	0.2129	9.4.2025
DSUP2025-10001	2601 Cameron Mills Road	7.1	9.24.2025
GRD2025-00019	29 E Reed Avenue	0.1655	9.26.2025
DSUP2025-10009	5901 Stevenson Avenue	3.1283	9.29.2025
GRD2025-00032	4018 Seminary Road	0.9697	10.2.2025
GRD2025-00030	3102 Wilson Avenue	0.1945	10.15.2025
GRD2024-00033	501 N Union Street	5.37	10.15.2025
GRD2025-00027	1500 Ruffner Road	0.1969	10.27.2025
GRD2025-00040	13 E Windsor Avenue	0.1121	1.5.2026

Reference #	Address	Disturbed Acres	Release Date
GRD2025-00036	107 W Alexandria Avenue	0.1387	1.15.2026
GRD2025-00043	51 E Windsor Avenue	0.1579	1.21.2026
DSUP2024-10008	5216 Seminary Road	0.5008	2.2.2026
GRD2025-00052	319 LaVerne Avenue	0.1492	2.9.2026
GRD2025-00053	205 MacArthur Road	0.1179	2.12.2026
DSUP2024-10010	126 Longview Drive	0.99	2.12.2026
GRD2025-00045	1702 DeWitt Avenue	0.1179	2.18.2026
GRD2025-00050	2502 Leslie Avenue	0.1494	2.18.2025
GRD2025-00044	15 E Custis Avenue	0.2079	2.24.2026
GRD2025-00046	31002 Wilson Avenue	0.2125	2.26.2026
GRD2025-00049	2307 Randolph Avenue	0.1341	2.27.2026
DSP2025-00005	301 King Street	1.53	3.3.2026
GRD2025-00042	3524 Saylor Place	0.12	3.9.2026
GRD2025-00038	1608 Frost Street	0.3787	3.9.2026
DSUP2023-10019	5001 Eisenhower Avenue	3.17	3.9.2026
GRD2025-00047	3663 Trinity Drive	0.292	3.11.2026
GRD2025-00051	3701 Cameron Mills Road	0.1805	3.16.2026
GRD2025-00054	2 W Howell Avenue	0.1605	3.17.2026
GRD2026-00003	2700 Bryan Place	0.2244	4.7.2026
GRD2025-00037	218 E Spring Street	0.1004	4.8.2026
GRD2026-00005	1308 Bayliss Drive	0.2264	4.8.2026
GRD2025-00041	22 W Wyatt Avenue	0.208	4.23.2026
GRD2026-00002	103 E Monroe Avenue	0.1517	4.28.2026
GRD2026-00006	210 E Mason Avenue	0.121	4.28.2026
GRD2026-00007	1419 Janney's Lane	0.7325	5.7.2026
GRD2026-00009	1000 Janney's Lane	0.2864	5.18.2026
GRD2026-00011	413 E Nelson Avenue	0.1772	5.19.2026
GRD2026-00010	4001 Lawrence Avenue	0.1969	5.19.2026
GRD2026-00018	102 E Monroe Avenue	0.1581	5.19.2026
GRD2026-00012	412 E Nelson Avenue	0.1506	5.26.2026
PRK2025-00002	1010 Douglas Street	0.5	6.18.2026

The City performed a total of 1,463 onsite inspections – 1,293 outside of the MS4 boundary and 170 inside of the MS4. As described in the MS4 Program Plan, T&ES-C&I inspectors perform other duties beyond E&SC inspections. For this reason, inspectors may visit a site up to two times daily. During this time, inspectors may provide verbal direction regarding E&SC and stormwater measures. This verbal direction is considered formal but may not always be documented formally in an inspection report unless a required inspection and report is due, or if a major corrective action is required. Due to this enhanced oversight, City inspectors provide continual direction to keep a site in good condition. During

the permit year, the City issued one Stop Work Order and accompanying Notice of Corrective Action for construction-site noncompliance. The contractor promptly implemented the required corrective measures and completed remediation in accordance with applicable procedures. The matter was resolved without further enforcement action.

The applicable City staff have obtained DEQ certifications (Stormwater Management Program Administrator, Plan Reviewer, and/or Inspector) or are in the process of obtaining these certifications. All applicable staff are currently fully certified, provisionally certified, or have the necessary training scheduled.

3.5 Post Construction Stormwater Management for New Development and Development on Prior Developed Lands (MCM #5)

MCM #5: Post Construction Stormwater Management for New Development and Development on Prior Developed Lands (Permit Reference: Part I.E.5.e.)

The annual report shall include the following information:

- (1) If the traditional permittee implements a VSMP in accordance with Part I E 5 a (1), (2), or (3):*
 - (a) The number of privately owned stormwater management facility inspections conducted; and*
 - (b) The number of enforcement actions initiated by the permittee to ensure long-term maintenance of privately owned stormwater management facilities including the type of enforcement action;*
- (2) Total number of inspections conducted on stormwater management facilities owned or operated by the permittee;*
- (3) A description of the significant maintenance, repair, or retrofit activities performed on the stormwater management facilities owned or operated by the permittee to ensure it continues to perform as designed. This does not include routine activities such as grass mowing or trash collection;*
- (4) For traditional permittees as specified in Part I E 5 a (1), a confirmation statement that the permittee submitted stormwater management facility information through the Virginia Construction Stormwater General Permit database for those land disturbing activities for which the permittee was required to obtain coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities in accordance with Part III B 1 or a statement that the permittee did not complete any projects requiring coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities (9VAC25-880);*
- (5) A confirmation statement that the permittee electronically reported stormwater management facilities using the DEQ BMP Warehouse in accordance with Part III B 1 and 2; and*
- (6) A confirmation statement that the permittee electronically reported stormwater management facilities inspected using the DEQ BMP Warehouse in accordance with Part III B 5.*

The following table is a summary of activities for Minimum Control Measure #5 and their completion status. Additional detail is provided after the table and in Appendix E.

Table 10. *Summary of Activities for MCM #5*

BMP/Task	Year	Measurable Goal	Status
5A Stormwater Facility BMP Inventory			
Maintain an updated electronic BMP database for reporting.	All	Provide a table and electronic spreadsheet of all BMPs brought online during the reporting period.	✓ Complete
5B Stormwater Facility BMP Maintenance Agreements and Guidelines			
Require the proper execute and recordation of BMP maintenance agreements.	All	Provide a sample of a properly executed and recorded BMP agreement.	✓ Complete
BMP/Task	Year	Measurable Goal	Status
5C Implement Bay Act and Local VSMP Authority			
Continue to implement the Environmental Management Ordinance.	All	Comply with DEQ Bay Act reporting and review requirements and implement the ordinance.	✓ Complete
5D Stormwater Facility BMP Design Guidelines			
Require adherence to Virginia BMP Clearinghouse and Virginia BMP Handbook.	All	Ensure design is consistent with VSMP regulations and summarize any changes to standards.	✓ Complete
5E Public Stormwater BMP Facility Inspection and Maintenance			
Inspect public BMP facilities for proper operation at least once annually.	All	Document the number of BMPs inspected each year and provide summary information.	✓ Complete
5F Private Stormwater BMP Facility Inspection and Enforcement			
Inspect all BMP facilities for proper operation at least once during the permit period.	All	Document total number of inspections completed, and the number of enforcement actions, when applicable.	✓ Complete

BMP 5A VESMP Implementation

The City amended Article XIII of the Zoning Ordinance - the Environmental Management Ordinance - for consistency with VSMP regulations and maintained consistency with the Chesapeake Bay Act requirements and received provisional approval as a local VSMP authority effective July 1, 2014, and

received full approval in November 2014. The City amended the EMO to reflect the Virginia Erosion and Stormwater Management Program (VESMP) effective July 1, 2024.

The City continues to implement a stormwater management program, including design standards, that are compliant with the Chesapeake Bay Preservation Area Designation and Management Regulations and the VSMP regulations, as incorporated in the EMO. Section 13-109 of the EMO, requires that development and redevelopment projects subject to VSMP Part II.B technical criteria conform to the design specifications of the Virginia BMP Clearinghouse for stormwater facility BMPs, and utilize the Virginia Runoff Reduction Method spreadsheet to demonstrate compliance with water quality and quantity requirements. Projects considered “grandfathered” and those meeting the “time limits” associated with coverage under the construction general permit are subject to Part II. C technical criteria and may use stormwater facility BMPs previously approved by the City and adhere to the design guidelines in the Alexandria Supplement to the Northern Virginia BMP Handbook. The City has also adopted a Green Building Policy that includes a requirement for all new private development and redevelopment projects to meet a minimum of 65% of their state phosphorous reductions using green infrastructure, which was first promulgated through a [“Use of manufactured/Proprietary Stormwater BMPs”](#) memo to industry. The Green Building Policy require City projects must meet 100% of their state phosphorous reductions through green infrastructure.

Consistent with the Consolidated Regulations effort at the state level, on April 13, 2024, the City Council adopted amendments to Article XIII of the Alexandria Zoning Ordinance (the Environmental Management Ordinance) in accordance with Text Amendment No. 2024-0003 by authority of §§ 62.1-44.15:24 - 62.1-44.15:50, Code of Virginia. On this date the City Council also adopted the amendments to Title 5, Chapter 4 of the City Code (the Erosion and Sediment Control Ordinance). These consolidated regulations combine both the Virginia Erosion and Sediment Control Program and the Stormwater Management Program into one regulatory chapter: VESMP, 9VAC25-875, as amended.

Measure of Effectiveness

A copy of the approval letter designating the City as a local VSMP authority and a copy of the City’s adopted ordinance is provided in Appendix E. Updates to ordinances, policies, and procedures to administer the local VESMP were made effective July 1, 2024, and the MS4 Program Plan was updated accordingly.

Consistent with the Consolidated Regulations effort at the state level, on April 13, 2024, the City Council adopted the amended Article XIII of the Alexandria Zoning Ordinance (the Environmental Management Ordinance) in accordance with Text Amendment No. 2024-0003 by authority of §§ 62.1-44.15:24 - 62.1-44.15:50, Code of Virginia. On this date the City Council also adopted the amendments to Title 5, Chapter 4 of the City Code (the Erosion and Sediment Control Ordinance). These consolidated regulations combine both the Virginia Erosion and Sediment Control Program and the Stormwater Management Program into one regulatory chapter: VESMP, 9VAC25-875, as amended.

BMP 5B Public Stormwater Facility Inspection and Maintenance

Pursuant to the general permit, the City inspects public facilities at least once every year. The inspections are performed according to the written policies and procedures entitled *Policies and Procedures for Post-Construction BMP Inspection and Maintenance* which can be found in Appendix E of the City's MS4 Program Plan. The City inspected 155 publicly owned and operated stormwater facility BMPs including regional ecosystem restoration facilities. The following describes significant issues found during PY3:

- Two Vegetated Roof BMPs (2009-0101 01 & 2009-0101 02) were inaccessible at 301 King Street due to major renovation activities occurring on the property location. These facilities will be re-evaluated for inspection purposes during PY4.

Measure of Effectiveness

Stormwater management facilities inspection results have been electronically reported using the DEQ BMP Warehouse in accordance with Part III B 5. No updates to the MS4 Program Plan were deemed necessary.

BMP 5C Private Stormwater Facility Inspection and Enforcement

Pursuant to the general permit, the City inspects privately-owned stormwater facilities at least once every five years. Per Section 13-109 of the EMO, facility owners must perform periodic inspection and required maintenance to ensure the long-term functioning of the facilities as originally designed to protect water quality. The inspections are performed according to the written policies and procedures entitled *Policies and Procedures for Post-Construction BMP Inspection and Maintenance* which can be found in Appendix E of the City's MS4 Program Plan.

Measure of Effectiveness

Three-hundred and thirty-four (334) private stormwater facility inspections were completed this permit year, with no actions being sent out this permit year related to these inspections. Please note that additional enforcement actions may be taken in response to these inspections; however, these actions may not take place until the next reporting period since owners have 90 days to complete the maintenance. Stormwater management facilities inspection results have been electronically reported using the DEQ BMP Warehouse in accordance with Part III B 5. No updates to the MS4 Program Plan were deemed necessary.

BMP 5D Stormwater Facility Inventory, Database, and Warehouse Reporting

The City submitted stormwater management facility information through the Virginia Construction Stormwater General Permit database for those land disturbing activities for which the permittee was required to obtain coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities in accordance with Part III B 1. The City electronically reported stormwater management facilities using the DEQ BMP Warehouse in accordance with Part III B 1 and 2. Further, the City continues to use an internal database (Microsoft Access) to track all stormwater facilities and/or BMPs that were implemented to improve water quality.

Measure of Effectiveness

During this permit year, 24 stormwater management facilities and/or BMPs were installed in the City to improve water quality. These facilities have been included in the DEQ BMP Warehouse and in Appendix E, “Stormwater Management Facilities Installed this Permit Year.”

During this reporting period, there were no off-site nutrient credit purchases.

A map of the City’s stormwater management facilities and/or BMPs is provided in Appendix E. No updates to the MS4 Program Plan were deemed necessary.

BMP 5E Stormwater Facility Maintenance Agreements

The City continues to require the execution and subsequent recordation of Stormwater BMP Facilities Maintenance / Monitoring Agreement to ensure long term operation and maintenance of new BMPs per the EMO. In addition, staff have also created a BMP maintenance vendor list for use by facility owners and operators.

Measure of Effectiveness

A sample BMP maintenance agreement that was submitted during this permit year and a screen capture that the form may be downloaded from the City’s website are included in Appendix E. The City continues the program of mailing educational letters that include maintenance responsibilities to single-family property owners with on-lot BMPs. An example of the letter and sample maintenance information sent to single-family residential BMP owners during this permit year is also located in Appendix E. No updates to the MS4 Program Plan were deemed necessary.

3.6 Pollution Prevention and Good Housekeeping for Facilities Owned or Operated by the Permittee within the MS4 Service Area (MCM #6)

MCM #6: Pollution Prevention and Good Housekeeping for Facilities Owned or Operated by the Permittee within the MS4 Service Area (Permit Reference: Part I.E.6.y.)

The annual report shall include the following information:

- (1) A summary of any written procedures developed or modified in accordance with Part I E 6 a and b during the reporting period;*
- (2) A confirmation statement that all high-priority facilities were reviewed to determine if SWPPP coverage is needed during the reporting period;*
- (3) A list of any new SWPPPs developed in accordance Part I E 6 i during the reporting period;*
- (4) A summary of any SWPPPs modified in accordance with Part I E 6 j, 6 l, or 6 m;*
- (5) The rationale of any high-priority facilities delisted in accordance with Part I E 6 l or m during the reporting period;*
- (6) The status of each nutrient management plan as of June 30 of the reporting year (e.g., approved, submitted and pending approval, and expired);*
 - (7) A list of the training activities conducted in accordance with Part I E 6 d, including the following information: (a) The completion date for the training activity;*
 - (b) The number of employees who completed the training activity; and (c) The objectives and good housekeeping procedures covered by the training activity.*

For the purposes of this annual report, municipal facilities are those facilities owned or operated by the City.

The following table is a summary of activities for Minimum Control Measure #6 and their completion status. Additional details are provided after the table and in Appendix F.

Table 11. Summary of Activities for MCM #6

BMP	Measurable Goal	Status
6A Written Pollution Prevention and Good Housekeeping Procedures		
Implement Standard Operating Procedures for Daily Operations	Document any updates to SOPs and any new SOPs.	✓ Complete
6B Stormwater Pollution Prevention Plans for High-Priority Facilities		
Implement SWPPPs and annually review and add/remove as necessary	Document any new facilities requiring SWPPPs or any removed. Continue to implement SWPPPs.	✓ Complete
6C Turf and Nutrient Management Plans		

BMP	Measurable Goal	Status
Implement Turf and Nutrient Management Plans and annually review and add/remove as necessary	Document any new areas requiring turf and nutrient management plans or any removed. Continue to implement SWPPs.	✓ Complete
6D Prohibiting Deicing Agents with Urea		
Ensure that the City did not use deicing agents that included urea.	Statement that the City didn't use deicing agents that included urea.	✓ Complete
6E Contractor Controls and Oversight		
Ensure proper procedures and controls are implemented by City contractors.	Document any changes to process or procedures.	✓ Complete
6F Training		
Conduct annual training to applicable employees. Training topics will rotate each year between recognizing illicit discharge and pollution prevention and good housekeeping.	A summary report on the required training, including a list of training events, the training date, the number of employees attending training and the objective of the training.	✓ Complete
6G Street Sweeping and Leaf Collection Programs		
Continue to implement the City's street sweeping and leaf collection programs.	Document lane miles swept and cubic yards of debris collected. Document the amount of leaves collected.	✓ Complete
6H Catch Basin and Inlet Cleaning Program		
Continue the City's catch basin and inlet cleaning program.	Document the number of catch basins and inlets cleaned.	✓ Complete
6I Employee Complaint Reporting Program		
Continue to implement the "Report a Problem" program.	Document ongoing implementation.	✓ Complete
6J Environmental Stakeholder Groups		

BMP	Measurable Goal	Status
Participate in Environmental Stakeholder Groups	Presentation with the City's Environmental Policy Commission	✓ Complete

BMP 6A Written Pollution Prevention and Good Housekeeping Procedures

Part I.E.6.a – b. of the permit requires the maintenance and implementation of written procedures for public facilities for best practices for good housekeeping procedures to prevent stormwater pollution. During the 2013-2018 permit cycle, the City developed standard operating procedures (SOPs) to minimize or prevent pollutant discharge from daily operations such as road, street, and parking lot maintenance; equipment maintenance; and the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers. These SOPs were reviewed during PY2 against the requirements outlined in the 2023-2028 MS4 General Permit.

The City continues to implement these SOPs and are utilized as part of the employee training program in accordance with Permit Part I.E.6.d. These SOPs will be reviewed during this permit cycle to ensure they include up-to-date information and effective procedures. New SOPs will be developed in accordance with the 2023-2028 MS4 General Permit, as required.

Measure of Effectiveness

The SOPs for Daily Operations are included in Appendix F of the City's MS4 Program Plan for those applicable operations. No SOPs required updating during this permit year. No updates to the MS4 Program Plan were deemed necessary.

BMP 6B Stormwater Pollution Prevention Plans for High-Priority Facilities

During the 2013-2018 permit cycle, the City identified its high-priority municipal facilities that may require the development and implementation of a SWPPP. This list was further refined for those high-priority municipal facilities with a high potential for discharging pollutants. Also completed during the previous permit cycle, the City developed an inspection checklist to be used at municipal facilities. The checklist covers good housekeeping practices, material storage and handling, as well as maintenance practices. The checklist is included in the SWPPPs developed for applicable municipal facilities.

The City continues to maintain and implement the SWPPPs for the identified municipal facilities. Facilities implementing SWPPPs keep an updated copy onsite, and SWPPPs have been incorporated into the pollution prevention training given to municipal employees.

Measure of Effectiveness

The following table provides the list of the municipal facilities with SWPPPs along with other pertinent information. Upon review of the City’s municipal facilities, no additional SWPPPs were developed or removed during the permit year. The Site Activity category was updated to reflect the language in 9VAC25-890-1 as reflected in the MS4 Program Plan for these facilities. Periodic inspections continue to be completed and documented in the SWPPPs.

Table 12. Summary Public Facilities with SWPPPs

Facility	Facility Location	Site Activity	SWPPP Location
Middle Yard at 3220 Colvin Street (“Sign Shop”)	3220 Colvin Street	Long-Term Bulk Materials Storage	3220 Colvin Street
Household Hazardous Waste & Electronics Recycling Center	3224 Colvin Street	Solid Waste handling and Transfer Recycling	2900-B Business Center Dr. – Resource Recovery Office
Equipment and Materials Storage and Vehicle Wash Facility	133 South Quaker Lane	Anti-Icing and Deicing Agent Storage, Handling, and Transfer Equipment Storage, Cleaning, and Maintenance Long-Term Bulk Materials Storage Permittee-Owned or Operated Vehicle Washing	2900-B Business Center Dr. – Operations Office
Material Storage Yard	3130 Business Center Drive	Equipment Storage Long-Term Bulk Materials Storage	2900-B Business Center Dr. – Operations Office
Field Operations Center	2900-A/B Business Center Drive	Anti-Icing and Deicing Agent Storage, Handling, and Transfer Equipment Storage	2900-B Business Center Dr. – Operations Office
Leaf Mulch Facility	4125 Eisenhower Avenue	Composting Equipment Storage Long-Term Bulk Materials Storage Recycling	2900-B Business Center Dr. – Operations Office
Transportation Division Impound Lot	5249 Eisenhower Avenue	Vehicle Storage	5249 Eisenhower Avenue
Impound Lot	3000 Business Center Drive	Vehicle Storage	5249 Eisenhower Avenue

Facility	Facility Location	Site Activity	SWPPP Location
Vehicle and Equipment Maintenance Center	3550 Wheeler Avenue	Vehicle Maintenance and Storage Equipment Storage	3550 Wheeler Avenue
Fuel Island	3400 Duke Street	Long-Term bulk Materials Storage	3550 Wheeler Avenue
Impound Lot – Taylor Drive	314 E Taylor Run Pkwy	Vehicle Storage	5249 Eisenhower Avenue

BMP 6C Turf and Nutrient Management

Part I.E.6.p of the permit requires the maintenance and implementation of turf and landscape nutrient management plans (NMPs) that were developed during the permit cycle. These plans were developed for municipal properties where nutrients were applied to more than one contiguous acre.

The list of municipal lands where nutrient management plans are required and have been completed is included in the MS4 Program Plan. This list includes the location and corresponding acreage for each plan and will be updated as needed. Per the requirements in the 2023-2028 MS4 General Permit, the status of these plans is included in this annual report.

Measure of Effectiveness

Table 13 provides the status of the 22 nutrient management plans representing 80.5 acres. All are approved and none are pending or expired.

Table 13. Status of Nutrient Management Plans for More than One-Acre

Facility	Street Address	Status
Angel Park	201 W. Taylor Run Parkway	Approved
Armistead Boothe Park	520 Cameron Station Blvd	Approved
Ben Brenman Park	4800 Ben Brenman Park Dr.	Approved
Braddock Park	1005 Mt. Vernon Ave	Approved
Charles Barrett Elementary School	1115 Martha Custis Drive	Approved
Chinquapin Park	3210 King St.	Approved
Founders Park	351 North Union Street	Approved
Four Mile Run Park	3700 Commonwealth Ave	Approved
George Washington Middle School	1005 Mt. Vernon Ave	Approved
Harborside Park	487 S. Union St	Approved
Hensley Park	4200 Eisenhower Ave	Approved
Luckett Park	3540 Wheeler Ave	Approved

Facility	Street Address	Status
Lyles-Crouch Traditional Academy	530 S St Asaph St.	Approved
Montgomery Park	901 North Royal Street	Approved
Mount Vernon Community Center	2601 Commonwealth Ave.	Approved
Oronoco Park	100 Madison Street	Approved
Polk Elementary School	5000 Polk Ave.	Approved
Potomac Yards Park	2501 Potomac Ave	Approved
Rivergate Park	2 Montgomery Street	Approved
Simpson Park	426 E. Monroe Ave	Approved
West Point	1 Oronoco St.	Approved
Windmill Hill Dog Park	501 South Union Street	Approved

BMP 6D Prohibiting Deicing Agents with Urea

Nutrients, if improperly applied, have the potential to pollute the local waterways, the Potomac River and the Chesapeake Bay. Part I.E.6.1.b. of the permit prohibits the use of deicing agents containing urea or other forms of nitrogen or phosphorus to parking lots, roadways, and sidewalks, or other paved surfaces.

Measure of Effectiveness

The City did not apply deicing agents containing urea or other forms of nitrogen or phosphorus to roadways, parking lots, sidewalks, or other paved surfaces during this reporting period, consistent with the SOP. No updates to the MS4 Program Plan were deemed necessary.

BMP 6E Contractor Controls and Oversight

The City continues to ensure that contractors working on behalf of the City follow procedures and employ required control measures to ensure that operations do not contribute to stormwater pollution. SOPs for pesticide and herbicide application place requirements on contractors. City employees charged with oversight of City capital projects receive annual water quality training. City capital improvement projects include pollution prevention language. The City will continue to implement this BMP and report on changes annually.

Measure of Effectiveness

During the permit year, the City continued to implement SOPs (described under BMP 6A), required necessary permits and certifications, had necessary language in contracts, and provided water quality training to City employees charged with oversight of City capital projects. No updates to the MS4 Program Plan were deemed necessary.

BMP 6F Training

Staff whose normal duties require a considerable amount of field work play a valuable role in identifying and addressing illicit discharges. Employees performing applicable duties shall be trained in recognizing and reporting illicit discharges no less than once every 24-months. Training provides the appropriate

tools for field staff to recognize, document relevant information and report the incident for follow up by the appropriate staff.

City staff engages in daily activities that have the potential to adversely impact water quality. The likelihood of these impacts occurring may be minimized or avoided by providing staff training on pollution prevention and good housekeeping. Employees performing applicable duties shall be trained in pollution prevention and good housekeeping no less than once every 24-months.

In addition, employees hired by the City who apply pesticides and herbicides shall be trained or certified in accordance with the Virginia Pesticide Control Act. Certification by the Virginia Department of Agriculture and Consumer Services (VDACS) Pesticide and Herbicide Applicator program shall constitute compliance with this requirement.

The City's employees and contractors serving as plan reviewers, plan inspectors, program administrators, construction site operators and those implementing the City's stormwater program will obtain and maintain the appropriate certification as required under the Virginia Erosion and Sediment Control Law and the Virginia Stormwater Management Act. The employees whose duties include emergency response will be properly trained in spill reporting which may be satisfied through a larger emergency response training program.

Measure of Effectiveness

The T&ES-SWM continues to provide annual training in compliance with the permit and the City's MS4 Program Plan. This program year's (PY3) training focused on Illicit Discharge Detection and Elimination; approximately 160 field staff received training. During PY3, training was administered via an in-person format at the Transportation & Environmental Services Field Services Office, Fleet Services, and 3200 Colvin Street. Training also was delivered virtually to General Services. Staff were all trained in IDDE and Pollution Prevention and Good Housekeeping was briefly discussed, where applicable and when time allowed.

Table 14. Summary of IDDE Training

Date	Department	Trainees
5/14/26	Transportation & Environmental Services Fleet Services	15
4/20/26	Transportation & Environmental Services Resource Recovery, Refuse Collection & Street Cleaning	51
6/3/26	Transportation & Environmental Services Traffic Operations C&I	22
4/13/26	Transportation & Environmental Services Public Works Service Street and Sewer Maintenance	41
6/16/26	General Services – Facilities Maintenance (MS Teams / Virtual)	10
4/21/26	Recreation, Parks & Cultural Activities – Park Operations	21

BMP 6G Street Sweeping and Leaf Collection Programs

The City continues to implement a City-wide street sweeping program to remove possible sources of nutrients, sediment, and impacts to biological and chemical oxygen demand in order to protect local

waterways, the Potomac River and the Chesapeake Bay. Additionally, collected leaves are turned to mulch and provided to for use on residential lawns, which decreases the use of fertilizers.

Measure of Effectiveness

The City swept approximately 2,718 lane miles this permit year. The amount of street lane miles swept changes slightly each year depending on weather conditions and other factors. No updates to the MS4 Program Plan were deemed necessary.

The City's Curbside Leaf Collection program performed the following:

1. Distributed approximately 70,000 biodegradable bags to various locations throughout City facilities.
2. Total cubic yards collected: 18,394

BMP 6H Catch Basin and Inlet Cleaning Program

The City has a long-standing program to inspect and clean stormwater catch basins and inlets. The catch basin and inlet cleaning program is meant to both reduce spot flooding and drainage problems as well as to prevent materials, including floatables and vegetative debris captured in inlets, from continuing to local streams. Catch basin cleaning varies year by year depending on the weather.

Measure of Effectiveness

The City inspected 19,100 linear feet of stormwater lines via CCTV, inspected and cleaned 1,375 catch basins, and maintained 53 stormwater inlet structures. No updates to the MS4 Program Plan were deemed necessary.

BMP 6I Employee Complaint Reporting

The City continues to implement the "Report a Problem" program to empower employees to report problems, to include illicit discharges or issues with the functioning of City assets. The program provides a way of reporting problems associated with City infrastructure, including stormwater management.

Measure of Effectiveness

A hyperlink to the Alex311 reporting system is provided in Appendix F. The MS4 Program Plan has been updated to reflect the City's intranet is no longer being used for this function.

BMP 6J Environmental Stakeholder Groups

The City receives input on the stormwater program from several stakeholder groups including the Environmental Policy Commission (EPC), the Stormwater Work Group (SWWG), the Fire Department's Environmental and Industrial Use Unit (EIU), and the Eco-City Steering Committee.

The EPC is appointed by the City Council and makes recommendations on environmental issues, including stormwater management. The City Manager has established two internal stakeholder groups

to work on stormwater issues and make policy decisions to ensure regulatory compliance and shape the stormwater program. The Water Quality Steering Committee, transitioned into the Eco-City Alexandria Steering Committee during the final reporting period of the 2013-2018 permit and is comprised of deputy city managers, department heads, and staff from T&ES-IEQ, and is charged with making policy decisions and setting the course for the City's environmental programming under the Eco-City Alexandria initiative, which include Water Resources. The Stormwater Work Group (SWWG) is an internal stakeholder group comprised of interdepartmental City staff with the deputy director of IEQ as the chair, the division chief as alternate, and other supervisory level staff. The SWWG's mission is to develop and coordinate the City's response across various City departments to MS4 permit requirements, including the Chesapeake Bay TMDL. The SWWG is charged with supporting development of policy, programs and plans to administer the local VSMP program and the MS4 general permit. The EIU acts as the lead for coordination of environmental issues, including water quality investigation, enforcement, and documentation.

Measure of Effectiveness

During the program year, staff discussions occurred between the Stormwater Management Division and departments across the City.

3.7 Evaluation of MS4 Program Implementation

In accordance with Part I.D.2.e of the permit, the City undertook a comprehensive review and update of the MS4 Program Plan to align it with the reissued MS4 permit during PY1.

3.8 Chesapeake Bay TMDL

Finalized in December 2010 by the United States Environmental Protection Agency (EPA), the Chesapeake Bay TMDL and the associated Watershed Implementation Plans (WIPs) developed by the Commonwealth of Virginia, set limits on nitrogen, phosphorus and sediment entering the Bay. The 2013 – 2018 MS4 general permit included new special conditions to address the Chesapeake Bay TMDL to achieve 5% of the target reductions captured in the City's Phase 1 Action Plan. The subsequent 2018 – 2023 MS4 general permit contained special conditions requiring the City to meet a total of 40% of the targeted reductions for the Bay that were captured in the City's Phase 2 Action Plan.

Strategies identified in the Phase 1 and 2 Action Plans have been implemented to achieve 70% reductions, above the required total 40% reductions in the 2018 – 2023 MS4 general permit. The City's Chesapeake Bay TMDL Action Plan for 5% Reductions was approved in 2016 and the Phase 2 Action Plan was approved in 2019. It also can be found in Appendix G and incorporated into the MS4 Program Plan.

The Phase 3 Action Plan is developed in accordance with the 2023 – 2028 MS4 general permit and was submitted November 1, 2024, and revised March 2025. Figure 2 provides an overview of several BMP retrofit projects that help the City meet the Bay Special Conditions. Specific details for each project are included in the Bay TMDL Action Plan.



Figure 2. BMP Retrofit Projects

Table 15 provides a summary of the required reductions per permit cycle as of the 2018-2023 MS4 General Permit specific to Alexandria, VA, as indicated in the Phase 2 Chesapeake Bay Action Plan. The reduction requirement for TSS was removed from the 2023-2028 MS4 General Permit however, the City continues to track reductions for consistency purposes.

Table 15. *Summary of Required Reductions by Permit Cycle*

Phase	Permit Cycle	Required Reduction (%)	Nitrogen (TN) (lbs/yr)	Phosphorus (TP) (lbs/yr)	Suspended Solids (TSS) (lbs/yr)
1	2013-2018	5%	380	50	43,097
2	2018-2023	35%	2,659	351	301,678
3	2023-2028	60%	4,558	602	517,162
Total		100%	7,597	1,004	861,937

Progress made during this reporting period toward the Chesapeake Bay required pollutant reductions are presented in Table 16. Individual accounting for each BMP included in PY3 progress is included in Appendix E.

Table 16. *Progress during PY3 – Individual Facilities/Retrofits (July 1, 2025 – June 30, 2026)*

Project	TN Reductions (lbs/yr)	Percent of TN 100% Goal	TP Reductions (lbs/yr)	Percent of TP 100% Goal	TSS Reductions (lbs/yr)	Percent of TSS 100% Goal
Development SWM Facilities	22.4	0.29%	18.12	1.8%	8,503.78	0.79%

The City's overall progress toward meeting the Chesapeake Bay required pollutant reductions from Phase 1 and Phase 2 are presented in Table 17. Table 18 provides an overview of progress

towards the Bay TMDL goal through FY2026. The Chesapeake Bay TMDL Action Plan outlines the implementation strategies to achieve 100% compliance.

In September 2025, the City reviewed the full suite of BMPs reported to the Commonwealth of Virginia in compliance with the Chesapeake Bay TMDL. BMPs were reviewed for duplicates and the nutrient removal rates were calculated in accordance with current policy and regulations. This exercise produced more accurate pollution removals associated with Phase 1 which are an essential component of providing an accurate roadmap to 100% compliance by FY2028, as described in the Action Plan.

Table 17. Cumulative Progress for Phase 1 – 2

Cumulative Progress	TN Reductions (lbs/yr)	Percent of TN 100% Goal	TP Reductions (lbs/yr)	Percent of TP 100% Goal	TSS Reductions (lbs/yr)	Percent of TSS 100% Goal
Phase 1 (2013-2018)	2,609	34%	342	34%	335,469	39%
Phase 2 (2018-2023)	2,675	35%	365	35%	241,332	28%
Cumulative Phase 1 – 2	5,284	70%	707	70%	576,801	67%

Table 18. Cumulative Progress through PY3

Cumulative Progress	TN Reductions (lbs/yr)	Percent of TN 100% Goal	TP Reductions (lbs/yr)	Percent of TP 100% Goal	TSS Reductions (lbs/yr)	Percent of TSS 100% Goal
Cumulative Phase 1 – 2	5,284	70%	707	70%	576,801	67%
FY2024 (PY1)	758.9	10%	276.9	28%	499,169.2	58%
FY2025 (PY2)	50.87	0.67%	9.04	0.9%	4,256.16	0.49%
FY2026 (PY3)	22.4	0.29%	18.12	1.8%	8,503.78	0.79%
Progress to Date	6116.17	80.5%	1011.06	100.7%	1,088,631.47	125.98%

3.9 Local TMDLs

The City has four existing TMDLs with an approved WLA for the MS4 area, two of which were approved prior to July 2008 and two of which were approved between July 2008 and June 2013.

A TMDL for bacteria related to fecal coliform was approved in 2004 for the non-tidal portion of Four Mile Run, and in 2007 a TMDL for PCBs was approved for the Tidal Potomac watershed. Given that these TMDLs were approved prior to July 2008, TMDL Action Plans were completed by June 30, 2015, and were submitted with the permit year 2015-2016 Annual Report.

In 2010, the SWCB issued approval of bacteria TMDLs for Tidal Four Mile Run, and the Hunting Creek, Cameron Run, and Holmes Run watersheds. In both recent TMDLs, bacterial water quality is based on levels of *E. coli*. Since these TMDLs were approved between July 2008 and June 2013, the corresponding TMDL Action Plans were completed by June 30, 2016, and were submitted with the 2016-2017 annual report. Based on guidance and conversations with DEQ staff, the City developed a comprehensive Bacteria TMDL Action Plan that addresses bacteria impairments for those affected watersheds. Beginning with the Non-Tidal Four Mile Run TMDL Action Plan which was due by June 30, 2015, the City incorporated the successive TMDLs for Hunting Creek, Cameron Run, and Holmes Run to create a comprehensive Bacteria TMDL Action Plan.

In accordance with the permit, these Local TMDL Action Plans were updated prior to May 2020 (18 months after the permit effective date). The permit also has a requirement for plans to be developed for TMDLs approved by EPA between July 1, 2013, and June 30, 2018, that have WLAs no later than May 2021 (30 months after permit effective date); however, the City does not have any new TMDLs that meet this criteria. Part II.B.3 of the permit provides a list of items to be included in each Local TMDL Action Plan. Based on the type of TMDL (bacteria, sediment, phosphorus, nitrogen, or PCBs), there is list of different strategies the City must choose from to address the impairments.

The City of Alexandria's Bacteria TMDL Action Plan was updated in 2020 after a 15-day public comment period (no comments were received). This Action Plan is found in Appendix G. Information pertaining to the updates are found in the PY2 Annual Report. DEQ completed their review and found the Plan acceptable on April 13, 2022. This Action Plan was revised pursuant to the 2023-2028 MS4 General Permit and submitted to the Department on April 30, 2025. To satisfy the public comment requirement in the current MS4 Permit, the City sent out a notice via eNews on April 1, 2025, inviting the public to comment from April 1 – April 18. No public comments were received.

The City of Alexandria's Tidal Potomac PCB TMDL Action Plan was updated in 2020 after a 15-day public comment period (no comments were received). This Action Plan is found in Appendix G. Information pertaining to the updates are found in the PY2 Annual Report. DEQ completed their review of the updated Action Plan and found it acceptable on April 13, 2022. This Action Plan was revised pursuant to the 2023-2028 MS4 General Permit and submitted to DEQ on April 30, 2025. To satisfy the public comment requirement in the current MS4 Permit, the City sent out an eNews on April 1, 2025, inviting the public to comment from April 1 – April 18. No public comments were received.

Actions taken pursuant to these updated TMDL action plans are in alignment with the education and outreach and public participation sections of the MS4 Program Plan and are included in this Annual Report under MCM #1 and #2 for pet waste (bacteria). In addition, the City developed best management practices regarding BMPs as documented in the June 30, 2015, Tidal Potomac PCB TMDL Action Plan.

The Action Plan is currently being implemented and includes the following BMPs:

1. City will include standard condition language for all site plan (DSP and DSUP) requiring a site characterization for PCBs during the redevelopment of a property where PCBs have been historically used or stored; or during the redevelopment of a property that falls into a DEQ identified high risk category for PCBs. The language was updated in permit year

2015-2016 and was included in all site plan reviews, placing the onus on the developer to perform due diligence; and is reviewed by the City.

2. The PCB brochure updated in PY4. The brochure educates residents and development community about PCBs and may be found on the website. Hyperlinks to the website and the brochure can be found in Appendix A.

4 Results of Information Collected and Analyzed

No information, including monitoring data, was required to be collected or analyzed under the City's permit.

5 MS4 Program Regional Efforts and Agreements

The City continues to participate in the Northern Virginia Regional Commission's Clean Water Partners (in collaboration with other local partners and permit holders) to conduct regional public education and outreach activities, as discussed in Section 3.1. A copy of the Clean Water Partners Agreement can be found in Appendix A of the City's MS4 Program Plan. The City does not rely on other government entities to satisfy permit obligations.

6 Approval Status of Qualifying Local Programs

The City relies on implementation of the Erosion and Sediment Control Ordinance, mandated by the Virginia Erosion and Sediment Control Regulations (VESCR), to help satisfy Minimum Control Measure #4 - Construction Site Stormwater Runoff Control. During permit year 2014-2015, the City's Erosion and Sediment Control (E&SC) Ordinance was reviewed and revised for consistency with amendments to the Virginia Stormwater Management Act and the Virginia Stormwater Management Program (VSMP) Regulations, and the renumbering of these, as well as the Virginia Erosion and Sediment Control Law (VESCL) and VESCR when administration of these programs was shifted from DCR to DEQ. The adoption of amendments to the City's E&SC ordinance during permit year 2014-2015 are discussed in BMP 4A.

In addition, the City relies on implementation of the EMO, mandated by the Virginia Chesapeake Bay Preservation Area Designation and Management Regulations, and the VSMP regulations as incorporated into the EMO, to help satisfy Minimum Control Measure #5 - Post Construction Stormwater Management.

The City's Erosion and Sediment Control Program has been reviewed and found consistent by the Virginia Soil and Water Conservation Board. In addition, the Chesapeake Bay Local Assistance Board (now superseded by the Virginia Soil and Water Conservation Board) has also found the City's Environmental Management Ordinance to be fully consistent with state regulations.

The City's approved VSMP Local Stormwater Management Program application included amendments to the EMO Ordinance for consistency with the new VSMP regulations and maintained the Chesapeake Bay Act requirements. The City received provisional approval as a local VSMP

authority effective July 1, 2014, and received full approval in November 2014. Documentation of approval is included in Appendix E.

Consistent with the Consolidated Regulations effort promulgated by the state level, on April 13, 2024, the City Council adopted amendments to Article XIII of the Alexandria Zoning Ordinance (the Environmental Management Ordinance) in accordance with Text Amendment No. 2024-0003 by authority of §§ 62.1-44.15:24 - 62.1-44.15:50, Code of Virginia. On this date the City Council also adopted the amendments to Title 5, Chapter 4 of the City Code (the Erosion and Sediment Control Ordinance). These consolidated regulations combine both the Virginia Erosion and Sediment Control Program and the Stormwater Management Program into one regulatory chapter: the Virginia Erosion and Stormwater Management Program (VESMP), 9VAC25-875, as amended.

Updates to ordinances, policies, and procedures to administer a local VESMP were made effective July 1, 2024.

7 Contact Information

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8 Appendices





**General VPDES Permit for
Small Municipal Separate Storm Sewer Systems**

Permit No. VAR040057

Year 3 Annual Report

July 1, 2025 – June 30, 2026

Appendix A

Minimum Control Measure #1, Public Education and Outreach

1. [Best Management Practices for Lawn Care Companies Brochure](#)
2. [Best Management Practices for Restaurant and Food Service Brochure](#)
3. [Best Management Practice for Automotive Garages and Service Centers Brochure](#)
4. [You Can Protect Alexandria Waterways Brochure](#)
5. [Pet Waste Brochure](#)
6. [Polychlorinated Biphenyls Brochure](#)
7. [Household Hazardous Waste & Electronics Recycling Program Pamphlet](#)
8. [Stormwater Utility Fee Credit Program for Residential Properties Informational Brochure](#)
9. [Stormwater Utility Fee Credit Program for Residential Condominium Associations Brochure](#)
10. BMP Sign Requirement on Plan Set with Storm Drain Marker
11. Sign for Stormwater Management Facilities
12. Photo of Stream Crossing Sign
13. [City's Stormwater Management Website](#)
14. City's Stormwater Management Website Metrics, FY2026
15. [City's Website with Information about Volunteering for Storm Drain Marking](#)
16. Sample eNews
17. Social Media Examples
18. Northern Virginia Region Commission 2026 Only Rain Survey (Clean Water Partners)
19. [Northern Virginia Clean Water Partners 2026 Summary](#)

BIORETENTION MAINTENANCE SCHEDULE:

Bioretention Area Maintenance Schedule and Guidelines

This document must be recorded as an addendum to the stormwater management/ BMP facilities operation and maintenance agreement

First Year Maintenance Guidelines

Successful establishment of bioretention areas requires that the following tasks be undertaken in the first year following installation:

- Initial inspections. For the first 6 months following construction, the bioretention area should be inspected at least twice after storm events that exceed 1/2 inch of rainfall.
- Spot reseeding. Inspect for bare or eroding areas in the contributing drainage area or around the bioretention area, and make sure they are immediately stabilized with grass cover.
- Watering. Watering is needed once a week during the first 2 months, and then as needed during first growing season (April-October), depending on rainfall.
- Remove and replace dead plants.

Routine Maintenance Guidelines

Bioretention areas must be inspected to ensure that they operate in good working condition and in accordance with the approved design and specifications. Items in need of repair must be immediately addressed.

Routine Maintenance Tasks	Frequency
Remove trash and debris	As needed
Check and repair eroded areas	Annually
Inspect for and remove excess sediment	Annually
Mow grass filter strips and bioretention turf cover	At least four times per year
Weed and rake mulch	Twice during the growing season
Inspect plant composition for consistency with approved plans and correct any deficiencies	Annually
Remulch to maintain a three inch layer	Annually
Prune trees and shrubs	Annually
Inspect for clogging or ponding water in the filter bed	Annually
Remove invasive plants	As needed
Replace dead or damaged plant material	As needed
Repair broken pipes	As needed
Remove sediment in pretreatment cells and inflows	Every 2-3 years
Replace the mulch layer	Every 3 years

BIORETENTION MATERIAL SPECIFICATIONS:

Material	Specification	Notes
Filter Media Composition	Filter Media to contain: 85%-88% sand 8%-12% soil fines 3%-5% organic matter in the form of leaf compost	The volume of filter media based on 110% of the plan volume, to account for settling or compaction.
Filter Media Testing	P-Index range = 10-30, OR Between 7 and 21 mg/kg of P in the soil media. CECs greater than 10	The media must be procured from approved filter media vendors.
Mulch Layer	Use aged, shredded hardwood bark mulch	Lay a 2 to 3 inch layer on the surface of the filter bed.
Alternative Surface Cover	Use river stone or pea gravel, coir and jute matting, or turf cover.	Lay a 2 to 3 inch layer of to suppress weed growth.
Top Soil For Turf Cover	Loamy sand or sandy loam texture, with less than 5% clay content, pH corrected to between 6 and 7, and an organic matter content of at least 2%.	3 inch surface depth.
Geotextile/Liner	Use a non-woven geotextile fabric with a flow rate of > 110 gal./min./sq. ft. (e.g., Geotex 351 or equivalent)	Apply only to the sides and above the underdrain. For hotspots and certain karst sites only, use an appropriate liner on bottom.
Choking Layer	Lay a 2 to 4 inch layer of sand over a 2 inch layer of choker stone (typically #8 or #89 washed gravel), which is laid over the underdrain stone.	
Stone Jacket for Underdrain and/or Storage Layer	1 inch stone should be double-washed and clean and free of all fines (e.g., VDOT #57 stone).	12 inches for the underdrain; 12 to 18 inches for the stone storage layer, if needed
Underdrains, Cleanouts, and Observation Wells	Use 6 inch rigid schedule 40 PVC pipe (or equivalent corrugated HDPE for micro-bioretention), with 3/8-inch perforations at 6 inches on center; position each underdrain on a 1% or 2% slope located not more than 20 feet from the next pipe.	Lay the perforated pipe under the length of the bioretention cell, and install non-perforated pipe as needed to connect with the storm drain system. Install T's and Y's as needed, depending on the underdrain configuration. Extend cleanout pipes to the surface with vented caps at the T's and Y's.
Plant Materials	Plant one tree per 250 square feet (15 feet on-center, minimum 1 inch caliper). Shrubs a minimum of 30 inches high planted a minimum of 10 feet on-center. Plant ground cover plugs at 12 to 18 inches on-center; Plant container-grown plants at 18 to 24 inches on-center, depending on the initial plant size and how large it will grow.	Establish plant materials as specified in the landscaping plan and the recommended plant list. In general, plant spacing must be sufficient to ensure the plant material achieves 80% cover in the proposed planting areas within a 3-year period. If seed mixes are used, they should be from a qualified supplier, should be appropriate for stormwater basin applications, and should consist of native species (unless the seeding is to establish maintained turf).

BIORETENTION BMP SIGNAGE

STORMWATER MANAGEMENT FACILITY

This Best Management Practice (BMP) facility helps to maintain the health of our streams, the Potomac River, and the Chesapeake Bay. It also helps to prevent flooding and stream erosion, promotes improved water quality, and protects aquatic life.

You are in the
Potomac River
Watershed

Report Problems to: (703) 746-6499

CITY OF ALEXANDRIA

Department of Transportation & Environmental Services

BIORETENTION AS-BUILT CHECKLIST

Construction Inspection Checklist: Bioretention

Project Name: _____ Address: _____
DSP/DSUP/GRD #: _____ Construction Start Date: _____
Contractor: _____ Telephone: _____
Certifying Professional: _____ Telephone: _____
BMP ID and General Location: _____

The certifying professional must be a Virginia licensed Professional Engineer, Landscape Architect or Land Surveyor

A certification is required pursuant to 9VAC25-870-55 of the Virginia Stormwater Management Regulations for all stormwater BMP facilities.

Inspectors should review the plans carefully and adjust these items and the timing of inspection verification as needed to ensure the intent of the design is met. The standard for design of this practice is based on the Virginia Stormwater BMP Clearinghouse.

Instructions:

- Mark each item as complete or write in "N/A" for those items that are not applicable.
- Fill in the blanks for requested information on dimensions, materials, etc.
- Provide one or more labeled photos for applicable items; check boxes indicate items that require photos. Photos requiring measurements (indicated with a dimension to be populated) must include visual verification (ruler, measuring tape, etc.).

Preconstruction Meeting

Complete	Photo	Description	Date
☐		The tentative schedule for construction has been identified and the requirements and schedule for interim inspections verified.	
☐		A pre-construction meeting with the contractor designated to install the bioretention area, the City SWM/ESC inspector, and the person completing this checklist has been conducted.	
☐		The SWPPP has been reviewed and requirements verified by the contractor, the person conducting inspections, and the City SWM/ESC inspector (projects over one acre of disturbance)	

BMP Construction Preparation

Complete	Photo	Description	Date
☐		The bioretention area has not been impacted during construction or has been remediated prior to installation.	
☐		All pervious areas of the contributing drainage areas have been adequately stabilized with a thick layer of vegetation or erosion control measures are still in place and stormwater has been diverted around the area.	
☐		Impervious cover draining to the BMP has been constructed and the area is free of equipment, vehicles, and material storage.	
☐	☐	Stormwater is diverted around the bioretention area and perimeter E&S controls to protect the BMP during construction have been installed.	

Excavation

Complete	Photo	Description	Date
☐		The area of bioretention excavation is marked and the size and location conform to the approved plan.	

Excavation (continued)

☐		If the excavation area has been used as a sediment trap, the bottom elevation of the proposed stone reservoir is lower than the bottom elevation of the existing trap.	
☐		Excavation bottom is scarified prior to placement of stone.	
☐	☐	Subgrade surface is free of rocks, roots, and large voids. (Voids may be refilled with base aggregate to create a level surface for the placement of aggregates and underdrain.)	
☐		No groundwater seepage or standing water is present. Any standing water is dewatered through an acceptable dewatering device and the design consultant has been notified.	
☐	☐	Excavation of the bioretention area has achieved proper grades and the required geometry. The area has been excavated from the sides to avoid soil compaction. Constructed dimensions: _____	
☐	☐	Sides of the excavation area are covered with geotextile; no tears or holes, or excessive wrinkles are present.	

Pretreatment, Filter Layer, Underdrain and Stone Reservoir Placement

Complete	Photo	Description	Date
☐	☐	Energy dissipaters and pretreatment practices (forebays, gravel diaphragms, etc.) are installed in accordance with the approved plan/design specifications.	
☐	☐	All aggregates (stone, sand, etc., as required) conform to the approved plan/design specifications.	
☐	☐	The impermeable liner (when required) is placed in accordance with manufacturer specifications and the approved plan.	
☐	☐	Filter fabric is installed on the sides only per the approved plan/design specifications.	
☐	☐	#57 stone is placed to achieve the required storage depth per the approved plan/design specifications. Depth of #57 stone: _____ ft.	
☐	☐	Underdrain size and perforations conform to the approved plan/design specifications. (if applicable) Underdrain Diameter: _____ inches Underdrain Material: _____ Underdrain Spacing: _____ ft. Perforation Size & Spacing: _____ inches Number of Cleanouts/Observation Wells: _____	
☐		Placement of underdrain(s), cleanouts/observation wells, and underdrain fittings are in accordance with the approved plan/design specifications.	
☐		Elevations of the underdrain(s) and outlet structure are in accordance with approved plan.	
☐	☐	The filter layer (choker stone/pea gravel/sand) is installed per the approved plan/design specifications. Choker material: _____ Depth of choker material: _____ inches	

Construction Inspection Checklist: Bioretention

Soil Media Placement			
Complete	Photo	Description	Date
☐		Soil media is certified by a supplier or contractor as conforming to the approved plan/design specifications.	
☐		Filter media is placed in 12-inch lifts to the top elevation of the bioretention area in accordance with the approved plan/design specifications. The filter media is raked to a level grade after final lift and the elevation has been verified after settlement. No machinery, vehicles, or other heavy equipment have been permitted to travel across the filter media.	
☐	☐	Filter media depth conforms to the approved plan/design specifications. Depth: _____ ft.	
☐		Side slopes of the ponding area are laid back at the required slope (no steeper than 3H:1V) in accordance with the approved plan/design specifications.	

Plant and Outlet Installation			
Complete	Photo	Description	Date
☐	☐	Riser, overflow weir, or other outflow structure is set to the elevation in the approved plan/design specifications and functional.	
☐	☐	Mulch composition and depth conform to approved plan/design specifications. Depth of mulch layer: _____ inches	
☐	☐	Ponding depth is in accordance with the approved plan/design specifications after plant and mulch placement. Depth of ponding area: _____ inches (above mulch, 12" maximum)	
☐	☐	Signs are installed per the approved plan.	
☐	☐	Plant installation conforms to the approved plan/design specifications and all plants are healthy.	
☐	☐	Final elevations and slopes within the bioretention area after plant and mulch installation match the approved plan elevations.	
☐	☐	Provide a photo of the completed BMP after completion of construction.	

Comments	Date

Construction Inspection Checklist: Bioretention

Comments (continued)	

All items checked above have been inspected by me (or by an individual under my responsible charge) and have been completed to my satisfaction and meet the approved plans and specification (or deviations as noted above).

Signature: _____ Date: _____

Certifying Professional's License Number (or Seal): _____

HYDRODYNAMIC AS-BUILT CHECKLIST

Construction Inspection Checklist: Hydrodynamic

Project Name: _____ Address: _____
DSP/DSUP/GRD #: _____ Construction Start Date: _____
Contractor: _____ Telephone: _____
Certifying Professional: _____ Telephone: _____
BMP ID and General Location: _____

The certifying professional must be a Virginia licensed Professional Engineer, Landscape Architect or Land Surveyor

A certification is required pursuant to 9VAC25-870-55 of the Virginia Stormwater Management Regulations for all stormwater BMP facilities.

Inspectors should review the plans carefully and adjust these items and the timing of inspection verification as needed to ensure the intent of the design is met. The standard for design of this practice is based on the Virginia Stormwater BMP Clearinghouse.

Instructions:

- Mark each item as complete or write in "N/A" for those items that are not applicable.
- Fill in the blanks for requested information on dimensions, materials, etc.
- Provide one or more labeled photos for applicable items; check boxes indicate items that require photos. Photos requiring measurements (indicated with a dimension to be populated) must include visual verification (ruler, measuring tape, etc.).

Preconstruction Meeting			
Complete	Photo	Description	Date
☐		The tentative schedule for construction has been identified and the requirements and schedule for interim inspections verified.	
☐		A pre-construction meeting with the contractor designated to install the hydrodynamic device, the City SWM/ESC inspector, and the person completing this checklist has been conducted.	
☐		The SWPPP has been reviewed and requirements verified by the contractor, the person conducting inspections, and the City SWM/ESC inspector (projects over one acre of disturbance)	

Hydrodynamic Device Construction			
Complete	Photo	Description	Date
☐	☐	Verify the type of hydrodynamic device installed: MTD Manufacturer: _____ MTD Name / Model: _____	
☐		Inflow pipe: _____ Diameter: _____ in. Material: _____ Invert-in elev. (if accessible) _____ Connection to the BMP structure is in accordance with manufacturer's specification. Type of connection: _____	
☐		Outflow pipe: _____ Diameter: _____ in. Material: _____ Invert-out elev. (if accessible) _____ Connection to the BMP structure is in accordance with manufacturer's specification. Type of connection: _____	

Hydrodynamic Device Construction (continued)			
☐		Conveyance/overflow structures are installed per the approved plan/design specifications. Type: _____ Dimensions: _____ Locations: _____	
☐		All sediment, debris, greases and oils removed from the device after final stabilization.	
☐	☐	Provide a photo of the completed BMP after completion of construction.	

Comments	Date

All items checked above have been inspected by me (or by an individual under my responsible charge) and have been completed to my satisfaction and meet the approved plans and specification (or deviations as noted above).

Signature: _____ Date: _____

Certifying Professional's License Number (or Seal): _____

APPROVED
SPECIAL USE PERMIT NO. 2023-10017

DEPARTMENT OF PLANNING & ZONING
M. Swidrak for K. Moritz 12.10.24
DIRECTOR DATE

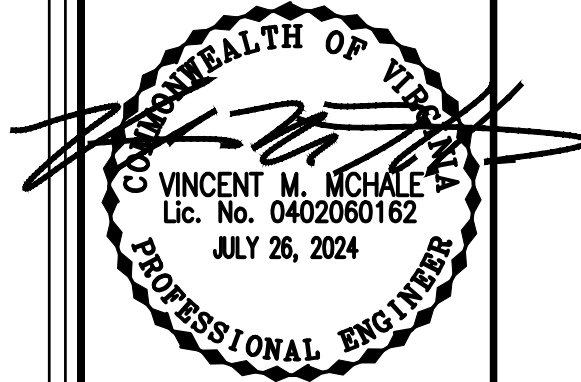
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. Lalit Sharma 12/11/2024
DIRECTOR DATE

[Signature] 12.10.24
CHAIRMAN, PLANNING COMMISSION DATE

DATE RECORDED _____

INSTRUMENT NO. _____ DEED BOOK NO. _____ DATE _____

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CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION

DESIGN: DJM
CHECKED: VMM
SCALE: NO SCALE
DATE: JUL 26, 2024

BMP DETAILS
AND
AS-BUILT
CHECKLISTS

SHEET **24** OF **38**
FILE: **23-045**



Appendix A | FY2026 Sign for Stormwater Management Facilities

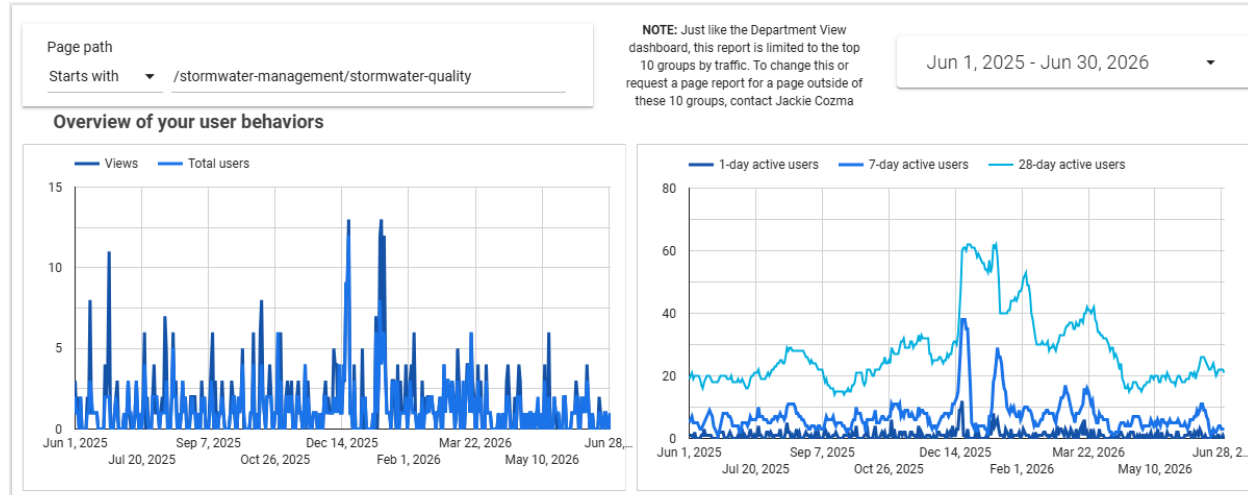


Appendix A | FY2026 Photo of Stream Crossing Sign

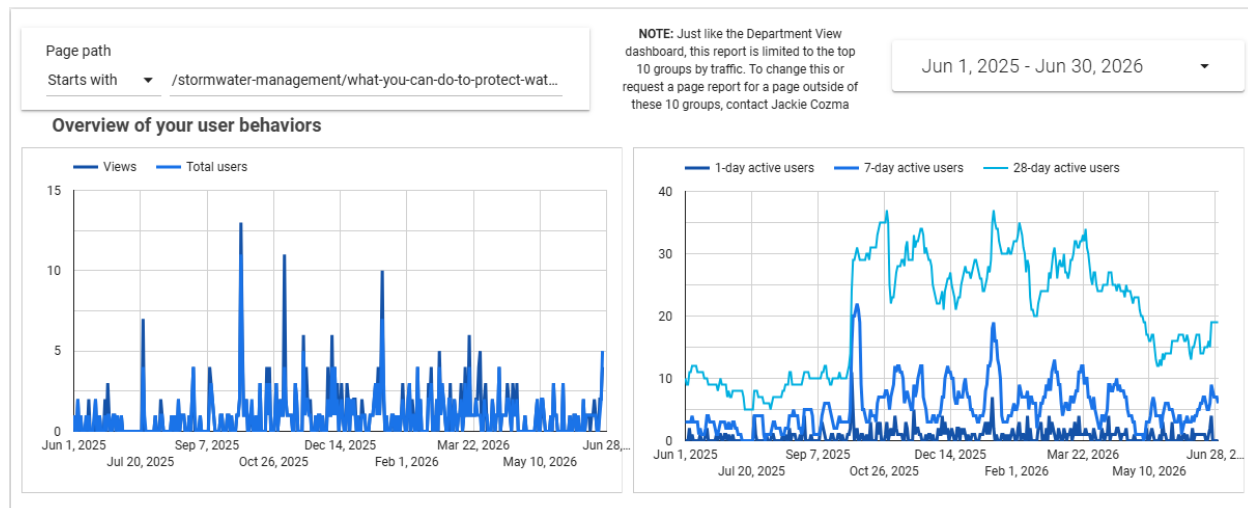
City of Alexandria PY3 MS4 Annual Report

Stormwater Web Page Analytics

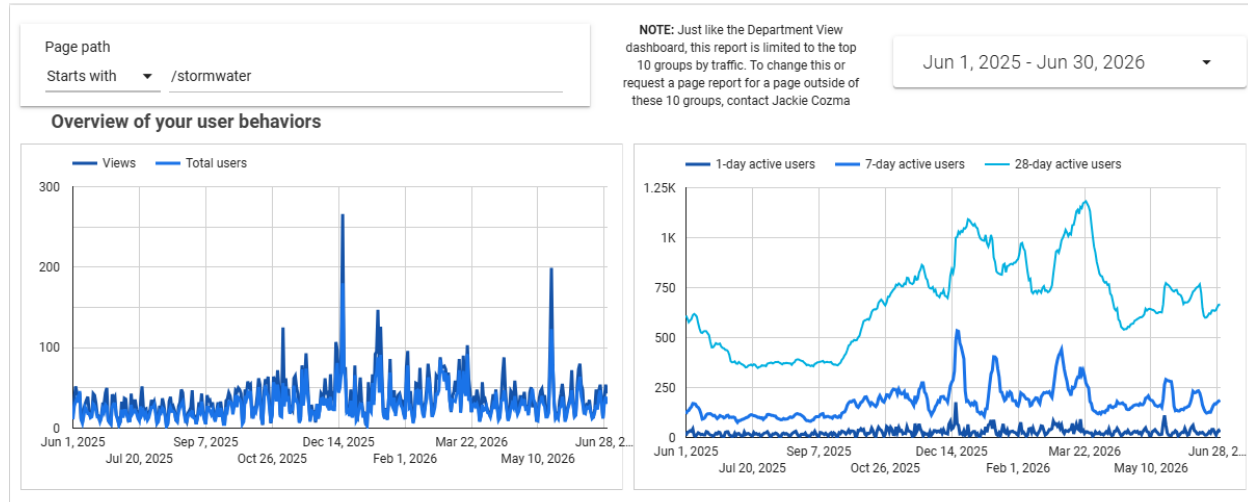
Stormwater Management: 2,204 Unique Page Views



Stormwater Quality: 597 Unique Page Views



What You Can Do: 397 Unique Page Views



From: Alexandria eNews <noreply@everbridge.net>
Sent: Monday, July 27, 2026 12:43 PM
To: Anthony Minnick
Subject: Learn and Take Environmental Action with Eco-City Alexandria

[Lea en español](#) [በአማርኛ ቋንቋ](#) [اقرأ باللغة العربية](#)

Learn and Take Environmental Action with Eco-City Alexandria

Eco-City Alexandria has two ways for residents to get involved in environmental action this fall. Whether you want to volunteer with your neighbors or learn more about local climate initiatives, check out these two opportunities:

Eco-City Academy

Eco-City Academy is a free program held over two Saturdays in September. The academy will give you an inside look at the City's climate, energy, and environmental goals. You'll talk with City staff, learn about Alexandria's Environmental Action Plan, and pick up hands-on ways to help build a greener, more resilient community.

- **What:** Hear from local climate experts, meet neighbors who care about sustainability, and help shape Alexandria's future.
- **When:** September 19 and 26 from 9:30 a.m. to 3:30 p.m.
- **Where:** Patrick Henry Recreation Center (4653 Taney Ave), Room C
- **Who Can Attend:** City of Alexandria residents 17 and older.
- **How to Apply:** Applications are due August 12. Apply online [Apply for Eco-City Academy Here](#)

For more information visit the [Eco-City Academy Webpage](#).

EcoAmbassadors Program

The EcoAmbassadors Program is a five-week program where you will learn the skills you need to help save energy, reduce utility bills, and promote sustainable living across Alexandria and Arlington.

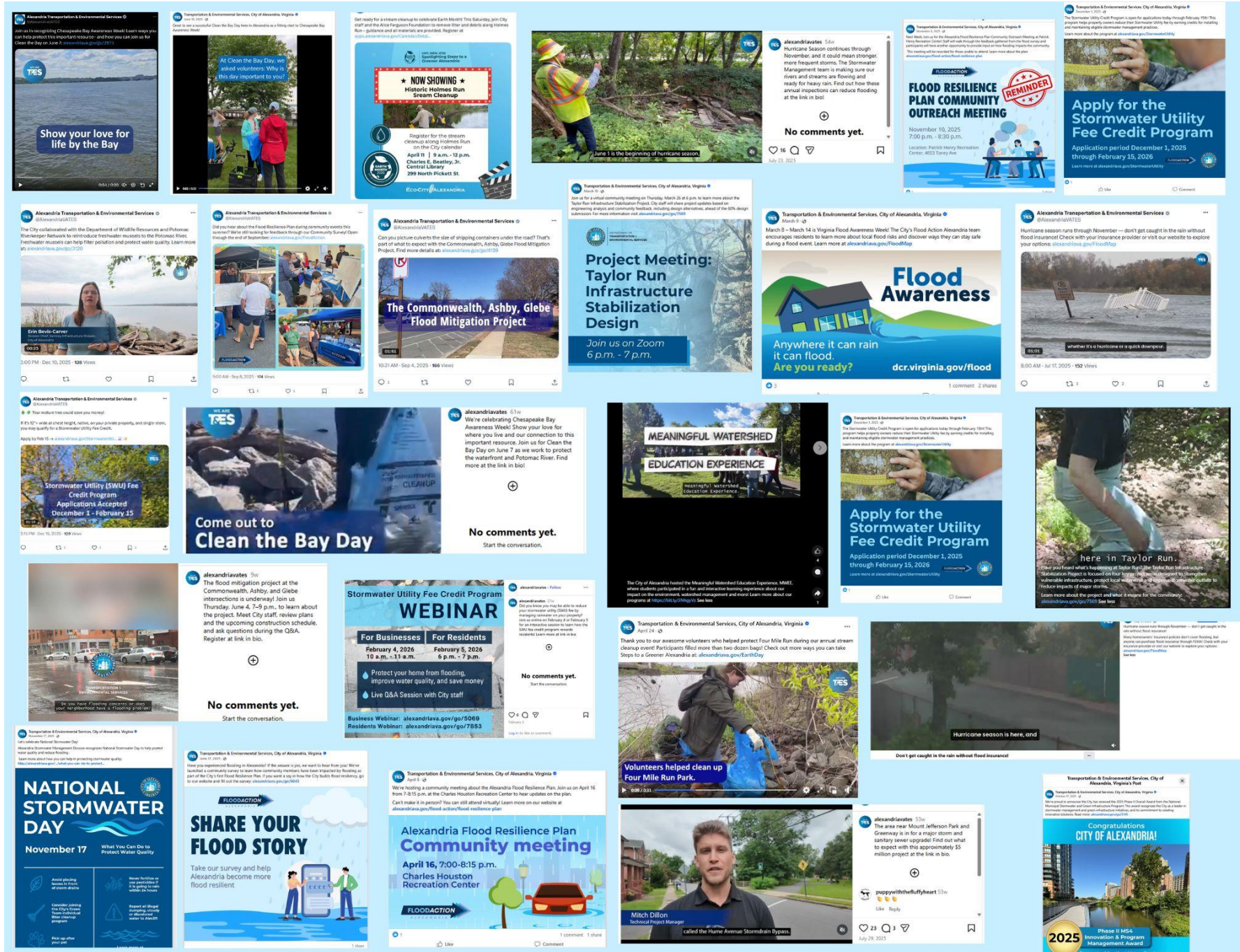
- **Eligibility:** Open to anyone ages 16 and older.
- **When:** Weekly trainings, Monday and Tuesday evenings 7:00 to 8:45 p.m. (Monday, 9/14, Tuesday, 9/22, Monday, 9/28, Monday, 10/5, Tuesday, 10/13, Monday 10/19).
- **Where:** The training locations will be published by late August. We are planning for these sessions to be held both in person and virtually, anticipating 80% in person and 20% virtual).
- **Details:** Run by EcoAction Arlington in partnership with the City of Alexandria and Arlington County.
- **How to Apply:** Applications are due August 31. [Apply for EcoAmbassadors Here](#)

For more information visit the [EcoAmbassadors Webpage](#).

If you prefer communication in another language, free interpretation and translation services are available. Please email LanguageAccess@alexandriava.gov or call 703.746.3960.

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City of Alexandria PY3 MS4 Annual Report - Social Media Post Examples



Northern Virginia Resident Stormwater Knowledge and Behavior Study

2026 Summary Report of Findings
July 31, 2026



Prepared for:
Northern Virginia Regional Commission

Prepared by:
Keisler Social & Behavioral Research

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1 INTRODUCTION AND APPROACH

Keisler Social & Behavioral Research (Keisler Research) was contracted by the Northern Virginia Regional Commission (NVRC) to conduct a survey of northern Virginia residents to capture knowledge, perceptions, beliefs, and behaviors surrounding stormwater and water pollution. The survey also assesses awareness and perceptions of two media campaigns conducted by the Northern Virginia Clean Water Partners (NVCWP) on stormwater drainage and water pollution, as well as awareness perceptions of NVCWP as an organization. The survey instrument is provided in the Appendix.

The survey was administered online in May 2026 on the Alchemer survey platform. Individuals that participate in Alchemer's survey panel, and other partner survey panels, were invited to participate in the survey. Compensation was provided in the form of points on the Alchemer panel system, which can be redeemed for gift cards, prize drawings, and retail deals. To qualify for the survey, respondents must have been 21 years of age or older at the time of participation and reside in of the following cities and counties in northern Virginia: Fairfax County, Loudoun County, Prince William County, Stafford County, Arlington County, and Alexandria.

2 SUMMARY OF 2026 FINDINGS

2.1 Respondent Characteristics

The final dataset includes surveys of 523 adults residing in Northern Virginia. Northern Virginia is defined here as the following cities and counties: Fairfax County, Loudoun County, Prince William County, Arlington County, Stafford County and Alexandria. All respondents were 21 years of age or older at the time they took the survey.

A demographic summary of survey respondents is provided in Table 1. Survey respondents were evenly split between women (49.7%) and men (49.7%), with a further 0.6% of respondents identifying as non-binary or gender non-conforming. All respondents were above 21 years of age. The most common age groups were between ages 35 to 44 (21.0%) and ages 25 to 34

(19.9%). White respondents make up over 50% of the sample and African American or Black respondents comprise just over one-fifth of the sample.

The locality with the most survey respondents is Fairfax County (not Fairfax City, Herndon, or Vienna) at 23.1% followed by Loudon County, Alexandria and Arlington. Household income brackets are fairly evenly distributed among respondents, with most respondents living in a household with an income between \$50,000 and \$124,999.

Slightly over half of the sample have lived in their residence between 1 and 9 years, while 18.5% have lived in their current residence for 10 to 19 years and 25.6% have for 20 or more years. A majority of respondents (62.3%) own their residence.

Almost all respondents report that English is their primary language (92.7%); the remaining respondents report a variety of languages as their primary language. The survey was administered in English only, and therefore all respondents are fluent in English.

Table 1. Survey respondent demographic characteristics.

Demographic	Subcategory	Percentage
Gender	Female	49.7%
	Male	49.7%
	Non-binary/non-conforming	0.6%
Age	21 to 24	9.0%
	25 to 34	19.9%
	35 to 44	21.0%
	45 to 54	15.7%
	55 to 64	14.7%
	65 to 74	14.5%
	75 or older	5.2%
Residence Type	Owned	62.3%
	Rented	35.6%
	Transitional housing	0.6%
	Military housing	0.2%
	Other - Please specify:	1.3%
Locality	Alexandria	12.8%

Demographic	Subcategory	Percentage
	Arlington	12.8%
	Fairfax County, but not one of the cities/towns listed	23.1%
	Fairfax County: Fairfax City	4.6%
	Fairfax County: Herndon	1.7%
	Fairfax County: Vienna	1.9%
	Falls Church	1.7%
	Loudoun County, but not Leesburg	14.1%
	Loudoun County: Leesburg	5.9%
	Prince William County, but not one of the cities/towns listed	8.4%
	Prince William County: Dumfries	1.9%
	Prince William County: Manassas	2.9%
	Prince William County: Manassas Park	0.8%
	Stafford County	7.3%
Occupation	Landscaping, grounds keeping, or lawn care	3.1%
	Not landscaping, grounds keeping, or lawn care	96.9%
Income	Less than \$35,000	13.4%
	\$35,000 to \$49,999	8.4%
	\$50,000 to \$74,999	18.0%
	\$75,000 to \$99,999	16.1%
	\$100,000 to \$124,999	11.3%
	\$125,000 to \$149,999	8.0%
	\$150,000 to \$174,999	7.3%
	\$175,000 to \$199,999	5.0%
	\$200,000 or greater	12.6%
Race	White/Caucasian	63.1%
	African American/Black	20.3%
	Asian	11.9%
	Hispanic/Latino	9.8%
	American Indian/Native Alaskan	1.5%

Demographic	Subcategory	Percentage
	Native Hawaiian/Pacific Islander	0.6%
	Other - Write In	1.0%
Language	English	92.7%
	Spanish	2.7%
	Arabic	0.8%
	Chinese	0.8%
	Korean	0.6%
	Tagalog (including Filipino)	0.6%
	Amharic or Somali	0.4%
	Persian (including Farsi, Dari)	0.2%
	Urdu	0.2%
	Vietnamese	0.2%
	Other - Write In (Required)	1.0%
Residence Years	Less than 1 year	7.3%
	1 to 3 years	19.5%
	4 to 9 years	29.1%
	10 to 19 years	18.5%
	20 or more years	25.6%
Lawn or Garden at Residence	No	19.3%
	Yes	80.7%
Own or Lease a Vehicle	No	12.4%
	Yes	87.6%
Dog Ownership	No	51.4%
	Yes	48.6%

2.2 Home Lawn Care

2.2.1 Fertilizer Use

Respondents were asked about their behavior regarding lawns or gardens and if their residence has a lawn or garden of any size. Results are summarized in Table 2 and displayed in

Figure 1. Most of those surveyed (80.7%) report having a lawn or garden, no matter how small. Almost all respondents (93.4%) are familiar with how their lawn is cared. Of those with a lawn or garden who know how their lawn is cared for, 66.6% report using a lawn care service at least once per year. Respondents with lawns were asked how often their lawns were fertilized, regardless of whether fertilization was done by someone in the household or an outside service. The response options were “1 time a year”, “2 times a year”, “3 times a year”, “4+ times a year”, “Only if/when a soil test indicates the grass needs fertilizer”, “Never”, or “Not sure”. Few respondents (11.1%) report fertilizing only when a soil test indicates the grass needs fertilizer, and 12.7% never fertilize their lawn or garden.

Men and women report show equal prevalence of being familiar with how their lawn is cared for (93.4% for men and 93.5% for women). Respondents aged 35 to 54 show the highest rates fertilizing three times a year, and low rates of fertilizing only according to soil tests or never fertilizing at all.

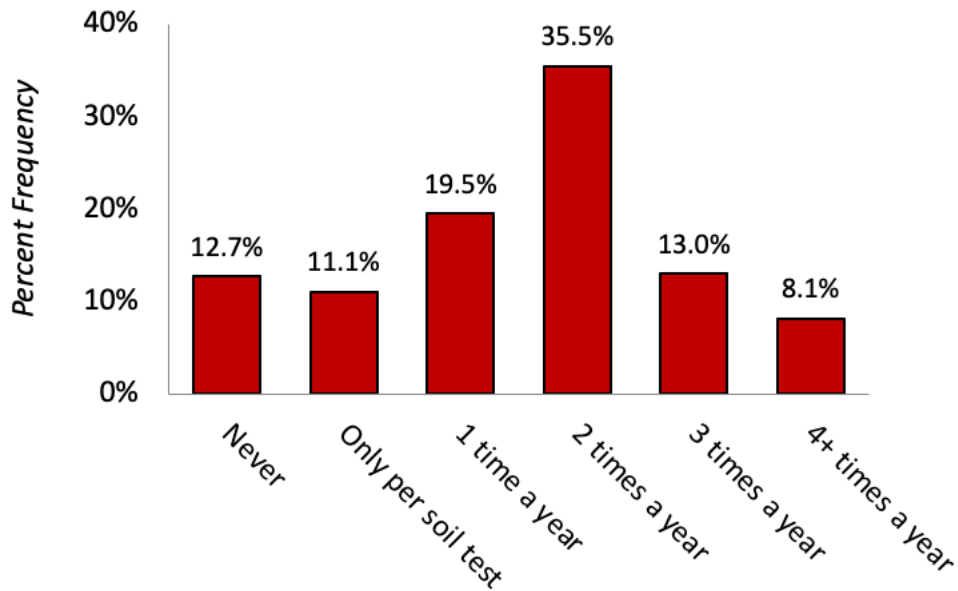
Table 2. Lawn and garden fertilization behaviors by demographic group.

Demographic	Subcategory	Familiar with Lawn/Garden Care	Frequency of Lawn Fertilization					
		Yes	Never	Only per soil test	1x per year	2x per year	3x per year	4x per year
	All Respondents	93.4%	12.7%	11.1%	19.5%	35.5%	13.0%	8.1%
Gender	Male	93.6%	10.3%	9.7%	14.9%	39.5%	18.5%	7.2%
	Female	93.5%	15.5%	12.6%	24.7%	31.0%	6.9%	9.2%
Age	21 to 24	94.3%	13.3%	16.7%	3.3%	46.7%	13.3%	6.7%
	25 to 34	89.2%	2.9%	20.0%	18.6%	42.9%	8.6%	7.1%
	35 to 44	100.0%	7.9%	6.7%	15.7%	39.3%	23.6%	6.7%
	45 to 54	96.8%	11.7%	6.7%	25.0%	36.7%	13.3%	6.7%
	55 to 64	93.5%	23.5%	11.8%	33.3%	19.6%	5.9%	5.9%
	65 to 74	92.2%	23.6%	7.3%	12.7%	30.9%	7.3%	18.2%
	75 or older	71.4%	14.3%	14.3%	35.7%	21.4%	14.3%	0.0%
Locality	Alexandria	91.3%	5.1%	7.7%	17.9%	38.5%	23.1%	7.7%

Demographic	Subcategory	Familiar with Lawn/Garden Care	Frequency of Lawn Fertilization					
		Yes	Never	Only per soil test	1x per year	2x per year	3x per year	4x per year
	Arlington	90.0%	17.5%	10.0%	20.0%	35.0%	15.0%	2.5%
	Fairfax Co.	94.4%	14.3%	11.9%	19.8%	36.5%	7.1%	10.3%
	Prince William & Stafford Co.	93.3%	12.7%	10.1%	26.6%	27.8%	12.7%	10.1%
	Loudon Co.	94.6%	11.8%	12.9%	12.9%	40.0%	16.5%	5.9%
Ethnicity	Not Hispanic/Latino	93.7%	13.1%	11.3%	20.8%	34.7%	12.2%	8.0%
	Hispanic/Latino	90.0%	9.4%	9.4%	6.3%	43.8%	21.9%	9.4%
Residence Years	Less than 1 year	89.5%	14.3%	14.3%	50.0%	14.3%	7.1%	0.0%
	1 to 3 years	88.6%	5.5%	12.7%	23.6%	30.9%	18.2%	9.1%
	4 to 9 years	93.4%	9.1%	12.7%	15.5%	43.6%	12.7%	6.4%
	10 to 19 years	95.3%	15.4%	9.0%	16.7%	37.2%	14.1%	7.7%
	20 or more years	95.2%	17.9%	9.8%	19.6%	31.3%	10.7%	10.7%
Home Ownership	Owned	96.5%	13.4%	11.7%	18.0%	34.3%	13.4%	9.2%
	Rented	84.6%	8.8%	10.0%	23.8%	41.3%	12.5%	3.8%
Income	Less than \$35,000	88.4%	6.5%	19.4%	29.0%	29.0%	12.9%	3.2%
	\$35,000 to \$49,999	80.0%	14.3%	14.3%	28.6%	28.6%	9.5%	4.8%
	\$50,000 to \$74,999	93.3%	16.1%	16.1%	26.8%	33.9%	0.0%	7.1%
	\$75,000 to \$99,999	95.8%	16.7%	12.1%	16.7%	30.3%	16.7%	7.6%
	\$100,000 to \$124,999	94.2%	6.7%	17.8%	6.7%	37.8%	15.6%	15.6%
	\$125,000 to \$149,999	92.5%	13.9%	5.6%	16.7%	41.7%	16.7%	5.6%
	\$150,000 to \$174,999	97.2%	8.8%	2.9%	17.6%	41.2%	20.6%	8.8%
	\$175,000 to \$199,999	100.0%	12.5%	4.2%	12.5%	45.8%	20.8%	4.2%
	\$200,000 or greater	95.4%	14.3%	5.4%	23.2%	35.7%	10.7%	10.7%
	\$150,000 to \$174,999	88.4%	6.5%	19.4%	29.0%	29.0%	12.9%	3.2%

* *Red font indicates significant differences within a demographic subgroup.*

Figure 1. Frequency of lawn fertilization.



Reported frequency of lawn fertilization from 2016-2024 can be seen in Table 3. Fewer respondents report fertilizing infrequently (1-2 times per year) in previous years compared to 2026; fewer respondents also report never fertilizing compared to 2016, 2017 and 2018. More respondents fertilize 3 times per year compared to 2016 and 2017. Overall, these results suggest a slight increase in the frequency of fertilization over the survey years.

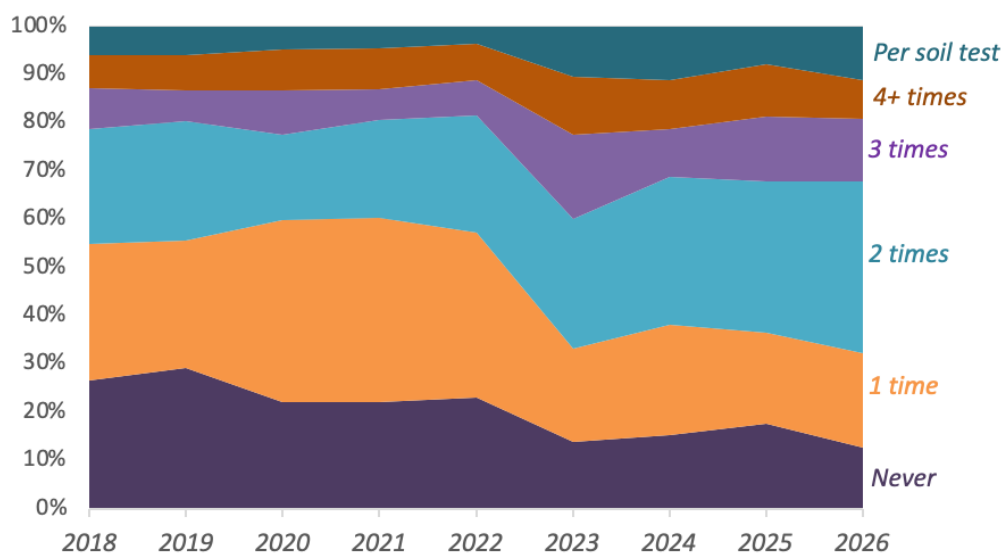
Table 3. Lawn fertilization frequency across years.

Frequency of Lawn Fertilization	Year of Survey									
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Never	34.3%	26.5%	29.2%	22.1%	22.1%	23.1%	13.8%	15.2%	17.6%	12.7%
Per soil test	*	6.1%	6.0%	4.8%	4.5%	3.5%	10.5%	11.1%	7.8%	11.1%
1 time	31.0%	28.4%	26.4%	37.8%	38.3%	34.3%	19.3%	22.9%	18.8%	19.5%
2 times	24.8%	23.9%	24.8%	17.7%	20.3%	24.1%	27.1%	30.8%	31.5%	35.5%
3 times	3.8%	8.3%	6.4%	9.2%	6.2%	7.3%	17.3%	9.7%	13.3%	13.0%
4+ times	6.2%	6.8%	7.2%	8.4%	8.6%	7.7%	12.0%	10.3%	11.0%	8.1%

* Red font indicates that the value significantly differs from the current 2026 value.

Asterisks (*) indicate that the question did not appear in the survey that year.

Figure 2. Lawn fertilization frequency across years.



2.2.2 Grass Clipping Disposal

Respondents that reported having a lawn or garden were asked how they dispose of their grass clippings. The provided response options were “Bagged and put in the regular trash”, “Bagged and put in compost/recycling bags for pick up”, “Left on the lawn/garden”, “Put in a compost pile/bin”, “Not sure”, “Other”, and “Not applicable/don’t have grass clippings”.

As shown in Table 4 and Figure 3, the most common response is leaving the grass on their lawn/garden, with 36.6% providing this response, followed closely by bagging it and putting it in compost or recycling for pickup (32.1%). Only 8.7% of respondents report composting the clippings.

Generally, older respondents (ages 55+) report leaving their grass clippings on their lawn at higher rates than younger respondents, whereas respondents ages 54 and under more frequently report bagging their clippings, either for trash or recycling pickup. Respondents living in Alexandria and Arlington more frequently bag their clippings for compost/recycling pickup, compared to other localities. Occupants of rented homes more frequently report that their grass clippings are bagged with regular trash, whereas occupants of owned homes more frequently report that their grass clippings are left on the lawn.

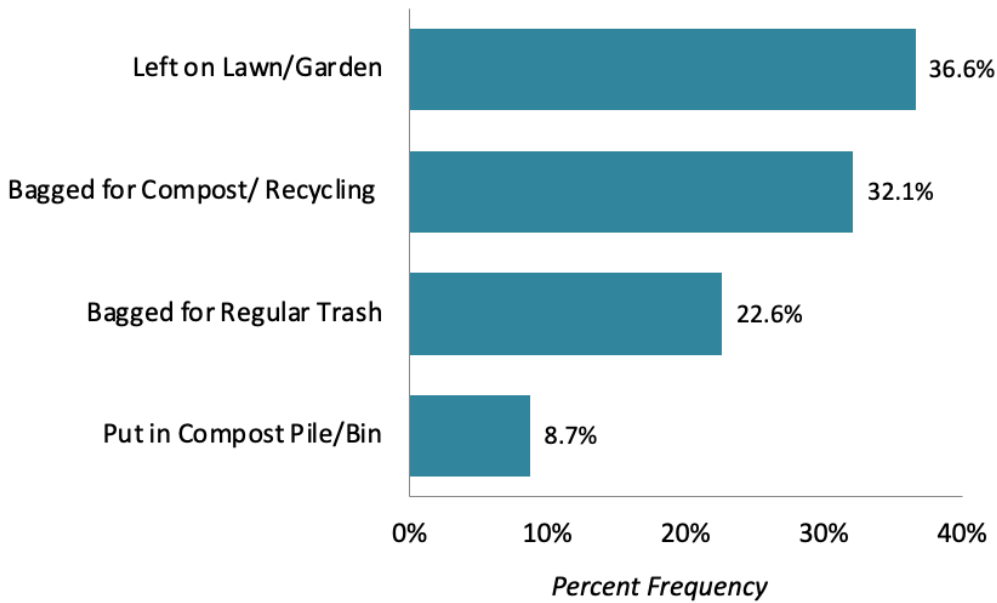
Table 4. Disposal of grass clippings by demographic group.

Demographic	Subcategory	Grass Clippings Handling			
		Bagged and put in the regular trash	Bagged and put in compost/recycling bags for pick up	Left on the lawn/garden	Put in a compost pile/bin
	All Respondents	22.6%	32.1%	36.6%	8.7%
Gender	Male	21.1%	32.0%	38.1%	8.8%
	Female	24.4%	32.3%	34.8%	8.5%
Age	21 to 24	37.0%	44.4%	18.5%	0.0%
	25 to 34	26.4%	34.7%	25.0%	13.9%
	35 to 44	25.6%	36.7%	26.7%	11.1%
	45 to 54	21.1%	36.8%	36.8%	5.3%
	55 to 64	24.0%	22.0%	50.0%	4.0%
	65 to 74	10.4%	18.8%	60.4%	10.4%
	75 or older	0.0%	28.6%	64.3%	7.1%
Locality	Alexandria	21.1%	44.7%	23.7%	10.5%
	Arlington	20.0%	50.0%	12.5%	17.5%
	Fairfax Co.	22.1%	31.1%	37.7%	9.0%
	Prince William & Stafford Co.	26.9%	23.1%	41.0%	9.0%
	Loudon Co.	21.3%	27.5%	48.8%	2.5%
Ethnicity	Not Hispanic/Latino	21.3%	31.7%	38.1%	8.8%
	Hispanic/Latino	36.7%	36.7%	20.0%	6.7%
	Less than 1 year	43.8%	12.5%	37.5%	6.3%

Demographic	Subcategory	Grass Clippings Handling			
		Bagged and put in the regular trash	Bagged and put in compost/recycling bags for pick up	Left on the lawn/garden	Put in a compost pile/bin
Residence Years	1 to 3 years	24.1%	39.7%	20.7%	15.5%
	4 to 9 years	24.0%	33.7%	33.7%	8.7%
	10 to 19 years	20.3%	27.0%	44.6%	8.1%
	20 or more years	18.9%	33.0%	42.5%	5.7%
Residence Type	Owned	19.0%	31.8%	40.5%	8.8%
	Rented	33.3%	34.6%	23.1%	9.0%
Income	Less than \$35,000	48.5%	27.3%	24.2%	0.0%
	\$35,000 to \$49,999	22.7%	40.9%	27.3%	9.1%
	\$50,000 to \$74,999	26.4%	34.0%	32.1%	7.5%
	\$75,000 to \$99,999	25.4%	33.3%	34.9%	6.3%
	\$100,000 to \$124,999	18.6%	32.6%	32.6%	16.3%
	\$125,000 to \$149,999	18.8%	31.3%	37.5%	12.5%
	\$150,000 to \$174,999	16.1%	32.3%	41.9%	9.7%
	\$175,000 to \$199,999	20.8%	33.3%	37.5%	8.3%
	\$200,000 or greater	10.5%	28.1%	52.6%	8.8%

* *Red font* indicates significant differences within a demographic subgroup.

Figure 3. Disposal of grass clippings.



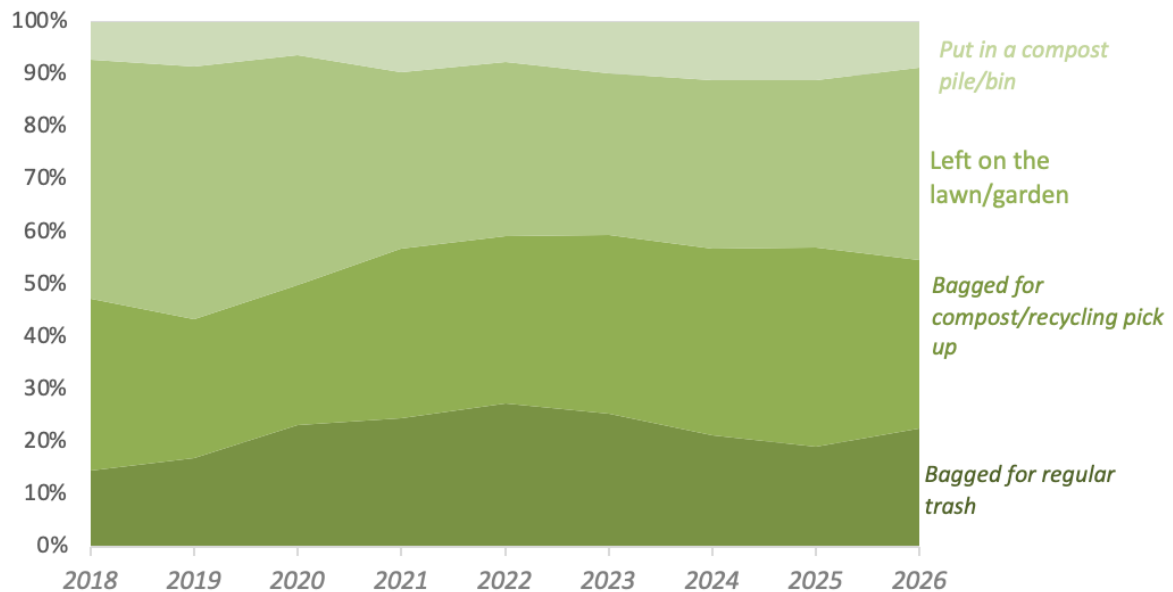
As can be seen in Table 5, respondents in 2023 reported leaving grass clippings on their lawn or garden at a lower rate than 2026 respondents. Otherwise, there were no significant differences between this year's survey responses to this question and previous years.

Table 5. Disposal of grass clippings across years.

Grass clipping disposal	Year of Survey								
	2018	2019	2020	2021	2022	2023	2024	2025	2026
Bagged for regular trash	14.5%	17.0%	23.3%	24.6%	27.3%	25.4%	21.3%	19.2%	22.6%
Bagged for compost/recycling pick up	32.8%	26.4%	26.7%	32.3%	32.0%	34.1%	35.6%	38.0%	32.1%
Left on the lawn/garden	45.7%	48.1%	43.8%	33.7%	33.1%	30.8%	32.2%	31.8%	36.6%
Put in a compost pile/bin	7.0%	8.5%	6.3%	9.5%	7.6%	9.7%	10.9%	11.0%	8.7%

* *Red font* indicates that the value significantly differs from the current 2026 value.

Figure 4. Disposal of grass clippings across years.



Respondents were also asked what is done with grass clippings if they end up in the street, if anything. The response options were “They are left there”, “They are swept or blown back into the lawn”, or “They are swept or blown into the storm drain”. Of those with a lawn or garden, 65.2% report sweeping or blowing them back into their lawn, while 16.8% report sweeping or blowing them into the storm drain, as can be seen in Table 6 and Figure 5. Lastly, 18.0% report leaving their grass clippings in the street.

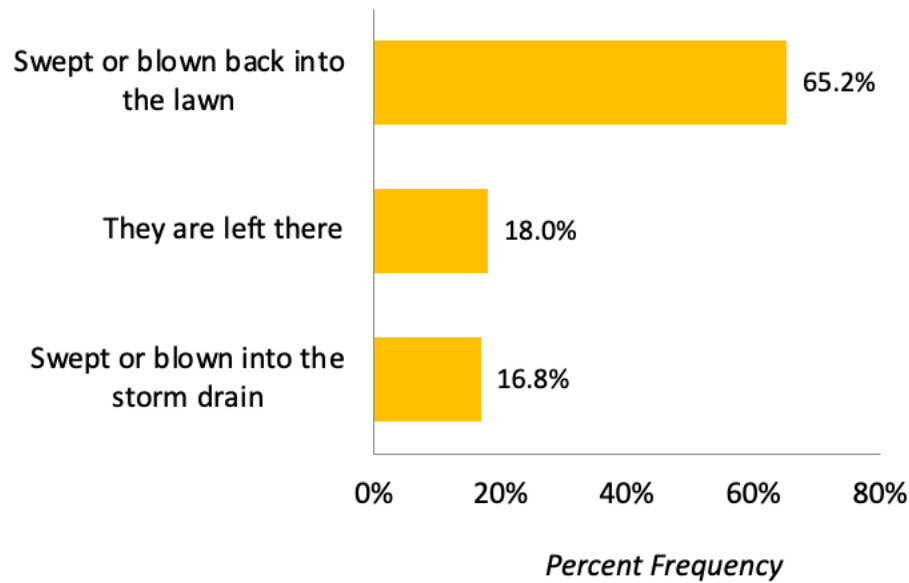
Table 6. Handling of grass clippings in street by demographic group.

Demographic	Subcategory	Grass Clippings on Street Handling		
		They are left there	Swept or blown back into the lawn	Swept or blown into the storm drain
	All Respondents	18.0%	65.2%	16.8%
Gender	Male	15.6%	69.9%	14.5%
	Female	20.8%	59.7%	19.5%
Age	21 to 24	10.3%	69.0%	20.7%
	25 to 34	16.1%	48.4%	35.5%
	35 to 44	20.9%	61.5%	17.6%
	45 to 54	3.6%	83.6%	12.7%
	55 to 64	28.6%	67.3%	4.1%

Demographic	Subcategory	Grass Clippings on Street Handling		
		They are left there	Swept or blown back into the lawn	Swept or blown into the storm drain
	65 to 74	26.1%	65.2%	8.7%
	75 or older	15.4%	76.9%	7.7%
Locality	Alexandria	13.2%	55.3%	31.6%
	Arlington	29.3%	51.2%	19.5%
	Fairfax Co.	19.3%	62.3%	18.4%
	Prince William & Stafford Co.	17.8%	74.0%	8.2%
	Loudon Co.	12.7%	73.4%	13.9%
Ethnicity	Not Hispanic/Latino	19.0%	65.1%	15.9%
	Hispanic/Latino	6.7%	66.7%	26.7%
Residence Years	Less than 1 year	13.3%	80.0%	6.7%
	1 to 3 years	12.7%	61.8%	25.5%
	4 to 9 years	11.4%	69.5%	19.0%
	10 to 19 years	26.5%	61.8%	11.8%
	20 or more years	22.5%	62.7%	14.7%
Residence Type	Owned	17.7%	66.5%	15.8%
	Rented	17.6%	62.2%	20.3%
Income	Less than \$35,000	24.2%	57.6%	18.2%
	\$35,000 to \$49,999	10.0%	65.0%	25.0%
	\$50,000 to \$74,999	20.4%	67.3%	12.2%
	\$75,000 to \$99,999	13.3%	61.7%	25.0%
	\$100,000 to \$124,999	26.2%	64.3%	9.5%
	\$125,000 to \$149,999	14.3%	68.6%	17.1%
	\$150,000 to \$174,999	12.5%	71.9%	15.6%
	\$175,000 to \$199,999	4.3%	78.3%	17.4%
	\$200,000 or greater	25.5%	60.8%	13.7%

* *Red font indicates significant differences within a demographic subgroup.*

Figure 5. Handling of grass clippings in the street.



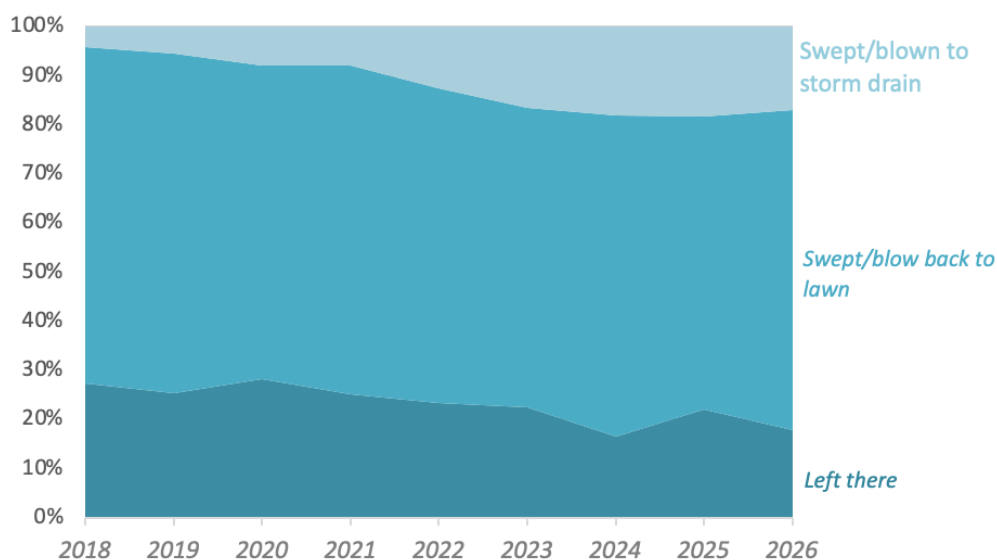
Survey respondents in prior to 2022 generally reported lower rates of sweeping or blowing grass clippings from the street into the storm drain than 2026 respondents. Otherwise, as shown in Table 7, there were no significant differences between previous years response and 2026 survey responses regarding handling of grass clippings in the street.

Table 7. Handling of grass clippings in the street across years.

Grass clippings in street	Year of Survey								
	2018	2019	2020	2021	2022	2023	2024	2025	2026
Left there	27.5%	25.3%	28.3%	25.1%	23.4%	22.6%	16.5%	22.0%	18.0%
Swept/blow back to lawn	68.4%	69.3%	63.9%	67.0%	64.2%	60.9%	65.5%	59.7%	65.2%
Swept/blown to storm drain	4.1%	5.3%	7.8%	7.9%	12.4%	16.6%	18.1%	18.2%	16.8%

* Red font indicates that the value significantly differs from the current 2026 value.

Figure 6. Handling of grass clippings in the street across years.



2.3 Vehicle Care

Respondents were next asked about their behavior regarding changing motor oil and how the used motor oil is disposed. Because the survey queries knowledge and behaviors regarding changing the motor oil of their personal vehicles, respondents were first asked if they own a personal vehicle. The majority of respondents (86.4%) report having a personal vehicle that they own or lease, as seen in Table 12. Alexandria and Arlington had lower rates of owning or leasing a personal vehicle while Loudon County had the highest rates. Men report higher rates of owning a vehicle than women, as do those who have lived in their residence for more years and those who own their homes. Additionally, Hispanic/Latino respondents reported lower rates of vehicle ownership and reported rates of vehicle ownership tended to increase with household income.

2.3.1.1 Disposing of Motor Oil

Those who own or lease a personal vehicle were then asked how they dispose of motor oil when their vehicle oil is changed (Table 8 and Figure 7). Response options were “I don’t change the oil

myself/I take it to a garage/oil change service”, “Take the motor oil to a gas station or hazmat facility for recycling”, “Store it in my garage”, “Put it in the trash”, “Dump it in the gutter or down the storm sewer”, “Dump it down the sink”, “Dump it on the ground”, and an option to write-in another method not listed. Most of these respondents (67.3%) report taking their vehicle to a garage or oil changing service when the oil needs to be changed. Additionally, 19.91% report taking the old motor oil to a gas station or hazmat facility and 6.9% store it in their garage. Men reported using a gas station or hazmat facility at higher rates than women. Older respondents (55+) and the youngest respondents (under 25) show the highest incidences of using an oil change service and lower rates of using a gas or hazmat facility

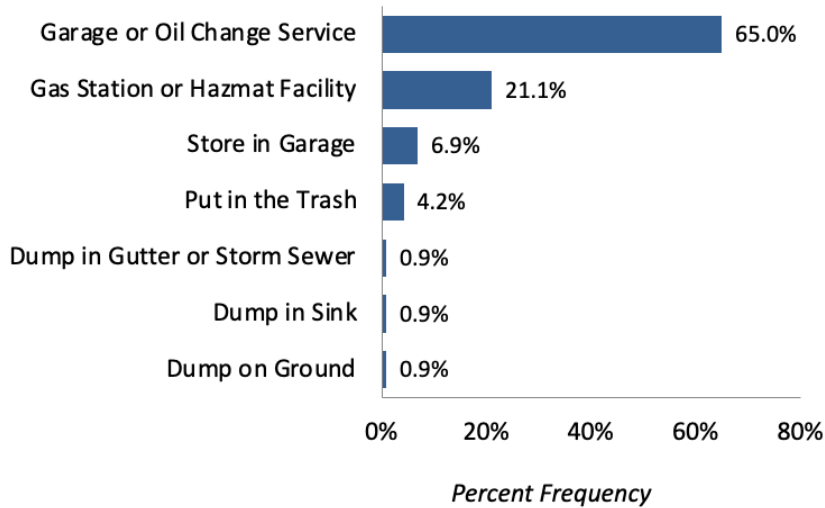
Table 8. Vehicle possession and motor oil disposal by demographic group.

Demographic	Subcategory	Motor Oil Disposal						
		Uses a Garage or Oil Change Service	Gas Station or Hazmat Facility	Store in Garage	Put in the Trash	Dump in Gutter or Storm Sewer	Dump in Sink	Dump on Ground
	All Respondents	67.3%	19.9%	6.9%	3.3%	1.1%	0.7%	0.9%
Gender	Male	61.2%	24.6%	9.5%	3.0%	0.4%	0.9%	0.4%
	Female	73.3%	15.2%	4.1%	3.7%	1.8%	0.5%	1.4%
Age	21 to 24	72.2%	11.1%	13.9%	2.8%	0.0%	0.0%	0.0%
	25 to 34	51.1%	28.7%	10.6%	3.2%	3.2%	1.1%	2.1%
	35 to 44	50.5%	25.7%	11.9%	6.9%	2.0%	2.0%	1.0%
	45 to 54	68.1%	25.0%	2.8%	4.2%	0.0%	0.0%	0.0%
	55 to 64	82.5%	11.1%	3.2%	1.6%	0.0%	0.0%	1.6%
	65 to 74	87.5%	12.5%	0.0%	0.0%	0.0%	0.0%	0.0%
	75 or older	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Locality	Alexandria	57.4%	22.2%	11.1%	7.4%	0.0%	0.0%	1.9%
	Arlington	68.6%	17.6%	11.8%	0.0%	2.0%	0.0%	0.0%
	Fairfax Co.	74.1%	13.9%	6.3%	1.9%	1.3%	1.3%	1.3%
	Prince William & Stafford Co.	61.1%	28.9%	3.3%	2.2%	2.2%	1.1%	1.1%
	Loudon Co.	66.7%	21.2%	6.1%	6.1%	0.0%	0.0%	0.0%
Ethnicity	Not	68.1%	19.4%	6.6%	3.2%	1.0%	0.7%	1.0%

Demographic	Subcategory	Motor Oil Disposal						
		Uses a Garage or Oil Change Service	Gas Station or Hazmat Facility	Store in Garage	Put in the Trash	Dump in Gutter or Storm Sewer	Dump in Sink	Dump on Ground
	Hispanic/Latino							
	Hispanic/Latino	60.0%	24.4%	8.9%	4.4%	2.2%	0.0%	0.0%
Residence Years	Less than 1 year	78.6%	17.9%	3.6%	0.0%	0.0%	0.0%	0.0%
	1 to 3 years	59.5%	23.8%	10.7%	2.4%	1.2%	0.0%	2.4%
	4 to 9 years	64.0%	20.8%	8.8%	4.8%	1.6%	0.0%	0.0%
	10 to 19 years	67.0%	18.7%	5.5%	5.5%	0.0%	2.2%	1.1%
	20 or more years	73.4%	17.7%	4.0%	1.6%	1.6%	0.8%	0.8%
Residence Type	Owned	65.8%	20.4%	7.0%	3.8%	1.3%	0.6%	1.0%
	Rented	71.2%	18.2%	6.8%	1.5%	0.8%	0.8%	0.8%
Income	Less than \$35,000	67.6%	23.5%	8.8%	0.0%	0.0%	0.0%	0.0%
	\$35,000 to \$49,999	71.4%	17.1%	8.6%	0.0%	2.9%	0.0%	0.0%
	\$50,000 to \$74,999	66.3%	15.1%	4.7%	8.1%	2.3%	1.2%	2.3%
	\$75,000 to \$99,999	56.6%	30.3%	7.9%	1.3%	1.3%	2.6%	0.0%
	\$100,000 to \$124,999	71.9%	19.3%	5.3%	0.0%	1.8%	0.0%	1.8%
	\$125,000 to \$149,999	60.0%	20.0%	5.0%	12.5%	0.0%	0.0%	2.5%
	\$150,000 to \$174,999	68.6%	20.0%	11.4%	0.0%	0.0%	0.0%	0.0%
	\$175,000 to \$199,999	61.5%	30.8%	0.0%	7.7%	0.0%	0.0%	0.0%
	\$200,000 or greater	81.0%	9.5%	9.5%	0.0%	0.0%	0.0%	0.0%

* *Red font indicates significant differences within a demographic subgroup.*

Figure 7. Motor oil handling behaviors.



Reported motor oil handling behaviors from years 2017-2026 can be seen below in Table 9.

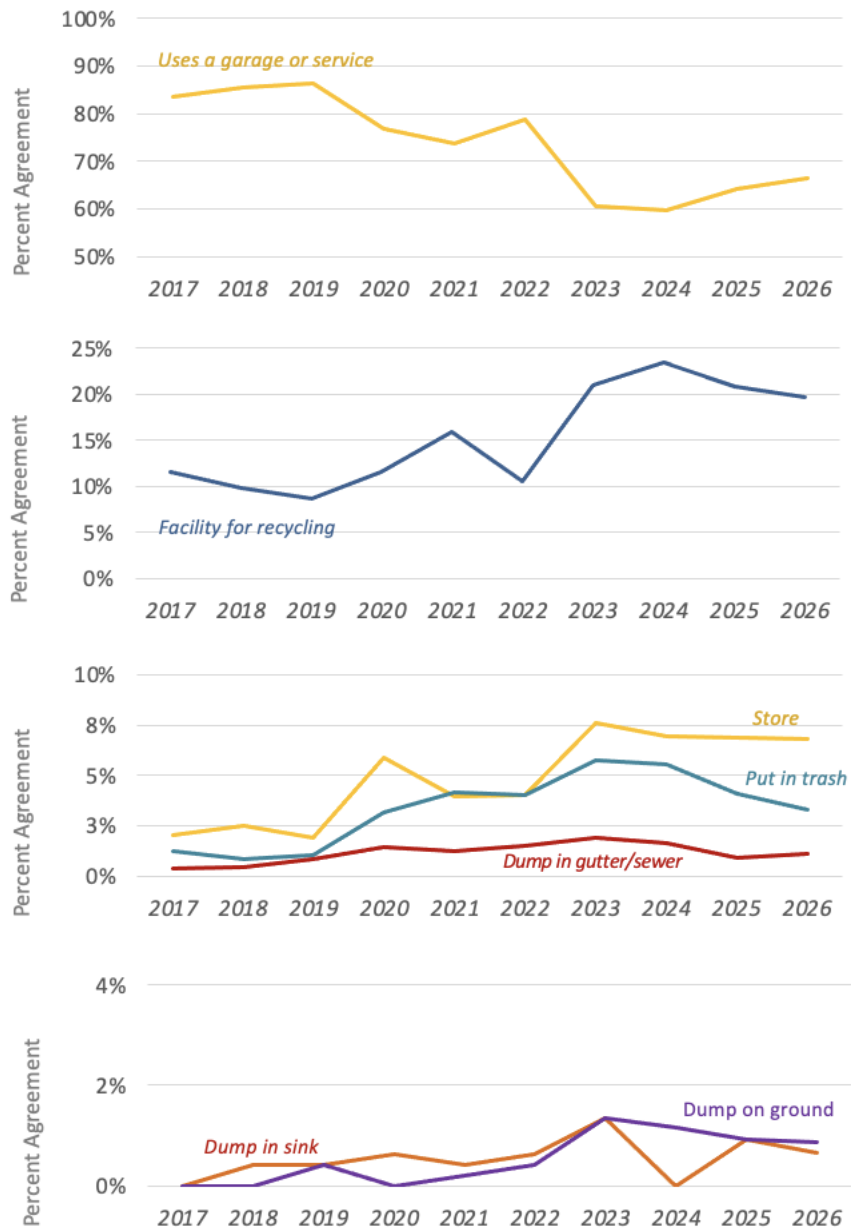
First, reported use of using a garage or oil change service and taking oil to a gas station or hazmat facility were higher in years 2017-2020 and 2022 than in 2026. Survey respondents from years 2017-2020 and 2022 report less frequent use of recycling facilities than 2026 respondents.

Table 9. Motor oil handling behaviors across years.

Motor oil disposal	Year of Survey									
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Uses a Garage or Oil Change Service	83.7%	85.7%	86.5%	76.8%	73.7%	78.9%	60.7%	59.8%	64.3%	66.5%
Gas Station or Hazmat Facility	11.6%	9.8%	8.8%	11.5%	16.0%	10.5%	21.0%	23.5%	20.8%	19.7%
Store in Garage	2.0%	2.5%	1.9%	5.9%	3.9%	4.0%	7.6%	7.0%	6.9%	6.8%
Put in the Trash	1.2%	0.8%	1.0%	3.1%	4.1%	4.0%	5.7%	5.6%	4.1%	3.3%
Dump in Gutter or Storm Sewer	0.4%	0.4%	0.8%	1.5%	1.2%	1.5%	1.9%	1.6%	0.9%	1.1%
Dump in Sink	*	0.4%	0.4%	0.6%	0.4%	0.6%	1.3%	*	0.9%	0.7%
Dump on Ground	*	*	0.4%	*	0.2%	0.4%	1.3%	1.2%	0.9%	0.9%

* Red font indicates that the value significantly differs from the current 2026 value. Asterisks (*) indicate that the question did not appear in the survey that year.

Figure 8. Motor oil handling behaviors across years.



2.3.1.2 Vehicle Washing

Respondents who reported owning or leasing a vehicle were also asked about their vehicle washing behaviors. Respondents were asked where they have washed their personal vehicle in the past year, with response options being “At my home or someone else’s home”, “At a

commercial car wash”, “I haven’t washed my vehicle”, and the option to write in another response not listed.

Those who reported washing their vehicle at home were asked about their water quality-related behaviors when washing their car. Response options were “Yes”, “No”, and “Not sure” for the following statements:

- I wash it on the grass, gravel, or dirt
- I use environmentally friendly detergent
- I use water only (no soap or detergent)

Of those who own or lease a personal vehicle, 38.6% said they wash their car/truck at home, as shown in Table 10 and Figures 9 and 10. Of those 38.6% of respondents that wash their vehicle at home, 44.1% report washing it on the grass, gravel, or dirt (Table 10 and Figure 10).

Additionally, 59.4% report using environmentally friendly detergent. Finally, 21.8% report only using water. A majority, 62.1%, report washing their vehicle at a commercial car wash and 7.6% reported not washing their car in the past year.

Table 10. Vehicle washing behaviors by demographic group.

Demographic	Subcategory	Wash Car at Home	Wash Car at Commercial Location	Wash Car in Grass, Gravel, or Dirt	Wash Car using Enviro Friendly Detergent	Wash Car using only Water (No Soap)	Have not Washed Car in Past Year
	All Respondents	38.6%	62.1%	44.1%	59.4%	21.8%	7.6%
Gender	Male	44.2%	69.2%	44.3%	60.9%	22.6%	5.0%
	Female	33.1%	55.0%	44.2%	57.0%	20.9%	10.4%
Age	21 to 24	44.7%	55.3%	57.1%	52.4%	9.5%	6.4%
	25 to 34	39.4%	61.5%	53.7%	63.4%	17.1%	10.6%
	35 to 44	48.2%	60.9%	66.0%	75.5%	34.0%	10.9%
	45 to 54	41.5%	72.0%	26.5%	61.8%	20.6%	1.2%
	55 to 64	28.6%	61.0%	27.3%	40.9%	9.1%	5.2%
	65 to 74	30.3%	60.5%	13.0%	43.5%	17.4%	6.6%
	75 or older	29.6%	59.3%	25.0%	37.5%	50.0%	14.8%
Locality	Alexandria	37.3%	61.2%	56.0%	56.0%	24.0%	4.5%
	Arlington	35.8%	53.7%	41.7%	58.3%	37.5%	10.4%
	Fairfax Co.	38.2%	66.5%	34.8%	60.6%	19.7%	7.5%

Demographic	Subcategory	Wash Car at Home	Wash Car at Commercial Location	Wash Car in Grass, Gravel, or Dirt	Wash Car using Enviro Friendly Detergent	Wash Car using only Water (No Soap)	Have not Washed Car in Past Year
	Prince William & Stafford Co.	31.5%	53.2%	42.9%	51.4%	25.7%	8.1%
	Loudon Co.	49.5%	70.5%	51.9%	65.4%	13.5%	7.6%
Ethnicity	Not Hispanic/Latino	37.5%	62.7%	42.4%	60.5%	21.5%	7.0%
	Hispanic/Latino	49.0%	56.9%	56.0%	52.0%	24.0%	13.7%
Residence Years	Less than 1 year	21.1%	50.0%	37.5%	50.0%	37.5%	13.2%
	1 to 3 years	31.4%	54.9%	43.8%	71.9%	18.8%	7.8%
	4 to 9 years	34.2%	66.4%	48.1%	51.9%	19.2%	6.6%
	10 to 19 years	48.5%	68.0%	53.2%	68.1%	21.3%	6.2%
	20 or more years	47.0%	61.9%	34.9%	54.0%	23.8%	8.2%
Residence Type	Owned	46.6%	68.7%	40.1%	61.8%	21.1%	6.4%
	Rented	25.8%	51.6%	56.3%	54.2%	25.0%	9.1%
Income	Less than \$35,000	27.1%	25.7%	47.4%	63.2%	21.1%	7.1%
	\$35,000 to \$49,999	25.0%	56.8%	45.5%	63.6%	27.3%	13.6%
	\$50,000 to \$74,999	28.7%	72.3%	48.1%	51.9%	22.2%	9.6%
	\$75,000 to \$99,999	44.0%	67.9%	43.2%	64.9%	13.5%	6.0%
	\$100,000 to \$124,999	33.9%	66.1%	60.0%	70.0%	10.0%	10.2%
	\$125,000 to \$149,999	59.5%	57.1%	48.0%	60.0%	24.0%	4.8%
	\$150,000 to \$174,999	47.4%	76.3%	38.9%	50.0%	22.2%	2.6%
	\$175,000 to \$199,999	69.2%	65.4%	38.9%	66.7%	33.3%	3.8%
	\$200,000 or greater	40.9%	72.7%	29.6%	48.1%	29.6%	7.6%

* *Red font indicates significant differences within a demographic subgroup.*

** *Insufficient data for between-group comparison.*

Figure 9. Vehicle washing locations.

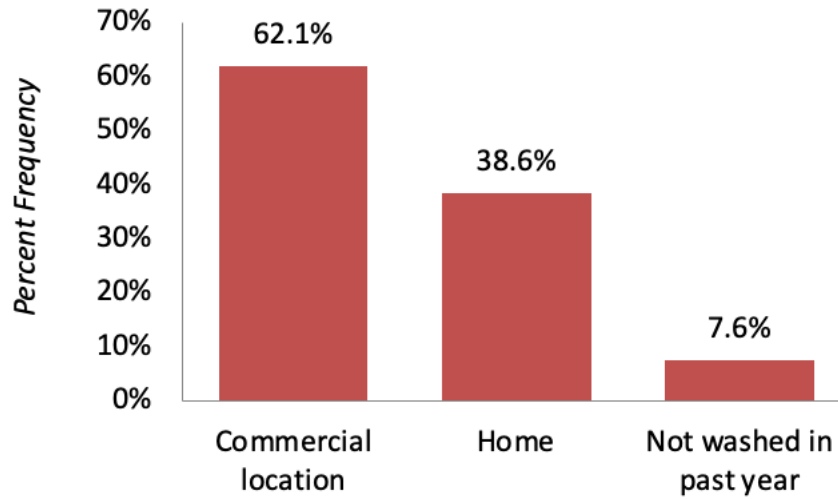
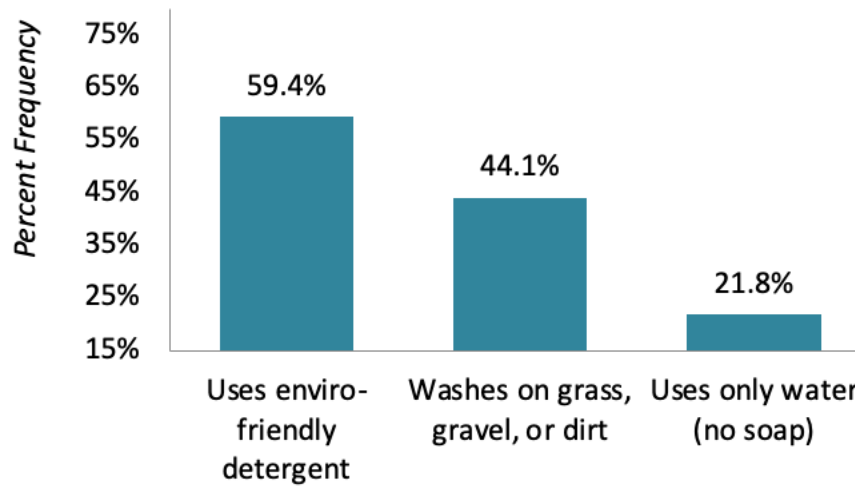


Figure 10. Desirable car washing behaviors.



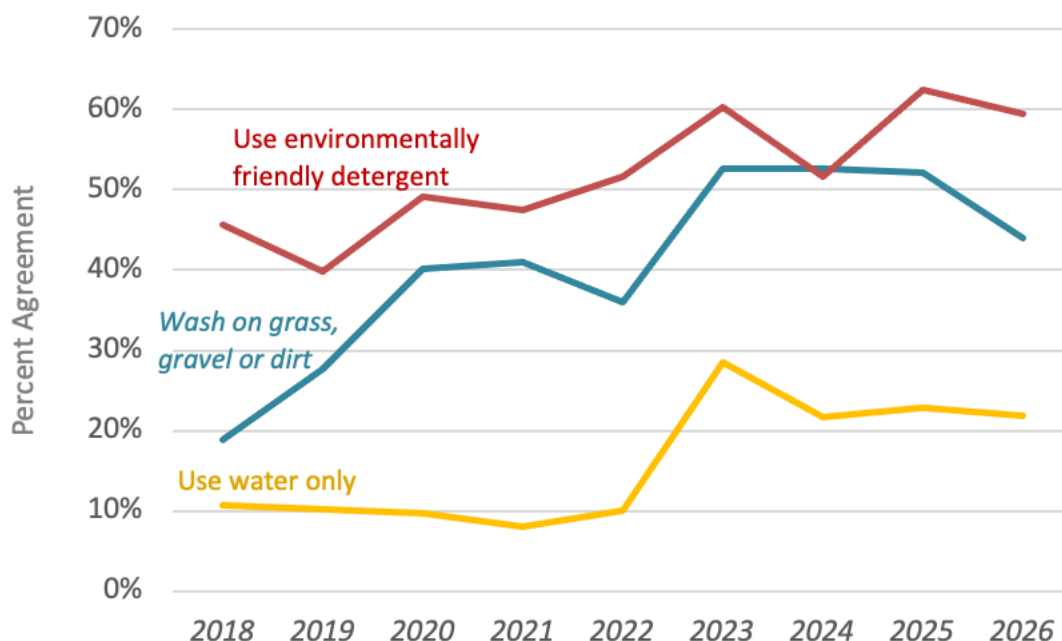
Below, Table 11 displays reported rates of vehicle washing behaviors from 2018-2026. Reported use of only water to wash vehicles was lower in years 2022-2022 than in 2026.

Table 11. Vehicle washing behaviors across years.

Vehicle washing behavior	Year of Survey								
	2018	2019	2020	2021	2022	2023	2024	2025	2026
Wash on grass, gravel or dirt	18.8%	27.7%	40.1%	41.0%	36.0%	52.6%	52.7%	52.1%	44.1%
Use environmentally friendly detergent	45.6%	39.9%	49.2%	47.5%	51.7%	60.3%	51.6%	62.4%	59.4%
Use water only	10.7%	10.1%	9.6%	8.0%	10.0%	28.5%	21.6%	22.9%	21.8%

* Red font indicates that the value significantly differs from the current 2026 value.

Figure 11. Vehicle washing behaviors across years.



Next, those who report washing their vehicle at home were asked how many times per year they do so, with response options being “Less than once a year”, “1-2 times per year”, “3-4 times per year”, “5-6 times per year”, “7-12 times per year”, “12+ times per year”. These responses can be seen in Table 12 and Figure 12. The most common response, at 21.8%, was 3-4 times per year. Next, 20.8% report washing their vehicle at home 1-2 times per year.

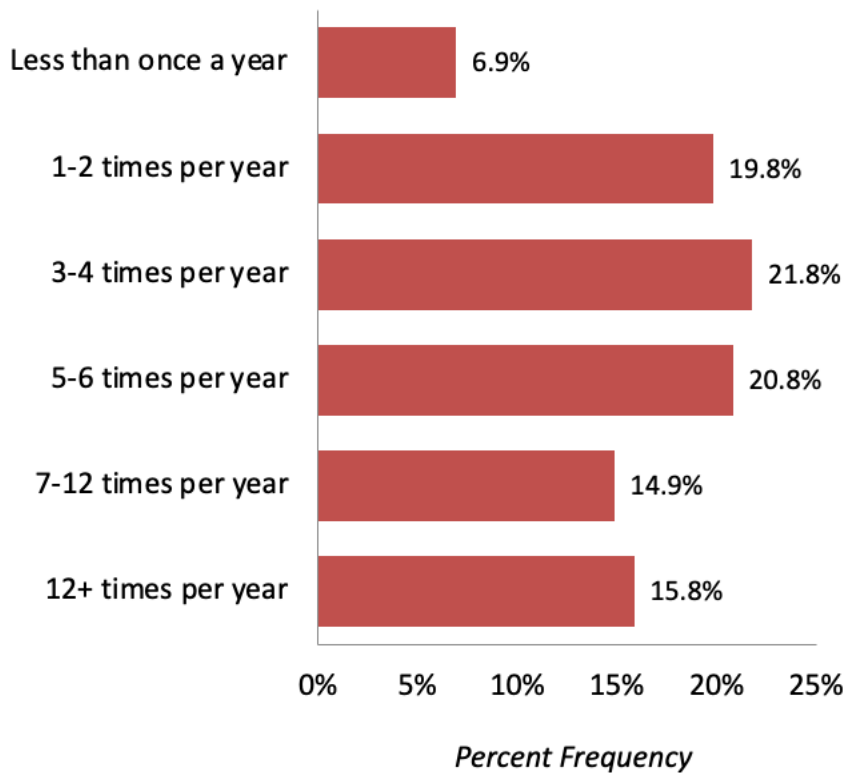
Table 12. Frequency of car washing at home by demographic group.

Demographic	Subcategory	Frequency of Car Washing at Home					
		Less than once a year	1-2 times per year	3-4 times per year	5-6 times per year	7-12 times per year	12+ times per year
	All Respondents	6.9%	19.8%	21.8%	20.8%	14.9%	15.8%
Gender	Male	4.3%	19.1%	23.5%	20.9%	16.5%	15.7%
	Female	10.5%	19.8%	19.8%	20.9%	12.8%	16.3%
Age	21 to 24	4.8%	19.0%	14.3%	33.3%	9.5%	19.0%
	25 to 34	4.9%	14.6%	14.6%	26.8%	22.0%	17.1%
	35 to 44	3.8%	11.3%	30.2%	17.0%	15.1%	22.6%
	45 to 54	5.9%	29.4%	23.5%	8.8%	14.7%	17.6%
	55 to 64	4.5%	22.7%	22.7%	27.3%	18.2%	4.5%
	65 to 74	21.7%	21.7%	21.7%	21.7%	4.3%	8.7%
	75 or older	12.5%	50.0%	12.5%	12.5%	12.5%	0.0%
Locality	Alexandria	8.0%	24.0%	16.0%	12.0%	12.0%	28.0%
	Arlington	8.3%	8.3%	20.8%	33.3%	16.7%	12.5%
	Fairfax Co.	9.1%	33.3%	25.8%	13.6%	4.5%	13.6%
	Prince William & Stafford Co.	5.7%	8.6%	25.7%	25.7%	17.1%	17.1%
	Loudon Co.	3.8%	13.5%	17.3%	25.0%	26.9%	13.5%
Ethnicity	Not Hispanic/Latino	6.8%	19.8%	23.2%	21.5%	13.0%	15.8%
	Hispanic/Latino	8.0%	20.0%	12.0%	16.0%	28.0%	16.0%
Residence Years	Less than 1 year	12.5%	0.0%	50.0%	0.0%	12.5%	25.0%
	1 to 3 years	12.5%	18.8%	21.9%	15.6%	9.4%	21.9%
	4 to 9 years	1.9%	19.2%	15.4%	34.6%	17.3%	11.5%
	10 to 19 years	6.4%	14.9%	29.8%	12.8%	12.8%	23.4%
	20 or more years	7.9%	27.0%	17.5%	20.6%	17.5%	9.5%
Residence Type	Owned	7.2%	19.7%	22.4%	22.4%	13.2%	15.1%
	Rented	6.3%	18.8%	20.8%	14.6%	20.8%	18.8%
Income	Less than \$35,000	15.8%	21.1%	0.0%	21.1%	21.1%	21.1%
	\$35,000 to \$49,999	9.1%	18.2%	18.2%	27.3%	27.3%	0.0%
	\$50,000 to \$74,999	3.7%	14.8%	11.1%	29.6%	22.2%	18.5%
	\$75,000 to \$99,999	2.7%	21.6%	35.1%	13.5%	8.1%	18.9%

Demographic	Subcategory	Frequency of Car Washing at Home					
		Less than once a year	1-2 times per year	3-4 times per year	5-6 times per year	7-12 times per year	12+ times per year
	\$100,000 to \$124,999	15.0%	0.0%	25.0%	35.0%	10.0%	15.0%
	\$125,000 to \$149,999	8.0%	24.0%	32.0%	8.0%	16.0%	12.0%
	\$150,000 to \$174,999	5.6%	11.1%	33.3%	22.2%	22.2%	5.6%
	\$175,000 to \$199,999	0.0%	27.8%	22.2%	27.8%	5.6%	16.7%
	\$200,000 or greater	7.4%	33.3%	11.1%	14.8%	11.1%	22.2%

* *Red font indicates significant differences within a demographic subgroup.*

Figure 12. Frequency of car washing at home.



2.4 Pet Waste Pickup

Respondents who indicated they are responsible or partially responsible for at least one dog were asked how often they pick up after their dog(s) while on a walk. The response options were “Always”, “Usually”, “Sometimes”, “Rarely”, “Never”, or “Not applicable/I don’t take the dog(s) on walks”. These respondents were also asked how often they picked up after their dog(s) in their yard, where the response options ranged from “Daily” to “Never”. The responses are summarized in Table 8 and displayed in Figure 7. Of all respondents, 48.6% report having one or more dogs (90.8%) report they always or usually pick up after their dog(s) on walks. Most also report picking up after their dog(s) in the yard on a daily basis (62.4%) and fewer report picking up after their dog(s) on a weekly basis (27.6%).

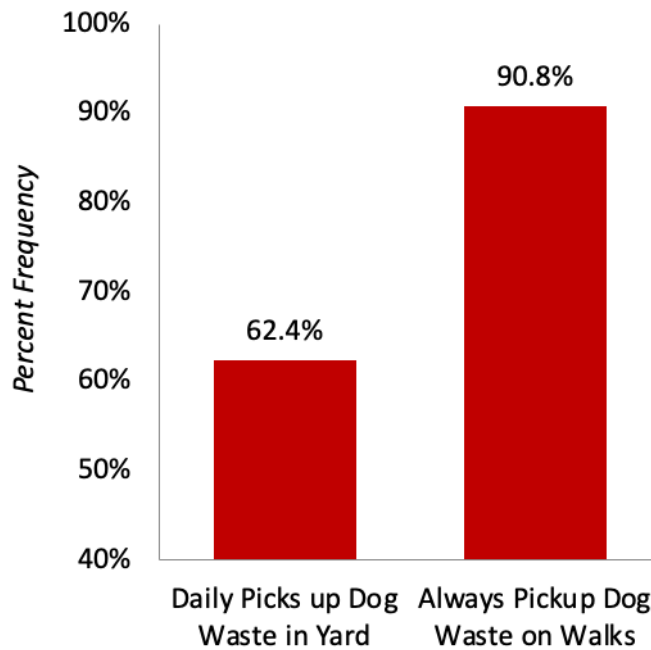
There are no demographic differences observed for pet waste pickup.

Table 13. Frequency of picking up dog waste by demographic group.

Demographic	Subcategory	Always Pick Up Dog Waste on Walks	Daily Pick Up Dog Waste in Yard	Weekly Pick Up Dog Waste in Yard
	All Respondents	90.8%	62.4%	27.6%
Gender	Male	91.5%	62.1%	29.8%
	Female	89.7%	62.4%	24.7%
Age	21 to 24	95.0%	55.6%	27.8%
	25 to 34	89.3%	71.4%	22.4%
	35 to 44	90.5%	58.6%	37.1%
	45 to 54	93.0%	62.2%	32.4%
	55 to 64	85.2%	50.0%	13.6%
	65 to 74	94.7%	75.0%	8.3%
	75 or older	100.0%	100.0%	0.0%
Locality	Alexandria	81.3%	61.5%	34.6%
	Arlington	93.1%	60.9%	30.4%
	Fairfax Co.	93.2%	59.7%	26.9%
	Prince William & Stafford Co.	92.0%	70.3%	13.5%
	Loudon Co.	90.9%	61.4%	33.3%
Ethnicity	Not Hispanic/Latino	90.5%	62.3%	27.3%
	Hispanic/Latino	93.5%	63.0%	29.6%
Residence Years	Less than 1 year	100.0%	40.0%	40.0%
	1 to 3 years	81.0%	63.6%	33.3%
	4 to 9 years	93.1%	68.1%	20.8%
	10 to 19 years	94.1%	54.2%	33.3%
	20 or more years	90.0%	63.5%	26.9%
Residence Type	Owned	91.7%	62.3%	29.0%
	Rented	89.7%	65.2%	21.7%
Income	Less than \$35,000	86.4%	58.3%	16.7%
	\$35,000 to \$49,999	93.3%	72.7%	18.2%
	\$50,000 to \$74,999	93.8%	69.7%	18.2%
	\$75,000 to \$99,999	88.4%	61.5%	28.2%
	\$100,000 to \$124,999	91.3%	68.2%	27.3%
	\$125,000 to \$149,999	95.8%	52.4%	38.1%
	\$150,000 to \$174,999	95.7%	59.1%	36.4%
	\$175,000 to \$199,999	95.0%	50.0%	45.0%
	\$200,000 or greater	81.8%	66.7%	20.0%

* There are no significant differences among the demographic groups.

Figure 13. Frequency of picking up dog waste.



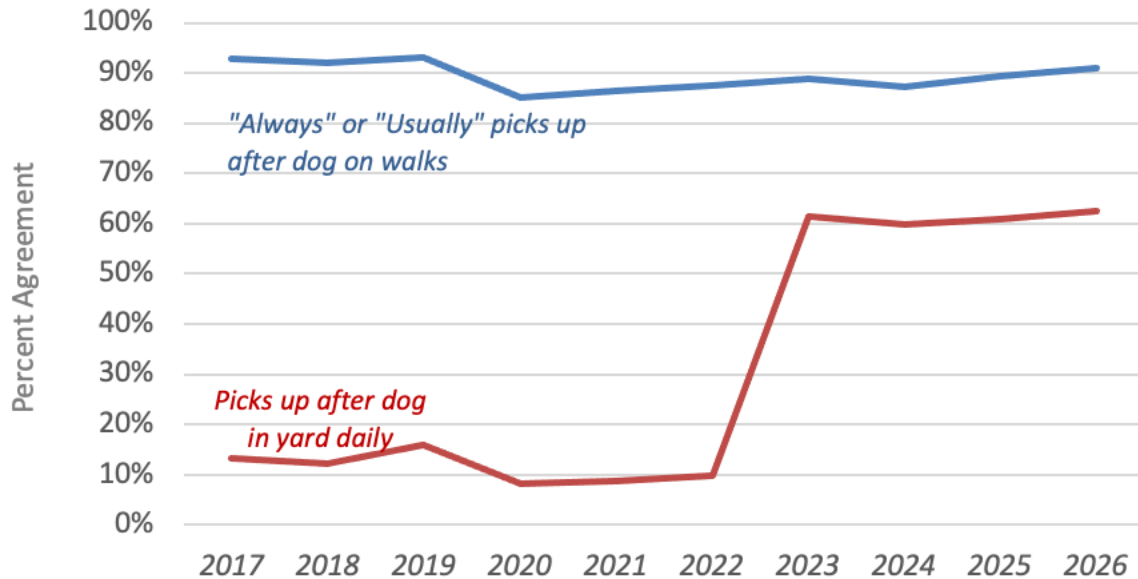
Rates of respondents reporting they “always” or “usually” pick up after their dog(s) on walks and pick after their dog(s) in the yard “daily” from 2017-2026 can be seen below in Table 14. From 2017-2021, reported rates of picking up from the yard daily were considerably lower than in 2026.

Table 14. Frequency of picking up dog waste across years.

Survey Response	Year of Survey									
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
"Always" or "Usually" picks up after dog on walks	92.7%	92.1%	93.0%	85.0%	86.4%	87.5%	88.7%	87.1%	89.3%	90.8%
Picks up after dog in yard daily	13.3%	12.2%	16.0%	8.3%	8.7%	9.9%	61.5%	59.9%	61.0%	62.4%

* *Red font* indicates that the value significantly differs from the current 2026 value.

Figure 14. Frequency of picking up dog waste across years.



Respondents who indicated that they pick up dog waste with any frequency either on walks or in their own yard were asked the most important reason for doing so, the results of which can be seen in Table 15 and Figure 15. The response options were “City/county ordinance”, “Don’t want to step in it”, “It causes water pollution”, “It is gross”, “It’s what good neighbors do”, “Odor”, or “Other reason”. In response to this question, 24.7% of dog owners report that their most important reason is “it’s what good neighbors do”. Additionally, 21.7% report their most important reason is a concern about water pollution. Few respondents are concerned about odor. Respondents ages 25-54 exhibit the most concern over pet waste city ordinances and potential water pollution. Respondents 65 and older are considerably more swayed by what “good neighbors do”.

Table 15. Most important reason for picking up dog waste by demographic group.

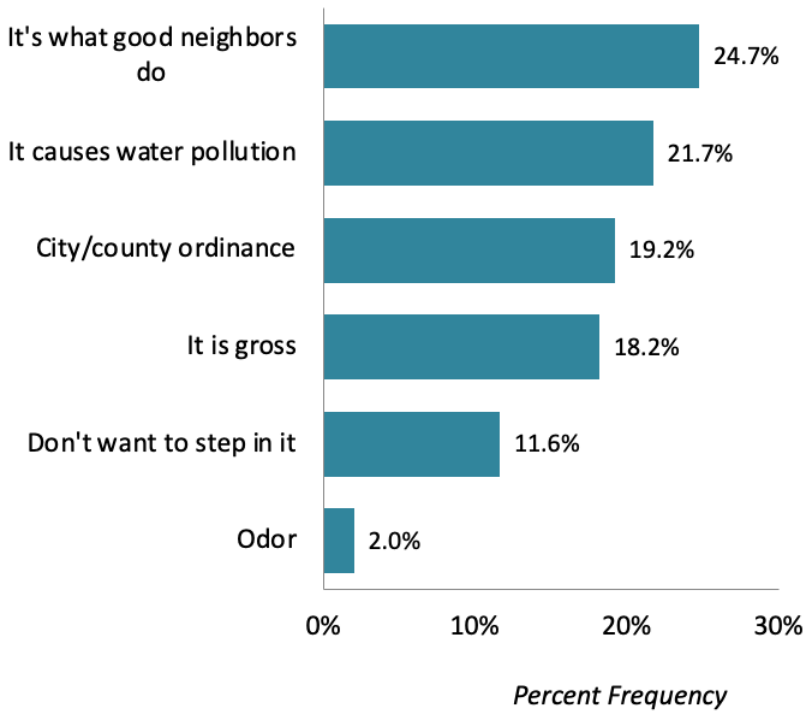
Demographic	Subcategory	Reason for Picking Up Dog Waste					
		City/county ordinance	Don't want to step in it	It causes water pollution	It is gross	It's what good neighbors do	Odor
	All Respondents	19.2%	11.6%	21.7%	18.2%	24.7%	2.0%
Gender	Male	20.8%	9.2%	25.0%	15.0%	26.7%	*
	Female	16.9%	15.6%	16.9%	23.4%	20.8%	*
Age	21 to 24	6.3%	31.3%	6.3%	25.0%	25.0%	*
	25 to 34	23.4%	12.8%	12.8%	27.7%	14.9%	*
	35 to 44	20.0%	7.1%	30.0%	18.6%	20.0%	*
	45 to 54	22.9%	8.6%	22.9%	5.7%	37.1%	*
	55 to 64	16.7%	16.7%	27.8%	16.7%	22.2%	*
	65 to 74	0.0%	10.0%	20.0%	10.0%	60.0%	*
	75 or older	50.0%	0.0%	0.0%	0.0%	50.0%	*
Locality	Alexandria	16.0%	24.0%	20.0%	8.0%	28.0%	*
	Arlington	36.4%	4.5%	18.2%	22.7%	18.2%	*
	Fairfax Co.	18.0%	13.1%	23.0%	14.8%	27.9%	*
	Prince William & Stafford Co.	18.2%	15.2%	12.1%	24.2%	21.2%	*
	Loudon Co.	15.8%	5.3%	28.1%	21.1%	24.6%	*
Ethnicity	Not Hispanic/Latino	19.2%	11.6%	23.3%	16.3%	25.6%	*
	Hispanic/Latino	19.2%	11.5%	11.5%	30.8%	19.2%	*
Residence Years	Less than 1 year	0.0%	25.0%	25.0%	25.0%	0.0%	*
	1 to 3 years	15.2%	15.2%	15.2%	24.2%	27.3%	*
	4 to 9 years	19.1%	11.8%	17.6%	20.6%	25.0%	*
	10 to 19 years	20.9%	4.7%	34.9%	9.3%	30.2%	*
	20 or more years	22.0%	14.0%	20.0%	18.0%	20.0%	*
Residence Type	Owned	19.4%	9.7%	23.9%	16.8%	25.8%	*
	Rented	19.0%	16.7%	14.3%	23.8%	21.4%	*
Income	Less than \$35,000	40.0%	0.0%	10.0%	30.0%	20.0%	*
	\$35,000 to \$49,999	20.0%	10.0%	0.0%	20.0%	50.0%	*
	\$50,000 to \$74,999	9.7%	22.6%	35.5%	16.1%	12.9%	*
	\$75,000 to \$99,999	16.7%	13.9%	16.7%	22.2%	19.4%	*
	\$100,000 to \$124,999	33.3%	14.3%	9.5%	23.8%	19.0%	*

Demographic	Subcategory	Reason for Picking Up Dog Waste					
		City/county ordinance	Don't want to step in it	It causes water pollution	It is gross	It's what good neighbors do	Odor
	\$125,000 to \$149,999	15.0%	10.0%	40.0%	5.0%	25.0%	*
	\$150,000 to \$174,999	18.2%	4.5%	27.3%	9.1%	31.8%	*
	\$175,000 to \$199,999	10.5%	10.5%	21.1%	15.8%	42.1%	*
	\$200,000 or greater	24.1%	6.9%	17.2%	24.1%	24.1%	*

* *Red font* indicates significant differences within a demographic subgroup.

** Insufficient data for between-group comparison.

Figure 15. Reason for picking up dog waste.



Below, in Table 11, survey responses from 2017-2026 regarding reasons for picking up dog waste can be seen. Generally, there is little evidence of changes in reasoning for picking up after one's dog.

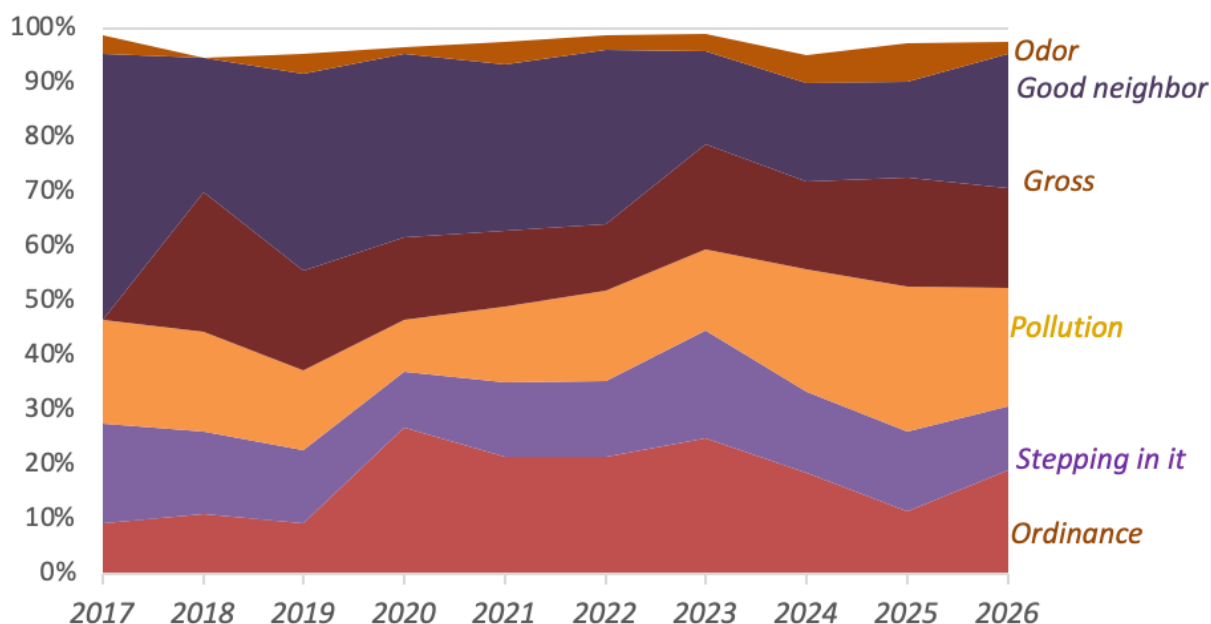
Table 16. Reason for picking up dog waste across years.

Reason	Year of Survey									
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
City/county ordinance	9.2%	11.1%	9.4%	27.0%	21.6%	21.4%	24.9%	18.6%	11.4%	19.2%
Don't want to step in it	18.4%	15.0%	13.5%	10.1%	13.7%	13.9%	19.8%	14.9%	14.7%	11.6%
It causes water pollution	19.1%	18.3%	14.6%	9.6%	13.7%	16.8%	14.8%	22.4%	26.6%	21.7%
It is gross	*	25.5%	18.1%	15.2%	14.1%	12.2%	19.4%	16.1%	20.1%	18.2%
It's what good neighbors do	48.7%	24.8%	36.3%	33.7%	30.3%	31.9%	16.9%	18.0%	17.4%	24.7%
Odor	3.3%	*	3.5%	1.1%	4.1%	2.5%	3.4%	5.0%	7.1%	2.0%
Other reason	1.3%	5.2%	4.7%	3.4%	2.5%	1.3%	0.8%	5.0%	2.7%	2.5%

* Red font indicates that the value significantly differs from the current 2026 value.

Asterisks (*) indicate that the question did not appear in the survey that year.

Figure 16. Reason for picking up pet waste across years.



2.5 Home Landscaping Water Conservation

Respondents were asked about their familiarity with and possession of various home water conservation methods including rain barrels, rain gardens, and conservation landscaping. Results are summarized in Table 17 and displayed in Figure 17. Survey respondents were given a definition of each conservation method and asked “Which of the following statements are true for you?” with response options “Yes”, “No”, and “Don’t know” for the following statements:

- I have [a rain barrel/ a rain garden/ conservation landscaping].
- I am familiar with [rain barrels/ rain gardens/ conservation landscaping].
- I don’t [a rain barrel/ a rain garden/ conservation landscaping] but I’m interested in getting [one/ one/ it].

When queried on their ownership, familiarity, and interest in rain barrels, about one-fifth (19.9%) report owning one, most (75.5%) report having familiarity with them, and over one-third (43.2%) report wanting to own one. When the same questions were posed regarding rain gardens, about one-fifth (19.9%) report owning one, half (49.7%) say they are familiar with them, and about one-third (37.3%) report wanting to own one. Finally, when asked about conservation landscaping, one third (28.3%) report having it, over half (57.4%) report being familiar with it and one third (36.1%) report being interested in adopting it.

We note that all respondents were asked whether they would like to adopt the methods, regardless of whether they have the ability or space to do so; in other words, apartment renters were asked about each method.

Taken together, we note that familiarity with rain gardens and conservation landscaping is lower than familiarity with rain barrels and shows room for growth. Over a third of respondents are interested in adopting new water conservation methods, indicating receptiveness to water conservation among residents and the opportunity for education and buy-in.

Table 17. Familiarity with home water conservation methods by demographic group.

Demographic	Subcategory	Have Rain Barrel	Familiar with Rain Barrel	Want a Rain Barrel	Have Rain Garden	Familiar with Rain Garden	Want a Rain Garden	Have Cons. Landscape	Familiar with Cons. Landscape	Want Cons. Landscape
	All Respondents	20.1%	75.5%	43.2%	19.9%	49.7%	37.3%	28.3%	57.4%	36.1%
Gender	Male	25.4%	78.5%	40.0%	23.8%	55.0%	38.8%	33.1%	63.1%	34.6%
	Female	15.0%	73.1%	46.2%	16.2%	44.6%	35.4%	23.8%	51.9%	37.3%
Age	21 to 24	12.8%	72.3%	57.4%	19.1%	46.8%	48.9%	25.5%	57.4%	44.7%

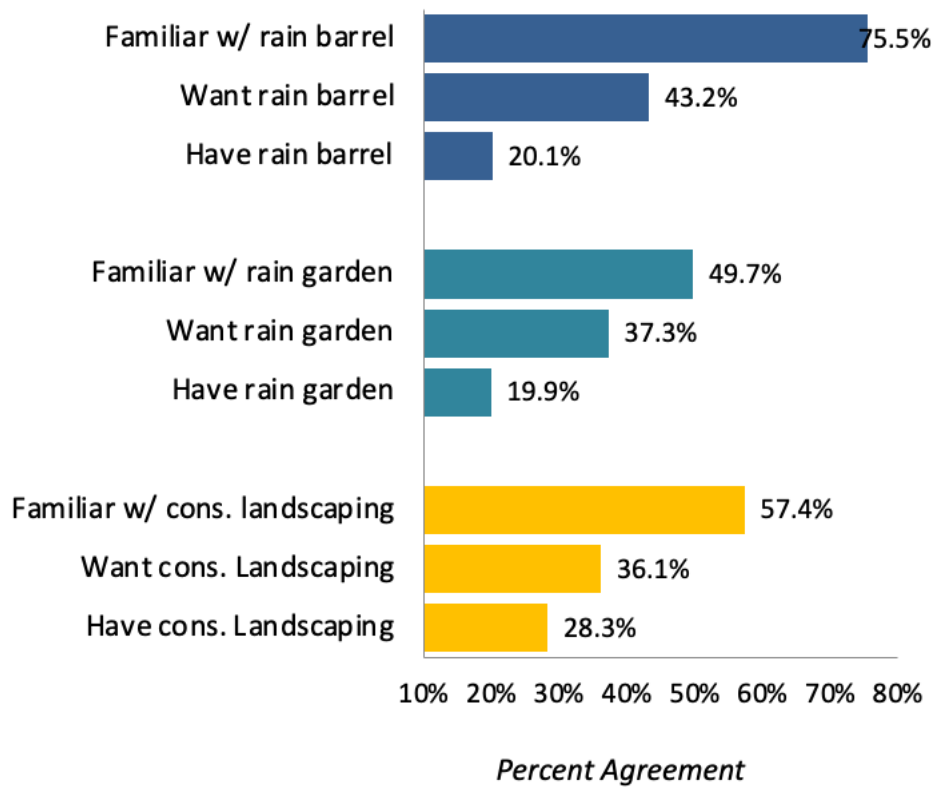
Demographic	Subcategory	Have Rain Barrel	Familiar with Rain Barrel	Want a Rain Barrel	Have Rain Garden	Familiar with Rain Garden	Want a Rain Garden	Have Cons. Landscape	Familiar with Cons. Landscape	Want Cons. Landscape
	25 to 34	28.8%	69.2%	51.9%	28.8%	59.6%	38.5%	29.8%	60.6%	41.3%
	35 to 44	38.2%	77.3%	45.5%	39.1%	64.5%	43.6%	47.3%	68.2%	34.5%
	45 to 54	17.1%	70.7%	50.0%	14.6%	53.7%	43.9%	23.2%	61.0%	41.5%
	55 to 64	6.5%	79.2%	32.5%	6.5%	28.6%	28.6%	22.1%	48.1%	32.5%
	65 to 74	5.3%	84.2%	27.6%	5.3%	43.4%	27.6%	17.1%	47.4%	28.9%
	75 or older	14.8%	77.8%	29.6%	3.7%	22.2%	18.5%	14.8%	44.4%	22.2%
Locality	Alexandria	29.9%	70.1%	41.8%	25.4%	53.7%	49.3%	32.8%	59.7%	40.3%
	Arlington	20.9%	77.6%	44.8%	23.9%	53.7%	37.3%	14.9%	59.7%	46.3%
	Fairfax Co.	16.8%	75.7%	43.4%	18.5%	49.1%	34.1%	28.9%	58.4%	31.2%
	Prince William & Stafford Co.	12.6%	73.0%	47.7%	13.5%	44.1%	33.3%	26.1%	48.6%	34.2%
	Loudon Co.	26.7%	80.0%	38.1%	22.9%	51.4%	39.0%	35.2%	61.9%	37.1%
Ethnicity	Not Hispanic/Latino	19.7%	75.8%	42.8%	19.9%	49.6%	37.3%	28.8%	58.7%	35.8%
	Hispanic/Latino	23.5%	72.5%	47.1%	19.6%	51.0%	37.3%	23.5%	45.1%	39.2%
Residence Years	Less than 1 year	7.9%	63.2%	47.4%	15.8%	50.0%	28.9%	13.2%	52.6%	31.6%
	1 to 3 years	15.7%	63.7%	47.1%	18.6%	40.2%	39.2%	21.6%	49.0%	39.2%
	4 to 9 years	24.3%	73.7%	45.4%	25.0%	53.3%	40.1%	28.9%	57.2%	41.4%
	10 to 19 years	23.7%	81.4%	44.3%	19.6%	57.7%	41.2%	30.9%	63.9%	36.1%
	20 or more years	19.4%	85.8%	35.8%	16.4%	47.0%	32.1%	35.1%	60.4%	29.1%
Residence Type	Owned	24.2%	79.8%	41.7%	23.0%	52.1%	37.7%	35.0%	63.5%	38.0%
	Rented	14.0%	69.9%	46.2%	15.1%	46.2%	35.5%	17.2%	46.2%	32.3%
Income	Less than \$35,000	11.4%	65.7%	40.0%	11.4%	38.6%	28.6%	20.0%	42.9%	30.0%
	\$35,000 to \$49,999	22.7%	75.0%	40.9%	25.0%	45.5%	29.5%	18.2%	43.2%	25.0%
	\$50,000 to \$74,999	12.8%	73.4%	48.9%	16.0%	47.9%	41.5%	23.4%	53.2%	42.6%
	\$75,000 to \$99,999	16.7%	73.8%	56.0%	16.7%	47.6%	46.4%	25.0%	64.3%	42.9%
	\$100,000 to \$124,999	23.7%	74.6%	35.6%	18.6%	49.2%	40.7%	32.2%	54.2%	33.9%
	\$125,000 to	28.6%	81.0%	35.7%	26.2%	64.3%	35.7%	33.3%	64.3%	31.0%

Demographic	Subcategory	Have Rain Barrel	Familiar with Rain Barrel	Want a Rain Barrel	Have Rain Garden	Familiar with Rain Garden	Want a Rain Garden	Have Cons. Landscape	Familiar with Cons. Landscape	Want Cons. Landscape
	\$149,999									
	\$150,000 to \$174,999	36.8%	78.9%	36.8%	36.8%	63.2%	34.2%	55.3%	73.7%	28.9%
	\$175,000 to \$199,999	26.9%	84.6%	61.5%	26.9%	61.5%	53.8%	34.6%	65.4%	50.0%
	\$200,000 or greater	21.2%	83.3%	31.8%	19.7%	48.5%	27.3%	30.3%	65.2%	36.4%

* *Red font* indicates significant differences within a demographic subgroup.

** *Insufficient data for between-group comparison*

Figure 17. Familiarity with home water conservation methods.



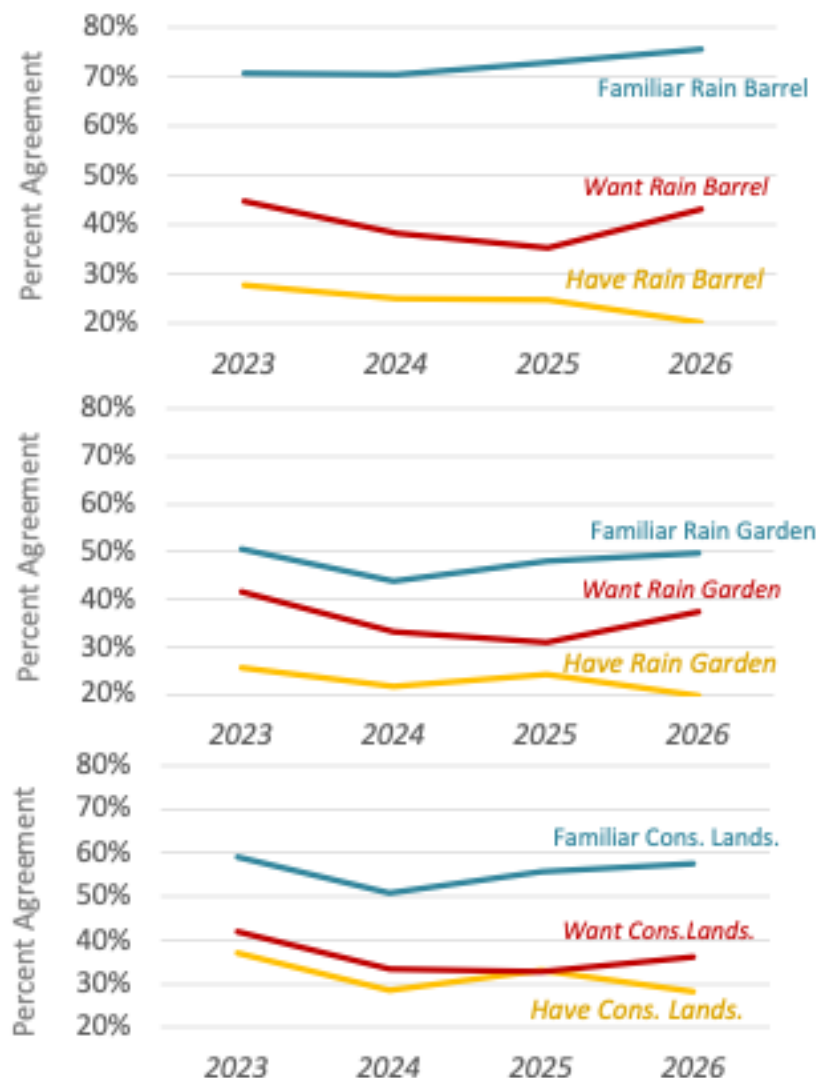
Familiarity, ownership and desire to own home water conservation methods from 2023 to 2026 are shown in Table 18. No significant differences over survey years are observed.

Table 18. Familiarity with home water conservation methods across years.

Survey Response	Year of Survey			
	2023	2024	2025	2026
Have Rain Barrel	27.7%	25.0%	24.7%	20.1%
Familiar Rain Barrel	70.7%	70.4%	72.9%	75.5%
Want Rain Barrel	44.9%	38.2%	35.4%	43.2%
Have Rain Garden	25.5%	21.6%	24.4%	19.9%
Familiar Rain Garden	50.5%	43.8%	48.1%	49.7%
Want Rain Garden	41.6%	33.3%	30.9%	37.3%
Have Conservation Landscaping	37.1%	28.6%	33.0%	28.3%
Familiar Conservation Landscaping	59.1%	50.8%	55.7%	57.4%
Want Conservation Landscaping	42.0%	33.3%	32.8%	36.1%

** Red font indicates that the value significantly differs from the current 2026 value.*

Figure 18. Familiarity, ownership and desire to own home water conservation methods (rain barrels, rain gardens, and conservation landscaping).



2.6 Roadway Maintenance Materials

Four survey questions measure residents' behaviors and perceptions related to roadway materials for icy conditions:

- **During snowy and icy conditions, how often (if at all) do you (or a family member) apply deicer (e.g., salt) at your residence?** [*always or most of the time, frequently, sometimes, occasionally, rarely, never, don't know*]

- [skipped if the “rarely” or “never” was given in the previous question] **Do you (or a family member) typically apply deicer (e.g., salt) at your residence before, during, or after a winter storm event?** [Select all that apply: Before, During, After Depends / varies too much to say, Other, Don’t know]
- **During snowy and icy conditions, how often (if at all) do you (or a family member) apply an abrasive for traction (e.g., sand) at your residence?** [always or most of the time, frequently, sometimes, occasionally, rarely, never, don’t know]
- **In general, how would you rate the impact (if any) on each of the following from using salt for winter storm events?** [5-point scale from “very positive” to “very negative”, and “don’t know/not sure”]: Tap/Drinking water, local waterways, emergency vehicle safety, motorist safety, pedestrian safety, economic and civic activity.

Respondents varied in frequency of applying deicer at their residences, with about 40.4% reporting “always or frequently”, 32.8% reporting “Sometimes or occasionally” and 26.8% reporting “rarely or never”. Men report using deicer more frequently than women, and home renters report using deicer more frequently than those in owned homes. Reported frequency of applying deicer tends to decrease with age.

Table 19. Frequency of applying a deicer at one’s residence, by demographic group.

Demographic	Subcategory	Always or frequently	Sometimes or Occasionally	Rarely or never
	All Respondents	40.4%	32.8%	26.8%
Gender	Male	37.6%	40.3%	22.1%
	Female	43.3%	25.2%	31.5%
Age	21 to 24	54.3%	21.7%	23.9%
	25 to 34	44.1%	42.2%	13.7%
	35 to 44	55.1%	30.8%	14.0%
	45 to 54	41.5%	34.1%	24.4%
	55 to 64	29.9%	29.9%	40.3%
	65 to 74	22.7%	32.0%	45.3%
	75 or older	19.2%	30.8%	50.0%
Locality	Alexandria	50.0%	31.8%	18.2%
	Arlington	38.8%	29.9%	31.3%
	Fairfax Co.	39.6%	32.5%	27.8%
	Prince William & Stafford Co.	44.4%	28.7%	26.9%
	Loudon Co.	32.4%	40.0%	27.6%
Ethnicity	Not Hispanic/Latino	39.2%	33.0%	27.8%
	Hispanic/Latino	51.0%	31.4%	17.6%

Demographic	Subcategory	Always or frequently	Sometimes or Occasionally	Rarely or never
Residence Years	Less than 1 year	44.7%	34.2%	21.1%
	1 to 3 years	45.4%	30.9%	23.7%
	4 to 9 years	41.1%	30.5%	28.5%
	10 to 19 years	38.9%	38.9%	22.1%
	20 or more years	35.8%	32.1%	32.1%
Residence Type	Owned	37.8%	36.3%	25.8%
	Rented	45.3%	25.7%	29.1%
Income	Less than \$35,000	46.2%	21.5%	32.3%
	\$35,000 to \$49,999	45.5%	34.1%	20.5%
	\$50,000 to \$74,999	39.1%	38.0%	22.8%
	\$75,000 to \$99,999	42.2%	33.7%	24.1%
	\$100,000 to \$124,999	40.7%	28.8%	30.5%
	\$125,000 to \$149,999	45.2%	35.7%	19.0%
	\$150,000 to \$174,999	34.2%	42.1%	23.7%
	\$175,000 to \$199,999	30.8%	30.8%	38.5%
	\$200,000 or greater	34.8%	31.8%	33.3%

* *Red font indicates significant differences within a demographic subgroup.*

Among those reporting deicer use, approximately one third use them before, during and after storms. Fewer (13.6%) adjust their use deicer use based on the storm (as opposed to reliably using the product whenever there is a storm). Older adults generally use deicer before a storm less frequently than younger. Similarly, those who have lived in their residence for fewer years are more likely to apply deicer before a storm. Finally Hispanic/Latino respondents exhibit more frequent use of deicer before storms than non-Hispanic/Latino respondents.

Table 20. When respondents apply deicers, by demographic group.

Demographic	Subcategory	Before Storm	During Storm	After Storm	Depends
	All Respondents	37.3%	26.2%	31.4%	13.6%
Gender	Male	38.8%	29.2%	32.7%	16.5%
	Female	35.8%	23.1%	30.4%	10.4%
Age	21 to 24	51.1%	36.2%	27.7%	23.4%
	25 to 34	41.3%	33.7%	35.6%	13.5%

Demographic	Subcategory	Before Storm	During Storm	After Storm	Depends
	35 to 44	49.1%	34.5%	38.2%	12.7%
	45 to 54	42.7%	26.8%	29.3%	13.4%
	55 to 64	24.7%	18.2%	28.6%	14.3%
	65 to 74	21.1%	10.5%	26.3%	9.2%
	75 or older	14.8%	11.1%	22.2%	11.1%
Locality	Alexandria	37.3%	26.9%	32.8%	16.4%
	Arlington	37.3%	19.4%	23.9%	13.4%
	Fairfax Co.	32.9%	27.7%	34.7%	14.5%
	Prince William & Stafford Co.	42.3%	21.6%	26.1%	11.7%
	Loudon Co.	39.0%	32.4%	35.2%	12.4%
Ethnicity	Not Hispanic/Latino	35.6%	26.5%	31.4%	13.1%
	Hispanic/Latino	52.9%	23.5%	31.4%	17.6%
Residence Years	Less than 1 year	55.3%	15.8%	34.2%	13.2%
	1 to 3 years	39.2%	22.5%	29.4%	10.8%
	4 to 9 years	36.8%	31.6%	25.7%	11.8%
	10 to 19 years	44.3%	33.0%	37.1%	13.4%
	20 or more years	26.1%	20.9%	34.3%	17.9%
Residence Type	Owned	33.4%	29.8%	34.0%	14.1%
	Rented	43.5%	21.0%	26.9%	11.8%
Income	Less than \$35,000	34.3%	18.6%	28.6%	10.0%
	\$35,000 to \$49,999	45.5%	22.7%	29.5%	15.9%
	\$50,000 to \$74,999	42.6%	25.5%	30.9%	13.8%
	\$75,000 to \$99,999	41.7%	28.6%	28.6%	9.5%
	\$100,000 to \$124,999	32.2%	25.4%	33.9%	16.9%
	\$125,000 to \$149,999	42.9%	31.0%	47.6%	16.7%
	\$150,000 to \$174,999	28.9%	36.8%	36.8%	13.2%
	\$175,000 to \$199,999	19.2%	34.6%	23.1%	11.5%

Demographic	Subcategory	Before Storm	During Storm	After Storm	Depends
	\$200,000 or greater	34.8%	22.7%	27.3%	16.7%

* *Red font indicates significant differences within a demographic subgroup.*

As shown in Table 21, the use of roadway abrasives is somewhat common than salt use: 21.9% of respondents use abrasives “always or frequently. Generally, reported use of abrasives tends to decrease with age.

Table 21. Frequency of applying an abrasive at one’s residence, by demographic group.

Demographic	Subcategory	Always or frequently	Sometimes or Occasionally	Rarely or Never
	All Respondents	21.9%	27.3%	50.8%
Gender	Male	24.8%	31.1%	44.1%
	Female	19.1%	23.2%	57.7%
Age	21 to 24	27.9%	23.3%	48.8%
	25 to 34	24.0%	37.0%	39.0%
	35 to 44	35.5%	35.5%	29.0%
	45 to 54	19.0%	21.5%	59.5%
	55 to 64	13.9%	26.4%	59.7%
	65 to 74	12.2%	16.2%	71.6%
	75 or older	7.4%	14.8%	77.8%
Locality	Alexandria	27.0%	39.7%	33.3%
	Arlington	22.4%	20.9%	56.7%
	Fairfax Co.	18.1%	28.3%	53.6%
	Prince William & Stafford Co.	26.5%	21.6%	52.0%
	Loudon Co.	20.2%	27.9%	51.9%
Ethnicity	Not Hispanic/Latino	21.1%	28.0%	50.9%
	Hispanic/Latino	29.2%	20.8%	50.0%
Residence Years	Less than 1 year	27.8%	27.8%	44.4%
	1 to 3 years	27.1%	30.2%	42.7%
	4 to 9 years	21.3%	25.3%	53.3%
	10 to 19 years	21.7%	23.9%	54.3%
	20 or more years	17.2%	29.7%	53.1%
Residence Type	Owned	20.4%	28.3%	51.3%
	Rented	24.9%	24.9%	50.3%

Demographic	Subcategory	Always or frequently	Sometimes or Occasionally	Rarely or Never
Income	Less than \$35,000	22.2%	15.9%	61.9%
	\$35,000 to \$49,999	29.3%	34.1%	36.6%
	\$50,000 to \$74,999	22.0%	34.1%	44.0%
	\$75,000 to \$99,999	18.8%	30.0%	51.3%
	\$100,000 to \$124,999	24.1%	25.9%	50.0%
	\$125,000 to \$149,999	26.8%	31.7%	41.5%
	\$150,000 to \$174,999	21.1%	31.6%	47.4%
	\$175,000 to \$199,999	16.0%	28.0%	56.0%
	\$200,000 or greater	18.5%	16.9%	64.6%

* *Red font* indicates significant differences within a demographic subgroup. Because the frequency categories are correlated (i.e., the sum to 100%), statistical tests were only run for the “Always or frequently” category.

The frequency of deicer and abrasive use in 2024 (the year the questions were added to the survey) through 2026 are show below. There are no observed differences between deicer and abrasive usage in previous years versus 2026.

Table 22. Use of deicers and abrasives in 2024 - 2026.

Used 'Always' or 'Frequently'	Year of Survey		
	2024	2025	2026
Deicer	33.7%	41.7%	40.4%
Abrasive	17.2%	24.7%	21.9%

Table 23. When deicers are used in 2024- 2026.

When deicer is used, relative to a storm	Year of Survey		
	2024	2025	2026
Before	31.2%	34.0%	37.3%
During	21.8%	26.5%	26.2%
After	31.6%	26.1%	31.4%
It Depends	15.4%	11.3%	13.6%

Finally, respondents were asked about their perceptions, positive and negative, of the impact of roadway salt use on various factors. The majority of respondents feel that roadway salt use has a positive impact on emergency vehicle safety (63.3%), motorist safety (67.1%), and pedestrian safety (71.3%). About one third view the impact on tap/drinking water (29.1%) and local waterways as positive (28.7%). Finally, about half (53.0%) perceive the impact on economic and civic activity as positive. Generally, positive perceptions of roadway salt increases with age and income.

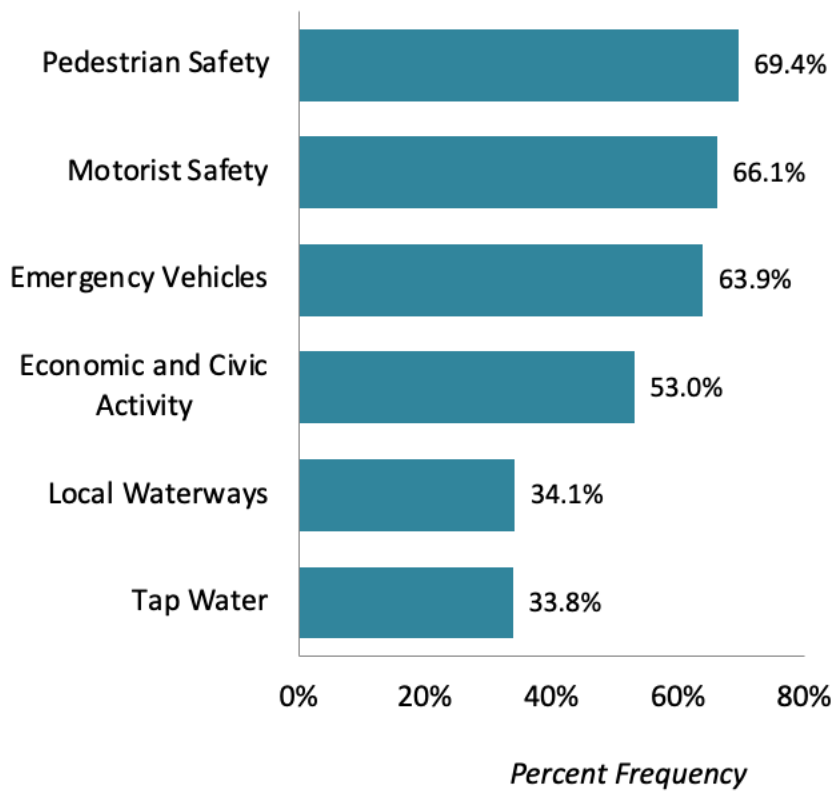
Table 24. Perceived impact of roadway salting as “very” or “somewhat” positive, by demographic group.

Demographic	Subcategory	Tap Water	Local Waterways	Emergency Vehicles	Motorist Safety	Ped. Safety	Eco. and Civic Act.
	All Respondents	29.1%	28.7%	63.3%	67.1%	71.3%	50.3%
Gender	Male	34.2%	46.5%	9.6%	10.8%	10.8%	12.7%
	Female	38.1%	49.2%	10.0%	10.8%	10.4%	10.0%
Age	21 to 24	21.3%	29.8%	8.5%	12.8%	8.5%	8.5%
	25 to 34	23.1%	28.8%	10.6%	12.5%	14.4%	15.4%
	35 to 44	26.4%	33.6%	4.5%	7.3%	6.4%	7.3%
	45 to 54	47.6%	53.7%	11.0%	9.8%	12.2%	12.2%
	55 to 64	48.1%	64.9%	10.4%	11.7%	11.7%	10.4%
	65 to 74	50.0%	73.7%	11.8%	9.2%	7.9%	14.5%
	75 or older	40.7%	70.4%	18.5%	18.5%	14.8%	11.1%
Locality	Alexandria	31.3%	37.3%	7.5%	20.9%	16.4%	14.9%
	Arlington	47.8%	53.7%	17.9%	11.9%	9.0%	11.9%
	Fairfax Co.	37.0%	49.7%	9.2%	9.8%	9.2%	12.7%
	Prince William &	26.1%	45.0%	9.0%	10.8%	12.6%	13.5%

Demographic	Subcategory	Tap Water	Local Waterways	Emergency Vehicles	Motorist Safety	Ped. Safety	Eco. and Civic Act.
	Stafford Co.						
	Loudon Co.	40.0%	50.5%	7.6%	4.8%	7.6%	4.8%
Ethnicity	Not Hispanic/Latino	36.4%	48.3%	9.7%	10.4%	10.4%	11.4%
	Hispanic/Latino	31.4%	43.1%	9.8%	13.7%	11.8%	11.8%
Residence Years	Less than 1 year	36.8%	42.1%	10.5%	10.5%	7.9%	10.5%
	1 to 3 years	26.5%	36.3%	13.7%	14.7%	14.7%	13.7%
	4 to 9 years	29.6%	40.1%	9.9%	11.2%	10.5%	12.5%
	10 to 19 years	42.3%	56.7%	9.3%	9.3%	10.3%	9.3%
	20 or more years	45.5%	60.4%	6.7%	8.2%	8.2%	10.4%
Residence Type	Owned	40.5%	54.9%	9.8%	10.7%	11.0%	11.0%
	Rented	28.0%	35.5%	9.7%	10.2%	9.1%	11.3%
Income	Less than \$35,000	24.3%	32.9%	11.4%	14.3%	12.9%	14.3%
	\$35,000 to \$49,999	31.8%	36.4%	6.8%	6.8%	6.8%	11.4%
	\$50,000 to \$74,999	38.3%	45.7%	10.6%	11.7%	9.6%	10.6%
	\$75,000 to \$99,999	33.3%	45.2%	8.3%	10.7%	10.7%	9.5%
	\$100,000 to \$124,999	30.5%	40.7%	10.2%	6.8%	6.8%	11.9%
	\$125,000 to \$149,999	26.2%	47.6%	14.3%	14.3%	16.7%	16.7%
	\$150,000 to \$174,999	47.4%	60.5%	7.9%	18.4%	18.4%	13.2%
	\$175,000 to \$199,999	46.2%	69.2%	7.7%	3.8%	7.7%	7.7%
	\$200,000 or greater	51.5%	68.2%	9.1%	7.6%	7.6%	9.1%

* *Red font* indicates significant differences within a demographic subgroup.

Figure 19. Perceived positive impacts of roadway salting (rates impact as “very” or “somewhat” positive).



Positive perceptions of salting between years 2024 (the first year the question was included in the survey) and 2026 are shown below. No differences over years are observed.

Table 25. Perceived positive impacts of roadway salting, 2024 – 2026.

Very' or 'Somewhat' positive	Year of Survey		
	2024	2025	2026
Tap Water	31.1%	33.8%	29.1%
Local Waterways	30.5%	34.1%	28.7%
Emergency Vehicles	61.8%	63.9%	63.3%
Motorist Safety	65.1%	66.1%	67.1%
Pedestrian Safety	68.8%	69.4%	71.3%
Economic and Civic Activity	45.5%	53.0%	50.3%

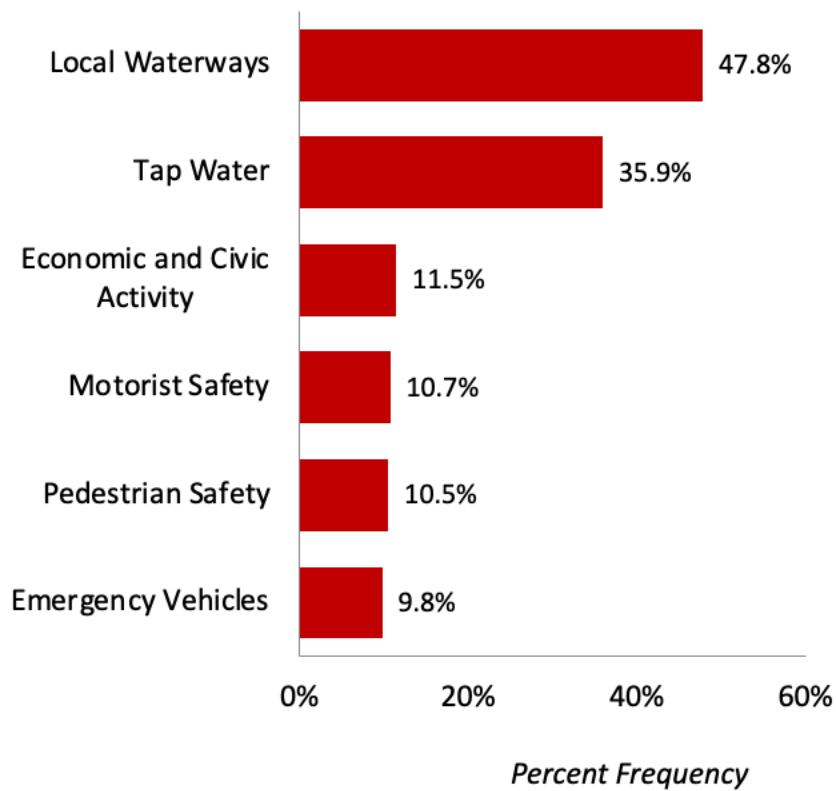
Table 28 shows rates of negative perceptions of roadway salting. The most common negative perceptions are on the impacts of salting on tap water and local waterways. Additionally, older adults more frequently perceive the impact of salt on tap water, local waterways and emergency vehicles as negative, compared to other age groups. Respondents in Alexandria show lower incidence of negative perceptions of the impact of salt on tap water and local waterways, compared to other localities. Negative perceptions of the impact tap water and local waterways also tends to increase with age.

Table 26. Perceived impact of roadway salting as “very negative” or “somewhat negative”, by demographic group.

Demographic	Subcategory	Tap Water	Local Waterways	Emergency Vehicles	Motorist Safety	Ped. Safety	Eco. and Civic Act.
	All Respondents	35.9%	47.8%	9.8%	10.7%	10.5%	11.5%
Gender	Male	34.2%	46.5%	9.6%	10.8%	10.8%	12.7%
	Female	38.1%	49.2%	10.0%	10.8%	10.4%	10.0%
Age	21 to 24	21.3%	29.8%	8.5%	12.8%	8.5%	8.5%
	25 to 34	23.1%	28.8%	10.6%	12.5%	14.4%	15.4%
	35 to 44	26.4%	33.6%	4.5%	7.3%	6.4%	7.3%
	45 to 54	47.6%	53.7%	11.0%	9.8%	12.2%	12.2%
	55 to 64	48.1%	64.9%	10.4%	11.7%	11.7%	10.4%
	65 to 74	50.0%	73.7%	11.8%	9.2%	7.9%	14.5%

Demographic	Subcategory	Tap Water	Local Waterways	Emergency Vehicles	Motorist Safety	Ped. Safety	Eco. and Civic Act.
	75 or older	40.7%	70.4%	18.5%	18.5%	14.8%	11.1%
Locality	Alexandria	31.3%	37.3%	7.5%	20.9%	16.4%	14.9%
	Arlington	47.8%	53.7%	17.9%	11.9%	9.0%	11.9%
	Fairfax Co.	37.0%	49.7%	9.2%	9.8%	9.2%	12.7%
	Prince William & Stafford Co.	26.1%	45.0%	9.0%	10.8%	12.6%	13.5%
	Loudon Co.	40.0%	50.5%	7.6%	4.8%	7.6%	4.8%
Ethnicity	Not Hispanic/Latino	36.4%	48.3%	9.7%	10.4%	10.4%	11.4%
	Hispanic/Latino	31.4%	43.1%	9.8%	13.7%	11.8%	11.8%
Residence Years	Less than 1 year	36.8%	42.1%	10.5%	10.5%	7.9%	10.5%
	1 to 3 years	26.5%	36.3%	13.7%	14.7%	14.7%	13.7%
	4 to 9 years	29.6%	40.1%	9.9%	11.2%	10.5%	12.5%
	10 to 19 years	42.3%	56.7%	9.3%	9.3%	10.3%	9.3%
	20 or more years	45.5%	60.4%	6.7%	8.2%	8.2%	10.4%
Residence Type	Owned	40.5%	54.9%	9.8%	10.7%	11.0%	11.0%
	Rented	28.0%	35.5%	9.7%	10.2%	9.1%	11.3%
Income	Less than \$35,000	24.3%	32.9%	11.4%	14.3%	12.9%	14.3%
	\$35,000 to \$49,999	31.8%	36.4%	6.8%	6.8%	6.8%	11.4%
	\$50,000 to \$74,999	38.3%	45.7%	10.6%	11.7%	9.6%	10.6%
	\$75,000 to \$99,999	33.3%	45.2%	8.3%	10.7%	10.7%	9.5%
	\$100,000 to \$124,999	30.5%	40.7%	10.2%	6.8%	6.8%	11.9%
	\$125,000 to \$149,999	26.2%	47.6%	14.3%	14.3%	16.7%	16.7%
	\$150,000 to \$174,999	47.4%	60.5%	7.9%	18.4%	18.4%	13.2%
	\$175,000 to \$199,999	46.2%	69.2%	7.7%	3.8%	7.7%	7.7%
	\$200,000 or greater	51.5%	68.2%	9.1%	7.6%	7.6%	9.1%

Figure 20. Perceived negative impacts of roadway salting (rates impact as “very” or “somewhat” negative).



Finally, the table below shows negative perceptions of the impact of roadway salting in 2024 through 2026. The perceived negative impact of salt on local waterways was lower in 2025 than in 2026. Otherwise, there are no significant differences in negative perceptions across years.

Table 27. Perceived negative impacts of roadway salting, 2024 – 2026.

Very' or 'Somewhat' negative	Year of Survey		
	2024	2025	2026
Tap Water	33.1%	35.2%	35.9%
Local Waterways	41.3%	39.9%	47.8%
Emergency Vehicles	10.6%	9.9%	9.8%
Motorist Safety	12.2%	10.1%	10.7%
Pedestrian Safety	9.5%	9.1%	10.5%
Economic and Civic Activity	10.2%	8.9%	11.5%

* *Red font indicates that the value significantly differs from the current 2026 value.*

2.7 Watershed and Stormwater Understanding

2.7.1 Local Watersheds

Respondents were asked a series of questions in order to assess their knowledge about watersheds. First, respondents were asked if they were familiar with the term “watershed”. Regardless of the response (yes or no), all respondents were then shown this definition of the term:

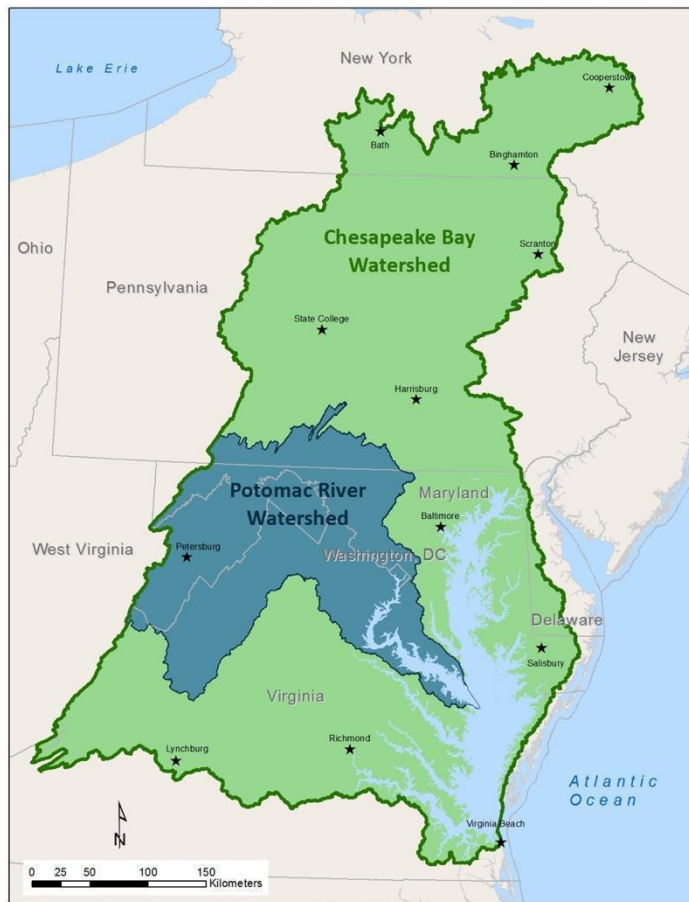
A watershed is an area of land that channels rainfall and snowmelt to creeks, streams, and rivers, and eventually to outflow points such as reservoirs, bays, and the ocean.

Next, survey respondents were queried about their knowledge of their local watershed. They were asked whether they believe they live in the following watersheds, and provided the response options were “Yes”, “No”, and “Don’t know:

- Chesapeake Bay watershed
- Potomac River watershed
- Another watershed not listed

For reference, a map of the Chesapeake Bay watershed and the Potomac River watershed can be seen below in Figure 23. All survey respondents live in both the Chesapeake Bay and Potomac watersheds.

Figure 21. Map of Chesapeake Bay and Potomac River watersheds.¹



As can be seen in Table 28, 76.1% of respondents report that they are familiar with the term “watershed”. When asked about the watersheds they reside in, 30.6% of respondents report that they live in the Chesapeake Bay watershed, 44.7% report that they live in the Potomac River watershed, and 2.9% report that they live in another watershed that was not listed in the survey. Men more often (correctly) believe they live in both Chesapeake Bay and Potomac River compared to women. Alexandria residents less frequently state that they live in the two watersheds, compared to residents of other localities. Familiarity with the term “watershed” and belief that one lives in both listed watersheds generally increases with one’s tenure in their residence. Occupants of owned homes also show greater familiarity with the term “watershed” and belief that one lives in both watersheds, compared to rental occupants. Finally, familiarity

¹ Interstate Commission on the Potomac River Basin. (n.d.). *Potomac River Basin Atlas*. Potomac River Basin Atlas - Subwatersheds. <https://www.potomacriver.org/Atlas-Maps/Subwatersheds/>

with the term “watershed” and belief that one lives in the Potomac River watershed generally increase with household income.

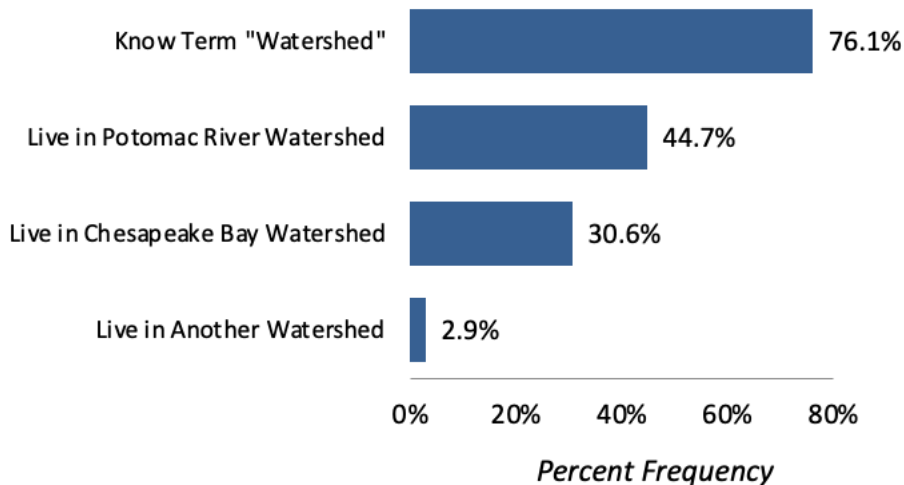
Table 28. Identifying the local watershed by demographic.

			Reports they live in the ...		
Demographic	Subcategory	Knows Term "Watershed"	Chesapeake Bay Watershed	Potomac River Watershed	Another Watershed
	All Respondents	76.1%	30.6%	44.7%	2.9%
Gender	Male	79.2%	38.5%	54.2%	*
	Female	72.7%	22.7%	35.4%	*
Age	21 to 24	74.5%	19.1%	31.9%	*
	25 to 34	78.8%	28.8%	37.5%	*
	35 to 44	82.7%	41.8%	54.5%	*
	45 to 54	78.0%	36.6%	46.3%	*
	55 to 64	67.5%	20.8%	40.3%	*
	65 to 74	75.0%	30.3%	52.6%	*
	75 or older	63.0%	22.2%	40.7%	*
Locality	Alexandria	73.1%	16.4%	47.8%	*
	Arlington	79.1%	25.4%	56.7%	*
	Fairfax Co.	79.8%	32.4%	37.0%	*
	Prince William & Stafford Co.	70.3%	28.8%	36.0%	*
	Loudon Co.	76.2%	41.9%	57.1%	*
Ethnicity	Not Hispanic/Latino	76.7%	30.5%	44.3%	*
	Hispanic/Latino	70.6%	31.4%	49.0%	*
Residence Years	Less than 1 year	78.9%	7.9%	21.1%	*
	1 to 3 years	59.8%	15.7%	42.2%	*
	4 to 9 years	78.3%	31.6%	39.5%	*
	10 to 19 years	80.4%	46.4%	52.6%	*
	20 or more years	82.1%	35.8%	53.7%	*
Residence Type	Owned	80.4%	39.6%	51.2%	*
	Rented	67.7%	16.7%	34.9%	*
Income	Less than \$35,000	62.9%	14.3%	25.7%	*
	\$35,000 to \$49,999	70.5%	9.1%	34.1%	*
	\$50,000 to \$74,999	68.1%	23.4%	36.2%	*
	\$75,000 to \$99,999	83.3%	34.5%	40.5%	*

			Reports they live in the ...		
Demographic	Subcategory	Knows Term "Watershed"	Chesapeake Bay Watershed	Potomac River Watershed	Another Watershed
	\$100,000 to \$124,999	72.9%	39.0%	47.5%	*
	\$125,000 to \$149,999	78.6%	52.4%	66.7%	*
	\$150,000 to \$174,999	78.9%	52.6%	73.7%	*
	\$175,000 to \$199,999	96.2%	38.5%	61.5%	*
	\$200,000 or greater	87.9%	30.3%	50.0%	*

* *Red font* indicates significant differences within a demographic subgroup.

Figure 22. Local watershed identification.



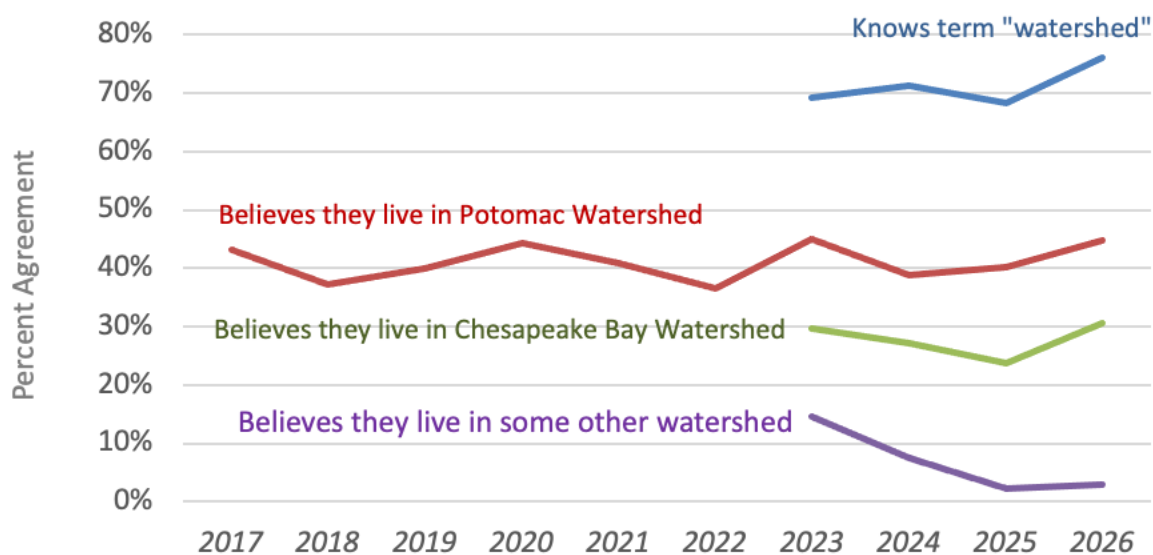
There are no differences in familiarity with the term “watershed” in the years in which the term was queried in this survey (since 2023). There also are no differences in knowledge of the local watersheds in the years that knowledge has been queried (since 2023 for the Chesapeake Bay watershed and since 2016 for the Potomac watershed). The proportion of respondents who believe that they live in a different watershed than those listed (Chesapeake and Potomac) was lower in 2023 and 2024 than presently.

Table 29. Watershed awareness across years.

Survey Response	Year of Survey									
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Knows term "watershed"	*	*	*	*	*	*	69.2%	71.3%	68.4%	76.1%
Believes they live in Potomac Watershed	43.2%	37.2%	40.0%	44.4%	40.8%	36.6%	44.9%	38.9%	40.2%	44.7%
Believes they live in Chesapeake Bay Watershed	*	*	*	*	*	*	29.7%	27.1%	23.8%	30.6%
Believes they live in some other watershed	*	*	*	*	*	*	14.5%	7.5%	2.2%	2.9%

Asterisks (*) indicate that the question did not appear in the survey that year.

Figure 23. Watershed awareness across years.



2.7.2 Local Stormwater

Respondents were asked a series of questions in order to assess their knowledge about stormwater drainage and household waste disposal.

As shown in Table 30, 42.4% of respondents report believing that stormwater goes into the Chesapeake Bay or Potomac River, 17.8% report believing it goes to a wastewater treatment facility, and 32.7% report believing it goes to both of these destinations. Newer residents (lived in home less than one year) believe that stormwater goes to the Chesapeake Bay or Potomac River with less frequency than longer tenured residents.

Table 30. Awareness of watersheds and knowledge of stormwater drainage by demographic group.

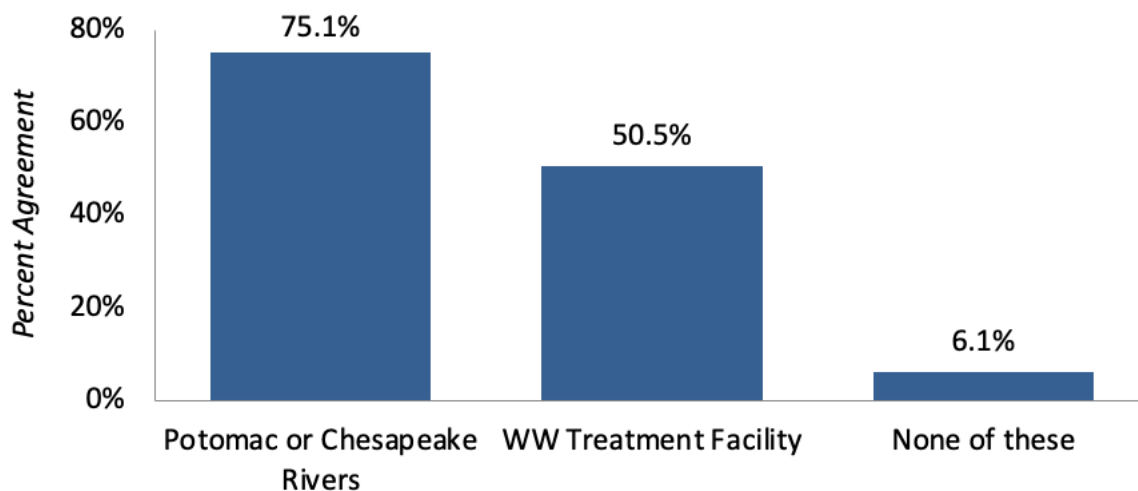
Demographic	Subcategory	Stormwater goes...				
		WW Treat ment	Potom. or Ches.	All Above	None	Other
	All Respondents	17.8%	42.4%	32.7%	4.6%	2.5%
Gender	Male	20.4%	43.1%	30.8%	3.1%	*
	Female	15.4%	41.5%	34.6%	6.2%	*
Age	21 to 24	12.8%	29.8%	44.7%	6.4%	*
	25 to 34	17.3%	43.3%	31.7%	6.7%	*
	35 to 44	23.6%	41.8%	31.8%	0.9%	*
	45 to 54	22.0%	50.0%	22.0%	4.9%	*
	55 to 64	14.3%	39.0%	36.4%	6.5%	*
	65 to 74	13.2%	50.0%	34.2%	2.6%	*
	75 or older	14.8%	29.6%	37.0%	7.4%	*
Locality	Alexandria	13.4%	47.8%	29.9%	7.5%	*
	Arlington	13.4%	43.3%	35.8%	6.0%	*
	Fairfax Co.	20.2%	35.3%	38.7%	3.5%	*
	Prince William & Stafford Co.	17.1%	41.4%	30.6%	5.4%	*
	Loudon Co.	20.0%	51.4%	24.8%	2.9%	*
Ethnicity	Not Hispanic/Latino	18.2%	41.3%	33.1%	5.1%	*
	Hispanic/Latino	13.7%	52.9%	29.4%	0.0%	*
Residence Years	Less than 1 year	23.7%	28.9%	36.8%	2.6%	*
	1 to 3 years	11.8%	42.2%	30.4%	10.8%	*
	4 to 9 years	15.8%	45.4%	33.6%	3.9%	*
	10 to 19 years	19.6%	49.5%	27.8%	2.1%	*
	20 or more years	21.6%	38.1%	35.8%	3.0%	*
Residence	Owned	19.9%	47.9%	28.5%	3.4%	*

		Stormwater goes...				
Demographic	Subcategory	WW Treat ment	Potom. or Ches.	All Above	None	Other
Type	Rented	13.4%	34.4%	39.2%	7.0%	*
Income	Less than \$35,000	21.4%	35.7%	27.1%	7.1%	*
	\$35,000 to \$49,999	9.1%	36.4%	43.2%	9.1%	*
	\$50,000 to \$74,999	12.8%	41.5%	37.2%	6.4%	*
	\$75,000 to \$99,999	11.9%	38.1%	42.9%	3.6%	*
	\$100,000 to \$124,999	23.7%	45.8%	23.7%	5.1%	*
	\$125,000 to \$149,999	33.3%	45.2%	19.0%	2.4%	*
	\$150,000 to \$174,999	13.2%	55.3%	28.9%	2.6%	*
	\$175,000 to \$199,999	15.4%	53.8%	30.8%	0.0%	*
	\$200,000 or greater	22.7%	43.9%	31.8%	1.5%	*

* *Red font* indicates significant differences within a demographic subgroup.

** Asterisks (*) indicates insufficient data for between-group comparison.

Figure 24. Stormwater destination beliefs.



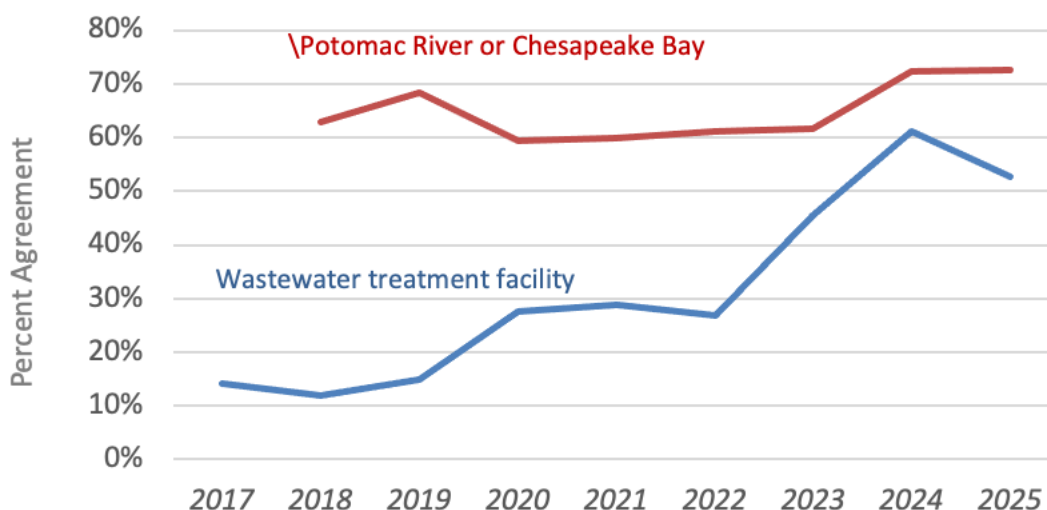
More respondents believe that stormwater goes to wastewater treatment facilities in 2026 than in 2016-2022, but fewer hold this belief in 2026 compared to 2024. More respondents also believe that stormwater goes to the Chesapeake Bay in 2026 compared to 2018–2023.

Table 31. Stormwater destination beliefs across years.

Survey Response	Year of Survey									
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Stormwater goes: Wastewater treatment facility	14.2%	12.0%	14.8%	27.6%	28.8%	26.8%	45.6%	61.1%	52.7%	50.5%
Stormwater goes: Potomac River or Chesapeake Bay	*	62.8%	68.4%	59.4%	60.0%	61.2%	61.6%	72.3%	72.7%	75.0%

* Red font indicates that the value significantly differs from the current 2026 value.
Asterisks (*) indicate that the question did not appear in the survey that year.

Figure 25. Storm water destination beliefs across years.



2.8 Household Waste Disposal

2.8.1 Household Hazardous Waste Disposal

Respondents in the 2026 Stormwater survey answered a new series of questions on household waste disposal. First, were asked whether they had ever the need to dispose of household hazardous waste (HHW). Next, all respondents were asked whether they knew if their locality has a specific place for residents to drop off HHW.

- Have you ever had household hazardous waste at home to dispose of? *Household hazardous waste includes items like batteries, automobile fluids, pesticides, herbicides, oil-based paint, paint thinners, etc.*
- Do you know whether or not your locality has a specific place for residents to drop off household hazardous waste?

Next, only those respondents who indicated that they had experienced the need to dispose of HHW were asked two further questions, to gauge HHW disposal behaviors:

- How do you typically dispose of household hazardous waste?
- Have you ever kept household hazardous waste at home longer than necessary because you weren't sure how to dispose of it appropriately?

About two-thirds of respondents (66.0%) reported the need to dispose of HHW at some point. Two-thirds, 67.3%, of respondents also report knowing if their locality has a specific drop-off location for it. Fewer younger adults (21-24 years of age) report knowing this information, compared to older adults (25+ years). Those with longer tenure in their homes and Hispanic respondents also show greater knowledge of drop-off locations, compared to their counterparts. Almost half of respondents who reported a need to dispose of HHW indicated that they had, at some point, kept the materials at their home for lack of knowledge on how or where to dispose of it. There are no demographics differences in the incidence of keeping HHW at home. Finally, respondents indicate that they use a variety of outlets to dispose of HHW. Half (46.5%) have municipal landfills/dumps, the most common method of disposal. Homeowners more commonly take HHW to out-of-the-home locations (municipal landfills/drop-offs, collection events, and retailers), where renters more commonly dispose of HHW with the rest of the household trash.

Table 32. Awareness of HHW disposal, keeping HHW at home and HHW disposal methods by demographic group.

				HHW Disposal Options Used				
Demographic	Subcategory	Know HHW Drop Off	Held HHW	Municipal Facility	Collection Event	Retailer	With HH Trash	Dump Outside
	All Respondents	67.3%	47.9%	46.5%	12.6%	22.6%	13.4%	1.5%
Gender	Male	71.9%	48.1%	50.8%	16.5%	26.5%	13.1%	*

				HHW Disposal Options Used				
Demographic	Subcategory	Know HHW Drop Off	Held HHW	Municipal Facility	Collection Event	Retailer	With HH Trash	Dump Outside
	Female	63.1%	47.4%	42.3%	8.8%	18.5%	13.1%	*
Age	21 to 24	46.8%	62.2%	31.9%	6.4%	19.1%	31.9%	*
	25 to 34	66.3%	52.6%	36.5%	13.5%	23.1%	16.3%	*
	35 to 44	73.6%	53.4%	50.9%	20.0%	23.6%	13.6%	*
	45 to 54	65.9%	44.8%	48.8%	14.6%	31.7%	1.2%	*
	55 to 64	61.0%	41.8%	46.8%	6.5%	15.6%	14.3%	*
	65 to 74	80.3%	42.2%	59.2%	7.9%	19.7%	9.2%	*
	75 or older	66.7%	25.0%	48.1%	14.8%	22.2%	14.8%	*
Locality	Alexandria	67.2%	50.0%	49.3%	16.4%	22.4%	13.4%	*
	Arlington	65.7%	51.7%	44.8%	14.9%	14.9%	14.9%	*
	Fairfax Co.	63.6%	45.6%	45.7%	8.1%	23.1%	16.2%	*
	Prince William & Stafford Co.	61.3%	42.1%	41.4%	5.4%	16.2%	11.7%	*
	Loudon Co.	81.0%	52.8%	52.4%	23.8%	33.3%	9.5%	*
Ethnicity	Not Hispanic/Latino	69.1%	47.1%	47.5%	13.1%	22.9%	13.1%	*
	Hispanic/Latino	51.0%	57.6%	37.3%	7.8%	19.6%	15.7%	*
Residence Years	Less than 1 year	60.5%	57.1%	47.4%	2.6%	15.8%	10.5%	*
	1 to 3 years	52.0%	53.7%	27.5%	9.8%	16.7%	13.7%	*
	4 to 9 years	69.1%	47.4%	40.1%	15.1%	22.4%	10.5%	*
	10 to 19 years	66.0%	45.0%	61.9%	16.5%	29.9%	12.4%	*
	20 or more years	79.9%	44.9%	56.7%	11.9%	23.9%	17.9%	*
Residence Type	Owned	76.1%	48.3%	55.8%	15.6%	26.7%	11.0%	*
	Rented	52.7%	45.8%	30.6%	8.1%	16.1%	17.7%	*
Income	Less than \$35,000	42.9%	34.7%	24.3%	5.7%	10.0%	15.7%	*
	\$35,000 to \$49,999	47.7%	45.2%	31.8%	13.6%	22.7%	15.9%	*
	\$50,000 to \$74,999	59.6%	50.0%	39.4%	6.4%	19.1%	10.6%	*
	\$75,000 to \$99,999	75.0%	45.8%	51.2%	4.8%	19.0%	15.5%	*
	\$100,000 to \$124,999	71.2%	65.2%	45.8%	20.3%	25.4%	22.0%	*

				HHW Disposal Options Used				
Demographic	Subcategory	Know HHW Drop Off	Held HHW	Municipal Facility	Collection Event	Retailer	With HH Trash	Dump Outside
	\$125,000 to \$149,999	85.7%	52.9%	61.9%	19.0%	33.3%	9.5%	*
	\$150,000 to \$174,999	78.9%	45.7%	68.4%	23.7%	28.9%	13.2%	*
	\$175,000 to \$199,999	84.6%	43.5%	73.1%	15.4%	26.9%	7.7%	*
	\$200,000 or greater	78.8%	47.2%	51.5%	19.7%	30.3%	7.6%	*

Figure 26. Awareness of HHW disposal, keeping HHW at home.

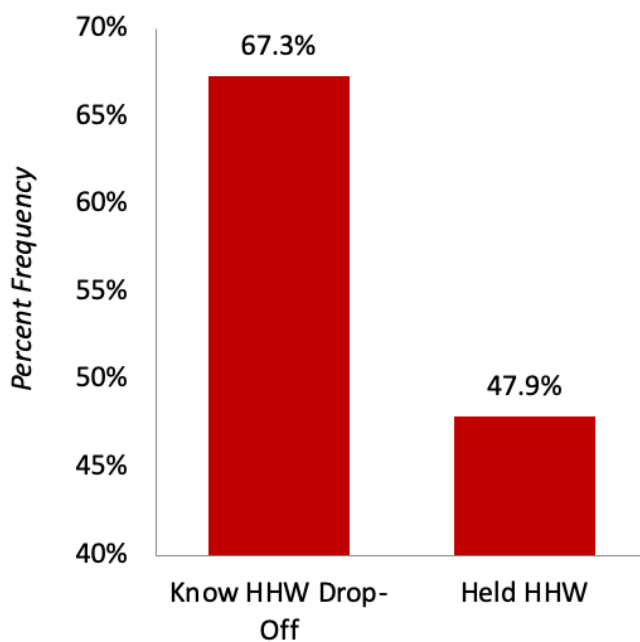


Figure 27. HHW disposal methods.

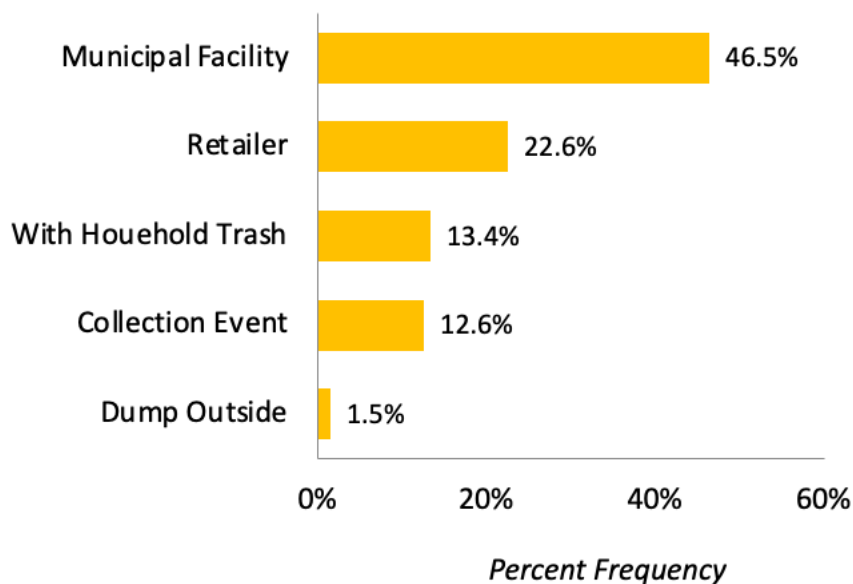
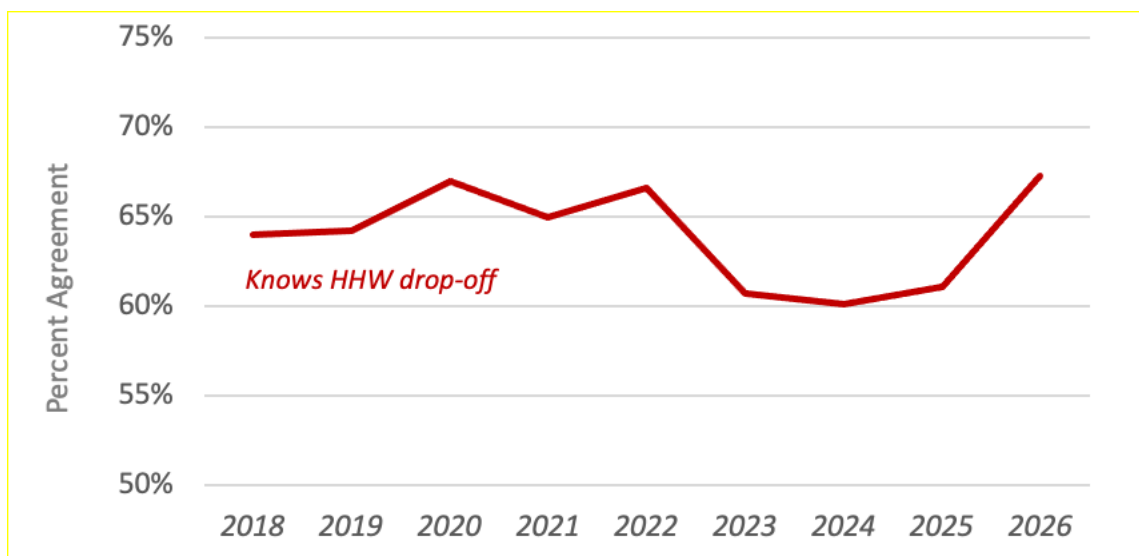


Figure 28. Awareness of where to drop off hazardous household waste across years.



2.8.2 Household Bulk Waste Disposal

Also new to the 2026 survey, respondents were asked how they disposed of bulk items from their household (e.g., furniture, appliances, mattresses). Almost half of respondents scheduled bulk trash pickups with the waste removal service (municipal or private). About one-third took bulk trash to landfills and donate to charity or thrift stores. One-fourth offered bulk items for free to

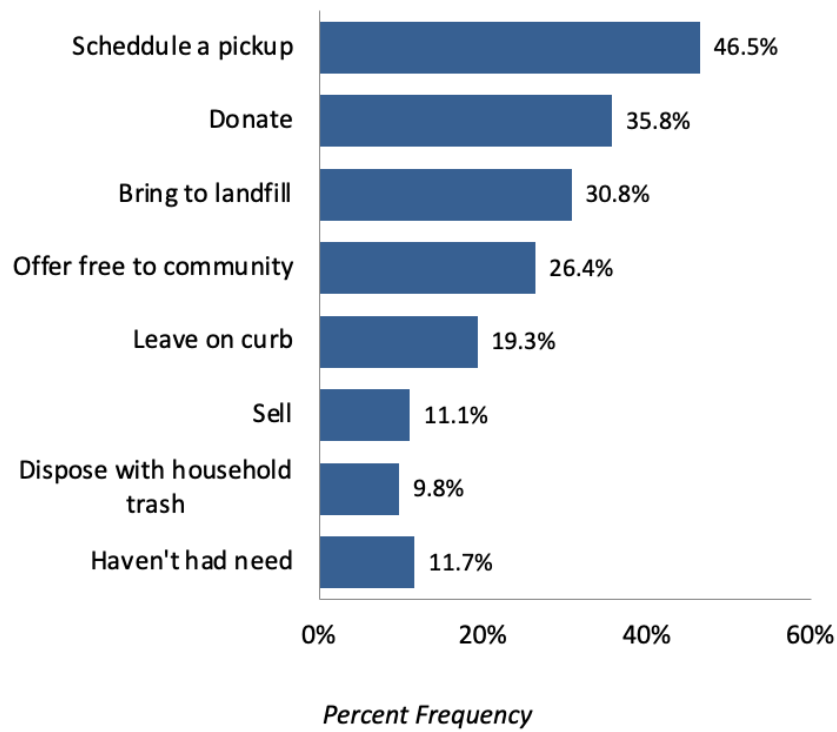
their communities (e.g., through Facebook Marketplace). The frequency of reporting scheduled pickups is greater in men than woman, in occupants of owned houses than rented houses, and generally increases with age, income and tenure in one’s residence.

Table 33. Methods of disposing of bulk household trash by demographic group.

Demographic	Subcategory	No Need	Sched. Pickup	Landfill	Donate	Free to comm	Sell	Curb	With HH Trash
	All Respondents	11.7%	46.5%	30.8%	35.8%	26.4%	11.1%	19.3%	9.8%
Gender	Male	12.7%	51.2%	30.4%	36.2%	29.2%	11.2%	18.8%	8.8%
	Female	10.4%	41.9%	31.2%	35.0%	23.5%	10.8%	19.6%	10.8%
Age	21 to 24	17.0%	34.0%	36.2%	34.0%	38.3%	14.9%	29.8%	10.6%
	25 to 34	14.4%	30.8%	34.6%	34.6%	30.8%	14.4%	19.2%	7.7%
	35 to 44	7.3%	50.9%	36.4%	37.3%	32.7%	9.1%	22.7%	13.6%
	45 to 54	8.5%	58.5%	39.0%	39.0%	31.7%	7.3%	12.2%	8.5%
	55 to 64	10.4%	48.1%	22.1%	37.7%	15.6%	14.3%	19.5%	9.1%
	65 to 74	13.2%	52.6%	19.7%	27.6%	15.8%	7.9%	17.1%	9.2%
	75 or older	18.5%	51.9%	14.8%	44.4%	7.4%	11.1%	14.8%	7.4%
Locality	Alexandria	10.4%	38.8%	32.8%	38.8%	26.9%	7.5%	22.4%	7.5%
	Arlington	13.4%	55.2%	17.9%	34.3%	26.9%	10.4%	16.4%	13.4%
	Fairfax Co.	11.6%	47.4%	28.9%	34.7%	26.6%	11.6%	22.0%	8.1%
	Prince William & Stafford Co.	13.5%	32.4%	37.8%	28.8%	18.0%	9.9%	20.7%	13.5%
	Loudon Co.	9.5%	59.0%	33.3%	43.8%	34.3%	14.3%	13.3%	7.6%
Ethnicity	Not Hispanic/Latino	11.9%	46.8%	30.1%	36.0%	26.1%	10.6%	18.6%	9.7%
	Hispanic/Latino	9.8%	43.1%	37.3%	33.3%	29.4%	15.7%	25.5%	9.8%
Residence Years	Less than 1 year	18.4%	36.8%	28.9%	50.0%	26.3%	15.8%	18.4%	10.5%
	1 to 3 years	24.5%	33.3%	26.5%	23.5%	18.6%	8.8%	16.7%	5.9%
	4 to 9 years	6.6%	46.1%	31.6%	34.2%	30.9%	10.5%	20.4%	11.2%
	10 to 19 years	9.3%	52.6%	39.2%	39.2%	27.8%	10.3%	13.4%	11.3%
	20 or more years	7.5%	55.2%	27.6%	40.3%	26.1%	12.7%	24.6%	9.7%
Residence Type	Owned	7.7%	55.2%	35.0%	38.3%	30.1%	10.4%	17.8%	7.4%
	Rented	18.8%	31.7%	23.7%	32.3%	19.9%	11.8%	21.5%	14.0%
Income	Less than \$35,000	24.3%	30.0%	21.4%	30.0%	14.3%	10.0%	25.7%	11.4%
	\$35,000 to \$49,999	15.9%	31.8%	22.7%	34.1%	25.0%	11.4%	13.6%	15.9%

Demographic	Subcategory	No Need	Sched. Pickup	Landfill	Donate	Free to comm	Sell	Curb	With HH Trash
	\$50,000 to \$74,999	12.8%	42.6%	23.4%	26.6%	23.4%	14.9%	17.0%	9.6%
	\$75,000 to \$99,999	8.3%	38.1%	41.7%	40.5%	26.2%	10.7%	20.2%	9.5%
	\$100,000 to \$124,999	10.2%	54.2%	30.5%	25.4%	27.1%	10.2%	27.1%	10.2%
	\$125,000 to \$149,999	7.1%	61.9%	33.3%	40.5%	42.9%	9.5%	19.0%	11.9%
	\$150,000 to \$174,999	10.5%	63.2%	23.7%	39.5%	21.1%	10.5%	18.4%	10.5%
	\$175,000 to \$199,999	3.8%	50.0%	57.7%	46.2%	53.8%	7.7%	11.5%	3.8%
	\$200,000 or greater	6.1%	62.1%	34.8%	50.0%	25.8%	10.6%	15.2%	4.5%

Figure 29. Methods of disposing of bulk household trash.



2.9 Water Pollution Identification and Reporting

Respondents were provided with two images, as seen below (Figure 30), and asked if either photo contains a potential source of water pollution, with response options being “Yes”, “No”, “Not sure”, and “Cannot see image”. The results are summarized in Table 34 and displayed in Figure 31.

Respondents were asked if they knew who to contact to report potential water pollution with the response options “I definitely know”, “I think I know”, “I don’t think I know”, and “I definitely don’t know”. They were also asked the likelihood that they would call officials to report potential pollution so it could be investigated with the response options being “I definitely would”, “I probably would”, “I’m equally likely to call and to not call”, “I probably would not”, and “I definitely would not”. The responses are summarized below.

When asked about the provided images, 78.3% report that yes, they would consider the images to be a potential source of water pollution. About half of respondents (52.0%) report that they

would know who to contact to report such a source of water pollution. Most (69.8%) report that they would indeed report such pollution to official if they were to see it. More occupants of owned homes than rented home indicate that they would know who to contact about water pollution. Those in lower income brackets report knowing who to call with less frequency.



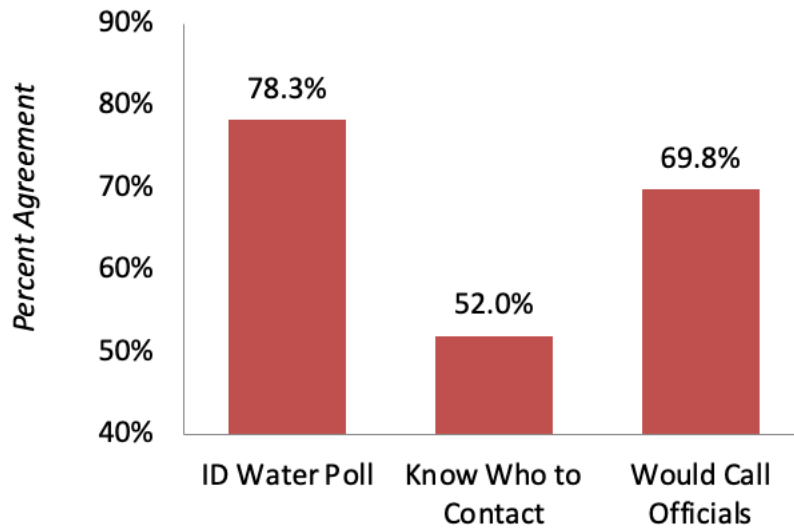
Table 34. Water pollution knowledge and behaviors by demographic group.

Demographic	Subcategory	ID Water Poll	Knows Who to Contact	Would Call Officials
	All Respondents	78.3%	52.0%	69.8%
Gender	Male	81.1%	62.3%	75.8%
	Female	75.7%	42.3%	64.2%
Age	21 to 24	87.0%	40.4%	66.0%
	25 to 34	76.0%	59.6%	65.4%
	35 to 44	78.9%	65.5%	77.3%
	45 to 54	82.9%	59.8%	76.8%
	55 to 64	71.1%	41.6%	59.7%
	65 to 74	77.6%	36.8%	68.4%

Demographic	Subcategory	ID Water Poll	Knows Who to Contact	Would Call Officials
	All Respondents	78.3%	52.0%	69.8%
	75 or older	77.8%	37.0%	74.1%
Locality	Alexandria	72.7%	55.2%	71.6%
	Arlington	76.1%	55.2%	74.6%
	Fairfax Co.	79.5%	47.4%	63.0%
	Prince William & Stafford Co.	77.5%	47.7%	68.5%
	Loudon Co.	81.9%	60.0%	78.1%
Ethnicity	Not Hispanic/Latino	78.0%	52.5%	70.1%
	Hispanic/Latino	80.4%	47.1%	66.7%
Residence Years	Less than 1 year	91.9%	47.4%	68.4%
	1 to 3 years	67.6%	43.1%	69.6%
	4 to 9 years	80.3%	52.6%	69.1%
	10 to 19 years	81.4%	59.8%	76.3%
	20 or more years	78.0%	53.7%	66.4%
Residence Type	Owned	79.9%	57.7%	73.0%
	Rented	75.7%	42.5%	65.1%
Income	Less than \$35,000	70.0%	40.0%	71.4%
	\$35,000 to \$49,999	74.4%	38.6%	68.2%
	\$50,000 to \$74,999	71.3%	51.1%	72.3%
	\$75,000 to \$99,999	83.1%	51.2%	63.1%
	\$100,000 to \$124,999	83.1%	52.5%	69.5%
	\$125,000 to \$149,999	81.0%	64.3%	83.3%
	\$150,000 to \$174,999	84.2%	63.2%	78.9%
	\$175,000 to \$199,999	80.8%	76.9%	76.9%
	\$200,000 or greater	83.1%	51.5%	57.6%

* *Red font indicates significant differences within a demographic subgroup*

Figure 31. Water pollution identification and knowledge.



Water pollution knowledge and intended behaviors across years are shown in Table 35 below. There is no difference between 2026 and previous years in the positive identification of water pollution. More respondents report that they know who to contact about water pollution in 2026 than in 2019, though 2019 appears to be an outlier on this metric. Finally, more respondents in 2026 report that that “definitely” or “probably” would contact someone about water pollution if they observed it, compared to 2016 – 2022; the proportion of respondents who would report pollution has generally increased over the years of the survey.

Table 35. Water pollution knowledge and behaviors across years.

Survey Response	Year of Survey								
	2018	2019	2020	2021	2022	2023	2024	2025	2026
"Yes", consider images water pollution	78.0%	75.2%	79.6%	80.4%	80.8%	79.0%	80.8%	77.1%	78.3%
"Definitely" or "think" I know who to contact about water pollution	51.6%	42.0%	52.6%	59.2%	58.8%	56.5%	49.0%	53.2%	52.0%
"Definitely" or "probably" would contact about water pollution	41.6%	38.0%	44.0%	53.4%	52.4%	63.4%	66.6%	69.2%	69.8%

* Red font indicates that the value significantly differs from the current 2026 value.

Those who reported being equally likely to call and not to call and those who reported that they would probably or definitely not call were next asked to identify their personal barrier to reporting, or, in other words, why they would not report the potential pollution. Response options given were “I’m too busy”, “It’s not my responsibility”, “It’s none of my business”, “I prefer not to communicate with officials or authorities”, and an option to write-in another reason not listed.

Of these respondents, 24.7% reported that it’s none of their business. Additionally, 23.4% reported their reason for not calling being that they’d prefer not to communicate with officials or authorities, 19.0% reported their reason being one not listed, 17.7% reported being too busy, and 15.2% reported that they wouldn’t call because it’s not their responsibility. There are no significant differences in the barriers to reporting across demographic groups.

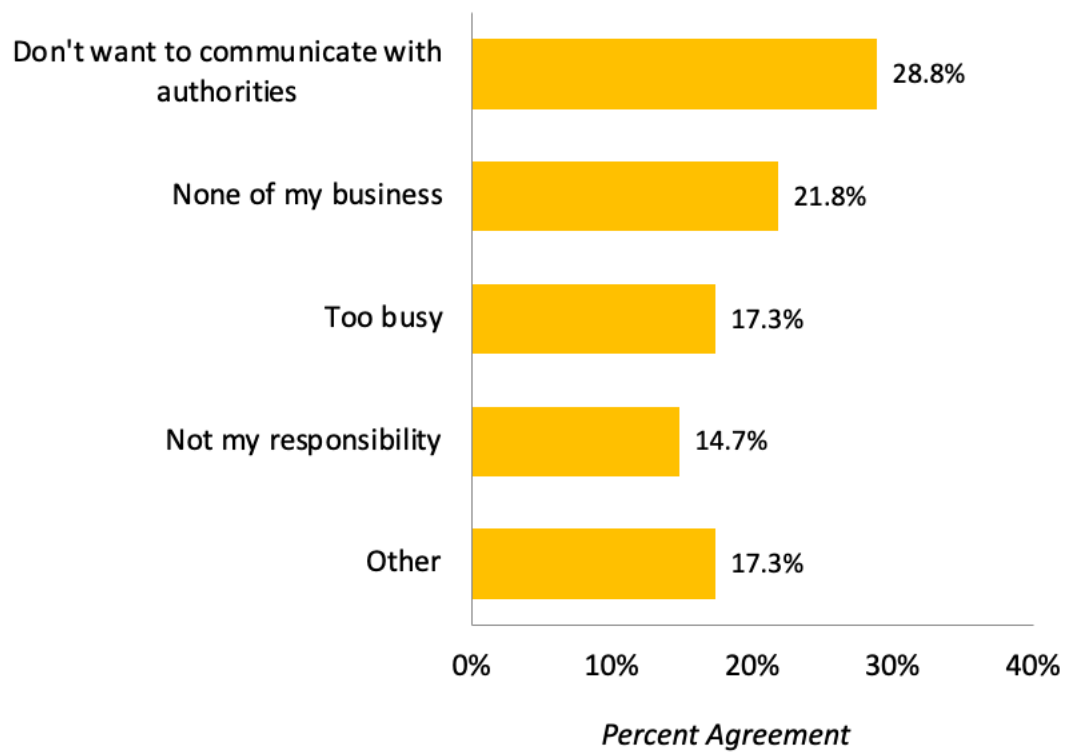
Table 36. Barriers to reporting pollution by demographic group.

Demographic	Subcategory	Too busy	Not my respons.	None of my business	Don't want to comm. with authorities	Other
	All Respondents	17.7%	15.2%	24.7%	23.4%	19.0%
Gender	Male	12.7%	12.7%	25.4%	23.8%	25.4%
	Female	20.4%	17.2%	24.7%	22.6%	15.1%
Age	21 to 24	18.8%	31.3%	31.3%	12.5%	6.3%
	25 to 34	25.0%	13.9%	27.8%	33.3%	0.0%
	35 to 44	20.0%	20.0%	24.0%	16.0%	20.0%
	45 to 54	10.5%	15.8%	15.8%	21.1%	36.8%
	55 to 64	19.4%	6.5%	32.3%	19.4%	22.6%
	65 to 74	12.5%	16.7%	20.8%	20.8%	29.2%
	75 or older	0.0%	0.0%	0.0%	57.1%	42.9%
Locality	Alexandria	15.8%	31.6%	21.1%	21.1%	10.5%
	Arlington	35.3%	11.8%	11.8%	35.3%	5.9%
	Fairfax Co.	10.9%	12.5%	25.0%	31.3%	20.3%
	Prince William & Stafford Co.	25.7%	17.1%	25.7%	8.6%	22.9%
	Loudon Co.	13.0%	8.7%	34.8%	17.4%	26.1%
Ethnicity	Not Hispanic/Latino	15.6%	16.3%	25.5%	23.4%	19.1%
	Hispanic/Latino	35.3%	5.9%	17.6%	23.5%	17.6%
Residence Years	Less than 1 year	8.3%	33.3%	25.0%	16.7%	16.7%
	1 to 3 years	19.4%	9.7%	29.0%	29.0%	12.9%
	4 to 9 years	19.1%	17.0%	27.7%	19.1%	17.0%
	10 to 19 years	13.0%	17.4%	26.1%	21.7%	21.7%

Demographic	Subcategory	Too busy	Not my respons.	None of my business	Don't want to comm. with authorities	Other
	20 or more years	20.0%	11.1%	17.8%	26.7%	24.4%
Residence Type	Owned	15.9%	12.5%	25.0%	21.6%	25.0%
	Rented	18.5%	20.0%	24.6%	24.6%	12.3%
Income	Less than \$35,000	5.0%	20.0%	25.0%	25.0%	25.0%
	\$35,000 to \$49,999	35.7%	7.1%	7.1%	28.6%	21.4%
	\$50,000 to \$74,999	26.9%	26.9%	26.9%	15.4%	3.8%
	\$75,000 to \$99,999	16.1%	9.7%	32.3%	29.0%	12.9%
	\$100,000 to \$124,999	11.1%	11.1%	22.2%	22.2%	33.3%
	\$125,000 to \$149,999	0.0%	14.3%	42.9%	28.6%	14.3%
	\$150,000 to \$174,999	12.5%	25.0%	0.0%	25.0%	37.5%
	\$175,000 to \$199,999	0.0%	33.3%	50.0%	16.7%	0.0%
	\$200,000 or greater	25.0%	7.1%	21.4%	21.4%	25.0%

* *Red font* indicates significant differences within a demographic subgroup.

Figure 32. Barriers to reporting water pollution.



The primary reasons for not calling to report water pollution in 2023 - 2026 (the only years that barriers were queried) can be seen below. There were no significant differences in reported barriers across years.

Table 37. Barriers to reporting water pollution across years.

Barrier to Contact	Year of Survey			
	2023	2024	2025	2026
Too busy	17.6%	21.7%	17.3%	17.7%
Not my responsibility	17.6%	16.3%	14.7%	15.2%
None of my business	23.1%	20.5%	21.8%	24.7%
Prefer not to communicate with officials or authorities	31.5%	25.3%	28.8%	23.4%
Other	10.2%	16.3%	17.3%	19.0%

2.10 General Water Pollution Campaign Awareness

Survey respondents were asked questions to better understand their level of awareness of NVRC water pollution campaigns. First, respondents were asked if they had “seen or received information about reducing water pollution from any source in the past 12 months”. Next, respondents were provided with the logo depicted to the right and asked if they had seen the logo before.



About one-third (30.4%) of respondents had seen or received information about reducing water pollution in the past year. More men than women are aware of water pollution education materials, and awareness is lower in those age 55+ compared to younger respondents. Alexandria City and Loudon County residents show the greater awareness than other localities. Occupants of owned home show greater awareness than occupant of rented homes.

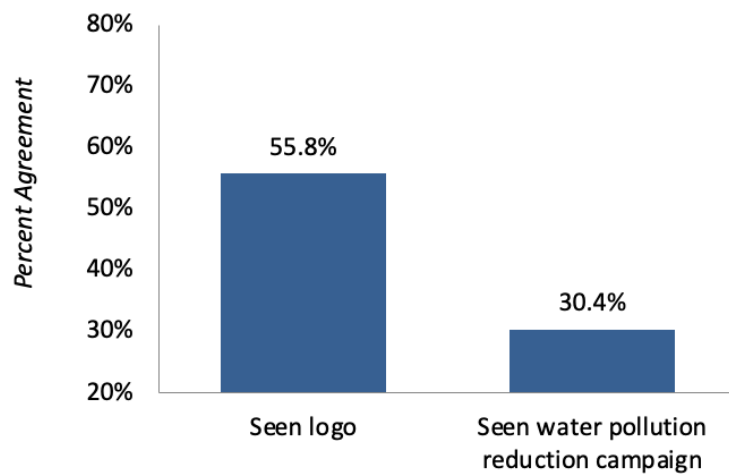
Over half (58.7%) reported having previously seen the *Only Rain Down the Drain* logo. Men showing greater recognition the logo than women. Similar to campaign familiarity, Alexandria City and Loudon County residents show the greatest recognition of the logo. Occupants of owned home show greater recognition than occupant of rented homes. Finally, recognition generally increases with household income.

Table 38. Percentage of respondents who have seen campaigns by demographic group.

Demographic	Subcategory	Seen Logo Previously	Seen Water Pollution Reduction Campaign
	All Respondents	55.8%	30.4%
Gender	Male	64.2%	39.2%
	Female	47.3%	21.5%
Age	21 to 24	61.7%	34.0%
	25 to 34	58.7%	40.4%
	35 to 44	66.4%	50.0%
	45 to 54	53.7%	35.4%
	55 to 64	48.1%	10.4%
	65 to 74	50.0%	7.9%
	75 or older	37.0%	11.1%
Locality	Alexandria	65.7%	37.3%
	Arlington	65.7%	31.3%
	Fairfax Co.	64.7%	27.2%
	Prince William & Stafford Co.	27.9%	15.3%
	Loudon Co.	58.1%	46.7%
Ethnicity	Not Hispanic/Latino	55.7%	31.1%
	Hispanic/Latino	56.9%	23.5%
Residence Years	Less than 1 year	47.4%	13.2%
	1 to 3 years	49.0%	25.5%
	4 to 9 years	60.5%	34.9%
	10 to 19 years	56.7%	41.2%
	20 or more years	57.5%	26.1%
Residence Type	Owned	61.0%	35.6%
	Rented	47.3%	22.6%
Income	Less than \$35,000	42.9%	14.3%
	\$35,000 to \$49,999	54.5%	29.5%
	\$50,000 to \$74,999	51.1%	27.7%
	\$75,000 to \$99,999	50.0%	27.4%
	\$100,000 to \$124,999	52.5%	30.5%
	\$125,000 to \$149,999	78.6%	54.8%
	\$150,000 to \$174,999	65.8%	39.5%
	\$175,000 to \$199,999	65.4%	50.0%
	\$200,000 or greater	63.6%	27.3%

* *Red font indicates significant differences within a demographic subgroup.*

Figure 33. Water pollution reduction campaign awareness.



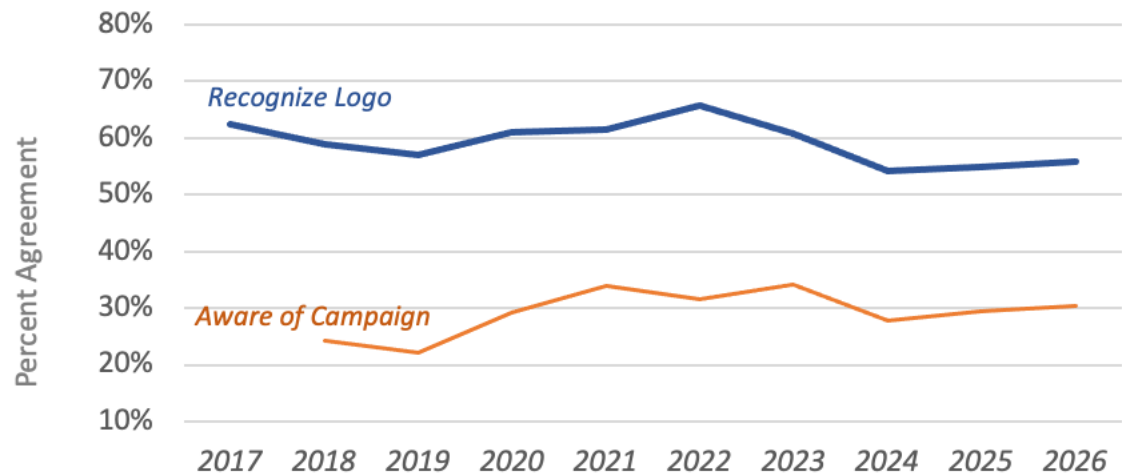
Reported recognition of the logo and water pollution reduction campaigns generally across survey years can be seen below. In 2022, reported recognition of the logo were significantly higher than in 2024. Otherwise, there were no significant differences in logo or campaign between previous years and 2026.

Table 39. Logo and campaign recognition across years.

	Year of Survey									
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Recognize Logo	62.4%	58.8%	57.0%	61.0%	61.4%	65.8%	60.7%	54.2%	54.9%	55.8%
Aware of Campaign	*	24.4%	22.2%	29.2%	34.0%	31.6%	34.1%	27.8%	29.4%	30.4%

* Red font indicates that the value significantly differs from the current 2026 value.
Asterisk (*) indicates that the survey question did not appear that year.

Figure 34. Logo and campaign recognition across years.



2.11 Engagement in Water Quality Improvement Activities

Respondents were asked about their awareness of and engagement in community activities that promote better water quality in the past 12 months. When asked about their familiarity with water quality activities, 26.8% report being aware of a water quality activity in the past 12 months. Men reported greater of a water quality activity at higher rates than women. Awareness is lower for those ages 45 years and above, compared to younger respondents, and among Prince William and Stafford County residents, compared to residents of other localities. Awareness is also greater among occupants of owned homes, compared to renters. Awareness generally increases with household income.

About half (53.6%) of respondents report that they participated in a water cleanup activity within the last 12 months. Reported respondents is greater among men and among those age 25 – 44 years.

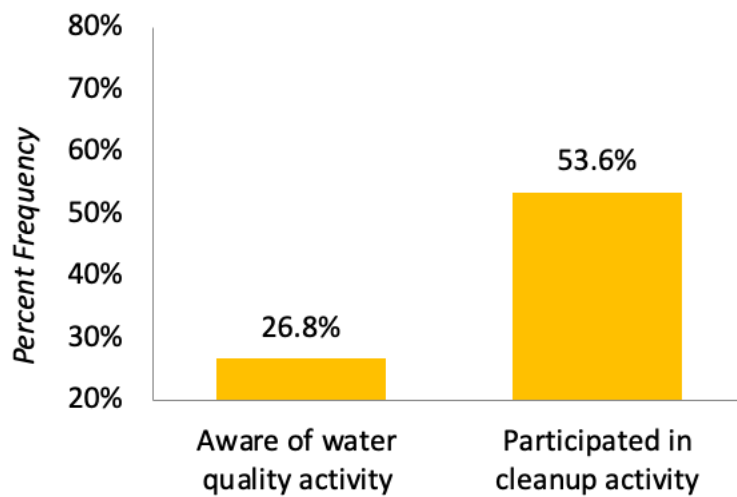
Table 40. Cleanup engagement behaviors by demographic group.

Demographic	Subcategory	Aware of Water Quality Activity in Last 12 Months	Participated in Cleanup Activity in Last 12 Months
	All Respondents	26.8%	53.6%
Gender	Male	33.5%	60.9%
	Female	20.4%	41.5%
Age	21 to 24	27.7%	38.5%

Demographic	Subcategory	Aware of Water Quality Activity in Last 12 Months	Participated in Cleanup Activity in Last 12 Months
	25 to 34	40.4%	54.8%
	35 to 44	40.0%	68.2%
	45 to 54	22.0%	61.1%
	55 to 64	14.3%	45.5%
	65 to 74	11.8%	11.1%
	75 or older	11.1%	0.0%
Locality	Alexandria	32.8%	50.0%
	Arlington	26.9%	50.0%
	Fairfax Co.	24.9%	53.5%
	Prince William & Stafford Co.	16.2%	55.6%
	Loudon Co.	37.1%	56.4%
Ethnicity	Not Hispanic/Latino	26.7%	54.0%
	Hispanic/Latino	27.5%	50.0%
Residence Years	Less than 1 year	21.1%	25.0%
	1 to 3 years	24.5%	52.0%
	4 to 9 years	27.6%	69.0%
	10 to 19 years	32.0%	54.8%
	20 or more years	25.4%	41.2%
Residence Type	Owned	30.1%	57.1%
	Rented	21.5%	45.0%
Income	Less than \$35,000	14.3%	50.0%
	\$35,000 to \$49,999	22.7%	20.0%
	\$50,000 to \$74,999	22.3%	57.1%
	\$75,000 to \$99,999	33.3%	35.7%
	\$100,000 to \$124,999	25.4%	86.7%
	\$125,000 to \$149,999	38.1%	62.5%
	\$150,000 to \$174,999	44.7%	58.8%
	\$175,000 to \$199,999	38.5%	50.0%
	\$200,000 or greater	19.7%	61.5%

* *Red font indicates significant differences within a demographic subgroup.*

Figure 35. Cleanup activity engagement.



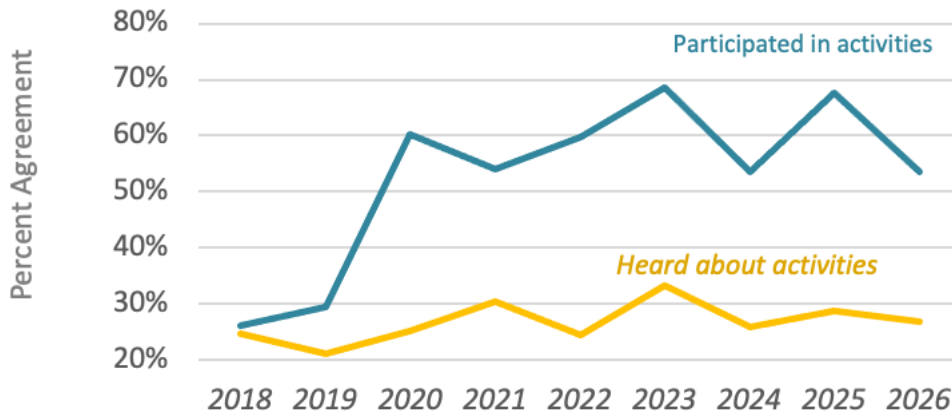
Response regarding cleanup engagement behaviors from years 2018-2026 can be seen below in Table 20. Reported rates of cleanup participation increased considerably in 2020, and have remained high since.

Table 41. Cleanup awareness and engagement across years.

	Year of Survey								
Survey Question	2018	2019	2020	2021	2022	2023	2024	2025	2026
Heard about activities	24.6%	21.0%	25.2%	30.4%	24.4%	33.2%	25.9%	28.7%	26.8%
Participated in activities	26.0%	29.5%	60.3%	53.9%	59.8%	68.5%	53.5%	67.6%	53.6%

* *Red font* indicates that the value significantly differs from the current 2026 value.

Figure 36. Cleanup awareness and engagement across years.



2.12 NVRC Outreach Campaigns

Next, survey respondents were shown NVRC’s “Only Rain Down the Drain” and “Pollution Solutions” advertisements in a random order and asked questions about recognition and perceptions of both. First, respondents were asked if they had seen the ad or a similar one on TV, Facebook, or Twitter and given the response options “Yes”, “No”, “Not sure”, and “Video did not play”. Respondents that reported not being able to see one or both of the videos were excluded from analysis for that campaign.

2.12.1 Only Rain Down the Drain

The recognition and perception results for both ads are shown in Figures 37 and 38. After seeing the *Only Rain* advertisement, 17.5% of respondents report having seen the ad previously. Respondents were then asked about their perceptions of the ad by listing a series of statements with the option to “Strongly disagree”, “Disagree”, “Neither disagree nor agree”, “Agree”, and “Strongly Agree”. The statements were:

- I understand the information in the ad.
- The ad is relevant to me.
- I trust the information in the ad.
- The ad’s message is important.
- The ad is persuasive.
- I think the ad would be effective.

In response to these statements, 89.6% report understanding the information in the ad, 77.2% report believing that the ad is relevant, 84.6% report trusting the information in the ad, 87.8% report thinking the information in the ad is important, 70.3% report believing the ad is persuasive, and 75.2% think the ad is effective. Men reported higher rates of having seen the ad previously, at 24.5% compared to 12.4% of women. Additionally, ad recognition is lower among those age 55 and above, compared to younger respondents, and among occupants of rented versus owned homes. Residents in Alexandria and Loudon County report the highest rates of recognition, compared to other localities.

Positive ad perceptions are less prevalent in Alexandria, compared to other localities.

Table 42. Perceptions of Only Rain Down the Drain advertisement by demographics.

Demographic	Subcategory	Recog.	Underst.	Relevnt.	Trust	Import.	Persuas.	Effect.
	All Respondents	17.5%	89.6%	77.2%	84.6%	87.8%	70.3%	75.2%
Gender	Male	22.9%	90.7%	76.7%	84.9%	89.1%	67.8%	77.1%
	Female	12.1%	88.3%	77.7%	84.2%	86.2%	72.5%	73.3%
Age	21 to 24	13.6%	93.2%	75.0%	88.6%	88.6%	77.3%	72.7%
	25 to 34	22.8%	84.2%	75.2%	79.2%	83.2%	63.4%	72.3%
	35 to 44	32.4%	89.8%	80.6%	85.2%	85.2%	72.2%	78.7%
	45 to 54	17.3%	93.8%	72.8%	86.4%	91.4%	70.4%	80.2%
	55 to 64	8.3%	88.9%	79.2%	84.7%	90.3%	75.0%	77.8%
	65 to 74	6.7%	92.0%	84.0%	90.7%	90.7%	72.0%	73.3%
	75 or older	0.0%	85.2%	63.0%	74.1%	88.9%	59.3%	59.3%
Locality	Alexandria	28.4%	82.1%	67.2%	76.1%	71.6%	53.7%	58.2%
	Arlington	15.4%	89.2%	81.5%	89.2%	89.2%	72.3%	78.5%
	Fairfax Co.	16.1%	89.3%	79.2%	89.9%	89.9%	73.2%	76.2%
	Prince William & Stafford Co.	8.4%	91.6%	70.1%	76.6%	86.9%	66.4%	75.7%
	Loudon Co.	23.8%	93.1%	85.1%	87.1%	95.0%	79.2%	82.2%
Ethnicity	Not Hispanic/Latino	17.9%	88.8%	76.8%	84.5%	88.2%	70.7%	74.6%
	Hispanic/Latino	13.7%	96.1%	80.4%	86.3%	84.3%	66.7%	80.4%
Residence Years	Less than 1 year	10.8%	89.2%	70.3%	89.2%	94.6%	73.0%	86.5%
	1 to 3 years	15.8%	80.2%	66.3%	78.2%	77.2%	62.4%	67.3%
	4 to 9 years	19.7%	91.8%	76.2%	85.7%	87.1%	72.8%	74.8%
	10 to 19 years	17.9%	96.8%	86.3%	88.4%	93.7%	78.9%	83.2%

Demographic	Subcategory	Recog.	Underst.	Relevnt.	Trust	Import.	Persuas.	Effect.
	20 or more years	18.0%	89.1%	82.0%	84.4%	90.6%	66.4%	72.7%
Residence Type	Owned	21.4%	91.5%	82.1%	86.5%	89.0%	72.0%	77.0%
	Rented	11.7%	86.7%	70.0%	82.2%	86.1%	67.2%	73.3%
Income	Less than \$35,000	13.6%	83.3%	60.6%	77.3%	83.3%	72.7%	71.2%
	\$35,000 to \$49,999	14.3%	83.3%	71.4%	83.3%	92.9%	64.3%	78.6%
	\$50,000 to \$74,999	15.4%	89.0%	80.2%	85.7%	86.8%	68.1%	73.6%
	\$75,000 to \$99,999	14.5%	91.6%	78.3%	83.1%	85.5%	68.7%	71.1%
	\$100,000 to \$124,999	17.2%	93.1%	77.6%	86.2%	82.8%	67.2%	75.9%
	\$125,000 to \$149,999	31.0%	92.9%	85.7%	88.1%	92.9%	69.0%	76.2%
	\$150,000 to \$174,999	21.6%	91.9%	81.1%	86.5%	89.2%	83.8%	86.5%
	\$175,000 to \$199,999	28.0%	100.0%	88.0%	92.0%	96.0%	76.0%	88.0%
	\$200,000 or greater	15.6%	87.5%	79.7%	85.9%	90.6%	70.3%	71.9%

* *Red font indicates significant differences within a demographic subgroup.*

Figure 37. Recognition of Only Rain Down the Drain and Pollution Solution advertisements.

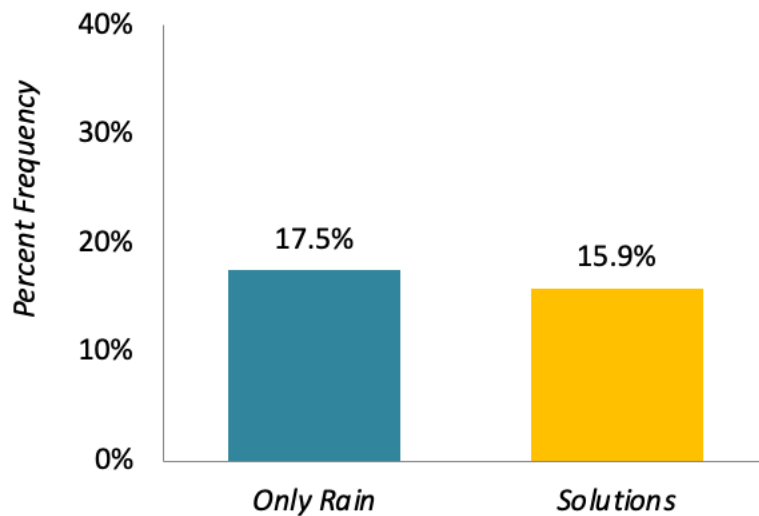
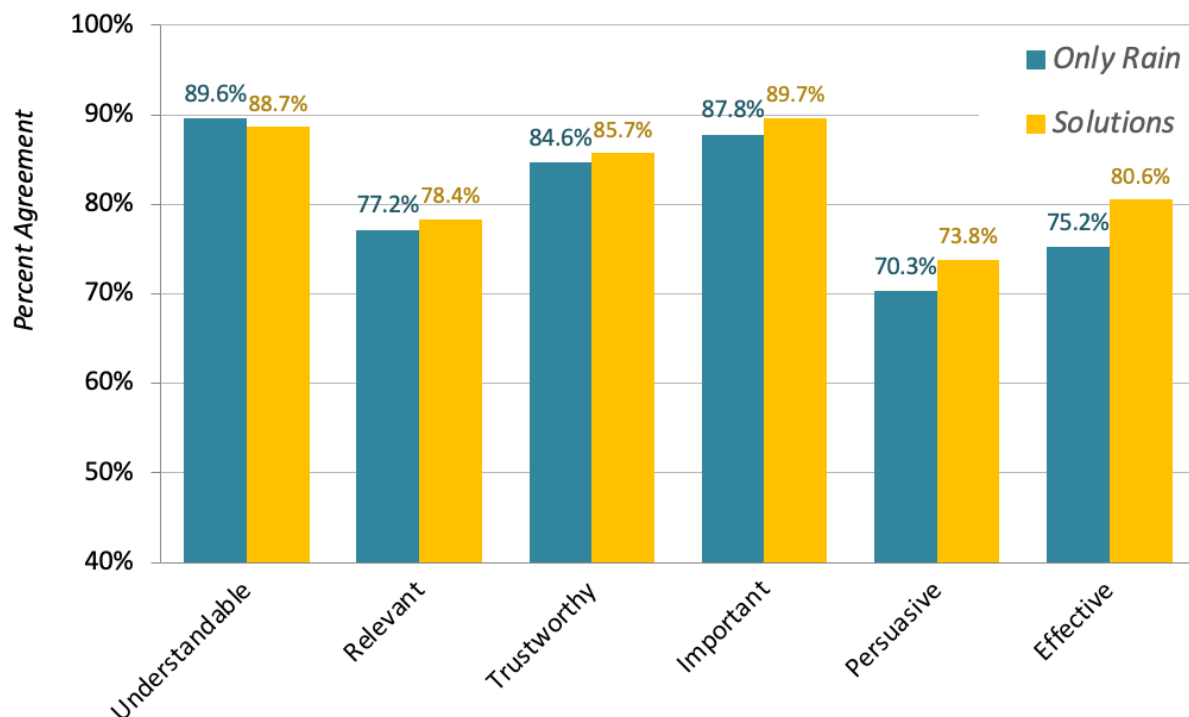


Figure 38. Perceptions of Only Rain Down the Drain and Pollution Solution advertisement.



Rates of recognition and perceptions of *Only Rain Down the Drain* from 2016 to 2026 can be seen below. Notably, respondents of the 2021 and 2022 survey reported higher rates of

recognition when compared to 2026. The proportion of respondents feel they understand the ad is greater in 2026 than in previous years.

Table 43. Recognition of Only Rain over survey years.

	Year of Survey									
Response to Survey Question	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Recognize <i>Only Rain</i>	23.6%	14.8%	15.4%	22.0%	29.0%	27.8%	23.3%	19.2%	18.5%	17.5%

* *Red font* indicates that the value significantly differs from the current 2026 value.

Table 44. Perceptions of 'Only Rain Down the Drain' across years.

	Year of Survey			
<i>Only Rain</i> perceptions	2023	2024	2025	2026
Understand	79.4%	83.3%	83.7%	89.6%
Relevant	70.7%	78.8%	70.1%	77.2%
Trust	78.9%	80.1%	81.1%	84.6%
Important	84.2%	83.7%	81.7%	87.8%
Persuasive	68.5%	70.5%	69.5%	70.3%
Effective	73.0%	71.9%	72.9%	75.2%

* *Red font* indicates that the value significantly differs from the current 2026 value.

2.12.2 Pollution Solutions

Respondents were shown the *Pollution Solution* ad and asked the same recognition and perception questions as given for *Only Rain*. After seeing the *Pollution Solutions* ad, 15.9% of respondents report having seen the ad previously. Men reported having seen the ad previously at higher rates than women, at 21.9% compared to 9.8%. As with *Only Rain*, residents in Alexandria and Loudon County report the highest rates of recognition, compared to other localities. Occupants of owned homes show greater recognition than occupants of rented homes.

The majority (88.7%) of respondents reported understanding the ad, 78.4% reported believing the ad is relevant, 86.7% reported trusting the information in the ad, 89.7% reported thinking the information in the ad is important, 73.8% report believing the ad is persuasive and 80.6% report thinking the ad is effective. Again, mirroring *Only Rain* results, positive ad perceptions are less prevalent in Alexandria, compared to other localities.

Table 45. Perceptions of ‘Pollution Solutions’ advertisement by demographic group.

Demographic	Subcategory	Recog.	Underst.	Relevnt.	Trust	Import.	Persuas.	Effect.
	All Respondents	15.9%	88.7%	78.4%	85.7%	89.7%	73.8%	80.6%
Gender	Male	21.9%	87.5%	78.1%	83.6%	89.8%	71.5%	81.3%
	Female	9.8%	90.2%	78.8%	88.2%	89.4%	75.9%	80.0%
Age	21 to 24	9.3%	88.4%	69.8%	88.4%	95.3%	65.1%	81.4%
	25 to 34	24.0%	86.0%	76.0%	80.0%	86.0%	71.0%	77.0%
	35 to 44	29.9%	88.8%	81.3%	87.9%	89.7%	72.9%	84.1%
	45 to 54	13.8%	91.3%	85.0%	88.8%	90.0%	77.5%	88.8%
	55 to 64	5.6%	87.5%	75.0%	83.3%	87.5%	72.2%	79.2%
	65 to 74	2.7%	92.0%	84.0%	93.3%	93.3%	82.7%	77.3%
	75 or older	11.1%	85.2%	63.0%	70.4%	88.9%	70.4%	66.7%
Locality	Alexandria	24.2%	78.8%	63.6%	77.3%	81.8%	60.6%	62.1%
	Arlington	12.5%	84.4%	81.3%	84.4%	85.9%	73.4%	81.3%
	Fairfax Co.	14.5%	93.4%	81.3%	90.4%	95.8%	78.3%	86.1%
	Prince William & Stafford Co.	9.3%	86.1%	72.2%	76.9%	83.3%	67.6%	75.9%
	Loudon Co.	22.0%	93.0%	88.0%	94.0%	94.0%	82.0%	88.0%
Ethnicity	Not Hispanic/Latino	16.1%	87.7%	78.4%	85.0%	89.0%	73.6%	79.5%
	Hispanic/Latino	14.0%	98.0%	78.0%	92.0%	96.0%	76.0%	90.0%
Residence Years	Less than 1 year	11.1%	86.1%	75.0%	86.1%	94.4%	80.6%	94.4%
	1 to 3 years	13.9%	77.2%	63.4%	73.3%	81.2%	61.4%	74.3%
	4 to 9 years	17.8%	89.0%	79.5%	87.7%	87.7%	74.7%	78.1%
	10 to 19 years	18.1%	94.7%	90.4%	93.6%	95.7%	81.9%	88.3%
	20 or more years	15.0%	93.7%	81.1%	87.4%	92.9%	74.8%	78.7%
Residence Type	Owned	19.6%	91.5%	84.2%	88.9%	91.1%	77.2%	82.3%
	Rented	10.1%	83.8%	68.7%	81.0%	87.2%	68.7%	77.1%
Income	Less than	9.0%	76.1%	61.2%	73.1%	79.1%	64.2%	77.6%

Demographic	Subcategory	Recog.	Underst.	Relevnt.	Trust	Import.	Persuas.	Effect.
	\$35,000							
	\$35,000 to \$49,999	17.1%	78.0%	70.7%	82.9%	87.8%	75.6%	78.0%
	\$50,000 to \$74,999	14.3%	89.0%	78.0%	83.5%	87.9%	70.3%	79.1%
	\$75,000 to \$99,999	12.0%	90.4%	77.1%	84.3%	91.6%	74.7%	78.3%
	\$100,000 to \$124,999	19.3%	91.2%	82.5%	86.0%	91.2%	68.4%	78.9%
	\$125,000 to \$149,999	28.6%	92.9%	92.9%	88.1%	95.2%	83.3%	83.3%
	\$150,000 to \$174,999	16.7%	94.4%	86.1%	97.2%	94.4%	83.3%	88.9%
	\$175,000 to \$199,999	24.0%	100.0%	92.0%	96.0%	96.0%	80.0%	92.0%
	\$200,000 or greater	14.5%	93.5%	80.6%	93.5%	91.9%	77.4%	80.6%

* *Red font* indicates significant differences within a demographic subgroup.

** *Insufficient data for comparison to other subgroups.*

Recognition and perceptions of *Pollutions Solutions* across the three years the ad was included in the survey are shown below. The ad shows gains in perceived understandability, relevance, and trust in 2026.

Table 46. Recognition and perceptions of Pollution Solutions across years.

Pollution Solutions recognition and perceptions	Year of Survey		
	2024	2025	2026
Recognize	16.7%	17.0%	15.9%
Understand	81.1%	85.0%	88.7%
Relevant	70.4%	69.3%	78.4%
Trust	81.3%	80.3%	85.7%
Important	82.5%	83.4%	89.7%
Persuasive	69.1%	68.2%	73.8%
Effective	71.8%	72.7%	80.6%

* *Red font indicates that the value significantly differs from the current 2026 value.*

2.13 Campaign Impact

Survey respondents who reported recognizing one or both advertisements were next asked a series of questions about the potential impact of the ad(s) on their behaviors.

Recognition and perceptions of Pollution Solutions are shown in the tables below; note that this ad launched in the 2023-2024 ad cycle.

2.13.1 Impact of advertisements on pet waste clean-up

Respondents were asked how certain behaviors have changed since they first saw the ad(s), if they had seen the advertisements prior to the current survey. The first set of questions asked about their current pet waste disposal behaviors. Respondents were provided the following statements with response options being “Yes”, “No”, or “Does not apply”:

- I understand more about the impact of pet waste on water quality.
- I’d like to pick up pet waste more often, though I haven’t made any changes yet.
- I now pick up pet waste more often.
- I was already doing what is recommended to reduce water pollution from pet waste.

Of those respondents who had seen the ad prior to completing the current survey, 94.7% report understanding more about pet waste, 79.5% report wanting to pick up pet waste more often

despite not having made any changes yet, 79.8% report now picking pet waste up more often and 88.8% report already doing what is recommended. Women reported higher rates of wanting to pick up pet waste more often, compared to men. Fairfax and Loudon County residents show lower incidence of wanting to pick up after their dog more, after viewing the ad.

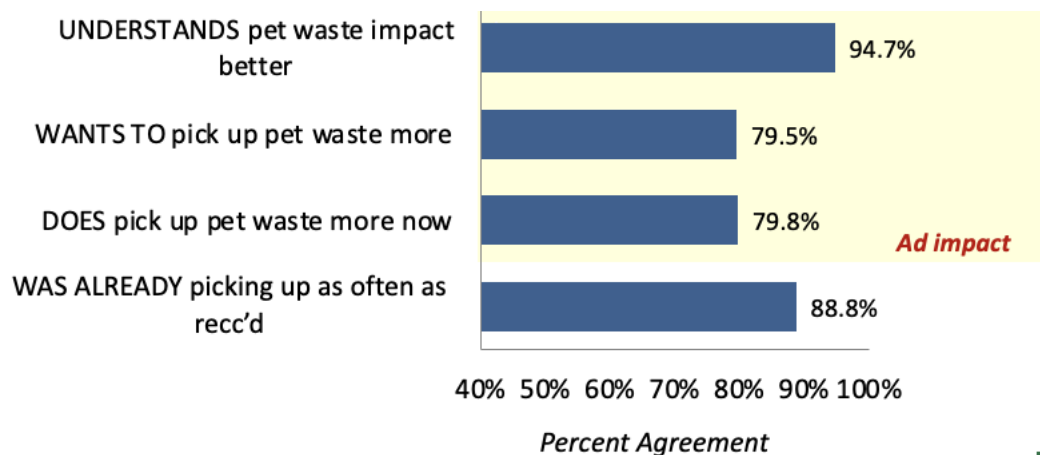
Table 47. Ad impact on pet waste clean-up behavior by demographic group among respondents who had seen the advertisement prior to completing the current survey.

Demographic	Subcategory	Understands Pet Waste	Want to Pick Up More	More Pick Up Now	Pet Waste Already
	All Respondents	94.7%	79.5%	79.8%	88.8%
Gender	Male	92.2%	80.7%	70.2%	86.4%
	Female	100.0%	76.9%	100.0%	93.3%
Age	21 to 24	83.3%	100.0%	83.3%	83.3%
	25 to 34	96.2%	73.9%	78.3%	91.7%
	35 to 44	97.2%	80.6%	80.0%	86.1%
	45 to 54	100.0%	80.0%	75.0%	83.3%
	55 to 64	100.0%	75.0%	100.0%	100.0%
	65 to 74	100.0%	100.0%	100.0%	100.0%
	75 or older	33.3%	50.0%	50.0%	100.0%
Locality	Alexandria	100.0%	93.8%	81.3%	100.0%
	Arlington	100.0%	100.0%	90.0%	80.0%
	Fairfax Co.	93.1%	75.0%	82.6%	80.8%
	Prince William & Stafford Co.	90.9%	90.0%	81.8%	90.9%
	Loudon Co.	92.0%	60.9%	70.8%	92.0%
Ethnicity	Not Hispanic/Latino	95.3%	79.2%	79.2%	87.7%
	Hispanic/Latino	88.9%	83.3%	85.7%	100.0%
Residence Years	Less than 1 year	80.0%	66.7%	100.0%	75.0%
	1 to 3 years	86.7%	86.7%	73.3%	81.3%
	4 to 9 years	93.9%	85.7%	86.7%	86.7%
	10 to 19 years	100.0%	70.6%	68.8%	100.0%
	20 or more years	100.0%	75.0%	80.0%	90.9%
Residence Type	Owned	95.8%	76.2%	76.6%	86.6%
	Rented	90.9%	90.0%	90.0%	95.5%
Income	Less than \$35,000	100.0%	85.7%	100.0%	100.0%

Demographic	Subcategory	Understands Pet Waste	Want to Pick Up More	More Pick Up Now	Pet Waste Already
	\$35,000 to \$49,999	88.9%	75.0%	87.5%	87.5%
	\$50,000 to \$74,999	100.0%	100.0%	80.0%	86.7%
	\$75,000 to \$99,999	92.3%	70.0%	80.0%	90.0%
	\$100,000 to \$124,999	91.7%	83.3%	72.7%	91.7%
	\$125,000 to \$149,999	100.0%	63.6%	81.8%	100.0%
	\$150,000 to \$174,999	100.0%	87.5%	62.5%	75.0%
	\$175,000 to \$199,999	100.0%	80.0%	80.0%	85.7%
	\$200,000 or greater	80.0%	66.7%	77.8%	77.8%

* *Red font indicates significant differences within a demographic subgroup.*

Figure 39. Ad impact on pet waste behaviors.



2.13.2 Impact of advertisements on lawn/garden fertilization

Next, respondents were asked about their fertilizer behaviors. Respondents were provided with the following statements with the response options being “Yes”, “No”, or “Does not apply”:

- I understand more about the impact of fertilizer on water quality.

- I'd like to fertilize fewer time during the year.
- I now fertilize fewer times during the year. **revised in 2025 from, "I plan to fertilize ..."*
- I was already doing what is recommended to reduce water pollution from fertilizer.

Of respondents who reported seeing the ad(s) previously, 92.7% report understanding more about the impact of fertilizer on water quality, 78.3% report wanted to fertilize fewer times despite not making any changes yet, 80.9% report now fertilizing less frequently and 88.3% report that they were already doing what is recommended.

Table 48. Ad impact on fertilizing behavior by demographic group of those who had seen the advertisement prior to completing the survey.

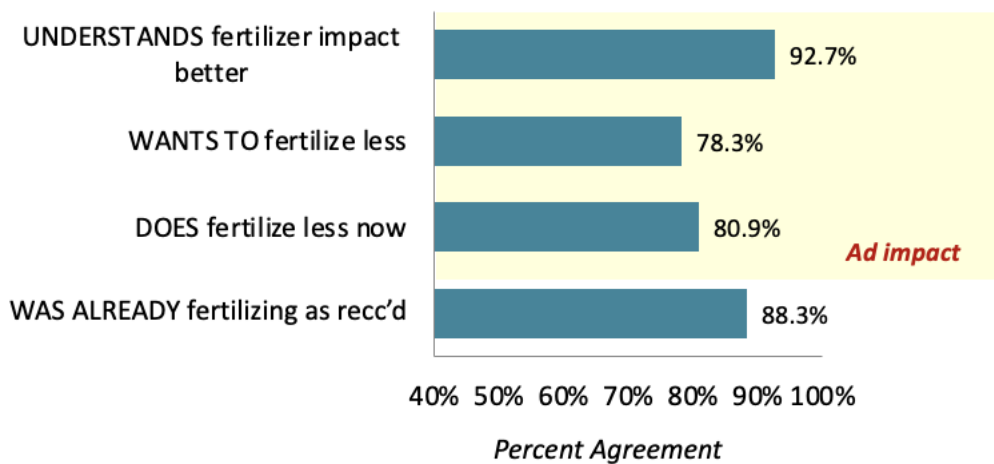
Demographic	Subcategory	Understands Fertilizer	Fertilizes Less Now	Fertilizes Less Now	Was Fertilizing Less Already
	All Respondents	92.7%	78.3%	80.9%	88.3%
Gender	Male	90.6%	75.4%	77.6%	87.1%
	Female	96.9%	83.9%	87.1%	90.6%
Age	21 to 24	100.0%	50.0%	83.3%	83.3%
	25 to 34	92.3%	76.9%	92.0%	84.0%
	35 to 44	91.7%	88.9%	74.3%	91.7%
	45 to 54	100.0%	69.2%	76.9%	85.7%
	55 to 64	100.0%	60.0%	60.0%	100.0%
	65 to 74	100.0%	80.0%	100.0%	80.0%
	75 or older	33.3%	100.0%	0.0%	100.0%
Locality	Alexandria	100.0%	78.9%	88.9%	88.9%
	Arlington	100.0%	90.0%	80.0%	90.0%
	Fairfax Co.	86.7%	78.6%	92.6%	83.3%
	Prince William & Stafford Co.	83.3%	90.9%	81.8%	100.0%
	Loudon Co.	96.0%	66.7%	60.9%	88.0%
Ethnicity	Not Hispanic/Latino	92.0%	78.6%	81.5%	88.4%
	Hispanic/Latino	100.0%	75.0%	75.0%	87.5%
Residence Years	Less than 1 year	60.0%	75.0%	100.0%	80.0%
	1 to 3 years	94.1%	73.3%	93.3%	81.3%
	4 to 9 years	93.9%	84.4%	86.7%	87.5%
	10 to 19 years	94.1%	76.5%	62.5%	100.0%

Demographic	Subcategory	Understands Fertilizer	Fertilizes Less Now	Fertilizes Less Now	Was Fertilizing Less Already
	20 or more years	95.8%	75.0%	75.0%	87.5%
Residence Type	Owned	91.7%	77.1%	78.3%	86.1%
	Rented	95.8%	81.8%	90.0%	95.5%
Income	Less than \$35,000	100.0%	100.0%	100.0%	100.0%
	\$35,000 to \$49,999	87.5%	57.1%	66.7%	85.7%
	\$50,000 to \$74,999	100.0%	93.3%	81.3%	93.8%
	\$75,000 to \$99,999	84.6%	75.0%	90.0%	83.3%
	\$100,000 to \$124,999	91.7%	83.3%	81.8%	91.7%
	\$125,000 to \$149,999	100.0%	69.2%	69.2%	84.6%
	\$150,000 to \$174,999	87.5%	87.5%	75.0%	87.5%
	\$175,000 to \$199,999	100.0%	57.1%	85.7%	85.7%
	\$200,000 or greater	80.0%	70.0%	80.0%	80.0%

* *Red font* indicates significant differences within a demographic subgroup.

** Insufficient data for between-group comparison.

Figure 40. Ad impact on fertilization behaviors.



2.13.3 Impact of advertisements on motor oil disposal

Finally, survey respondents were asked about their behaviors regarding disposing of motor oil after watching the advertisements. Respondents were provided the following statements with the option to respond “Yes”, “No”, or “Does not apply”:

- I understand more about the impact of motor oil on water quality.
- I’d like to dispose of motor oil properly, though I haven’t made any changes yet.
- I now properly dispose of motor oil.
- I was already doing what is recommended to reduce water pollution from motor oil.

Of the respondents, 91.6% report understanding more about the impact of motor oil on water quality, 82.8% report wanting to dispose of motor oil properly despite not making any changes yet, 88.8% report now properly disposing of motor oil and 85.7% of respondents were already doing what is recommended. There are no significant differences across demographic groups.

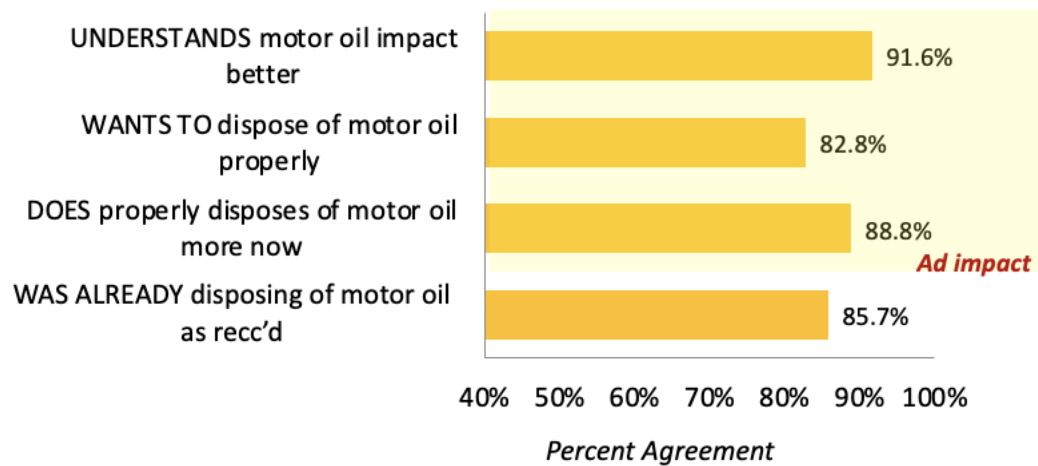
Table 49. Ad impact on motor oil (MO) disposal by demographic group among respondents who had seen the advertisement prior to completing the survey.

Demographic	Subcategory	MO Understand	Wants to Dispose Properly	Now Disposes Properly	Was Already Disposing Properly
	All Respondents	91.6%	82.8%	88.8%	85.7%
Gender	Male	87.5%	81.4%	84.7%	80.0%
	Female	100.0%	85.7%	96.7%	96.8%

Demographic	Subcategory	MO Understand	Wants to Dispose Properly	Now Disposes Properly	Was Already Disposing Properly
Age	21 to 24	83.3%	100.0%	100.0%	66.7%
	25 to 34	92.3%	72.0%	92.0%	79.2%
	35 to 44	88.9%	88.9%	86.1%	88.9%
	45 to 54	100.0%	75.0%	81.8%	92.3%
	55 to 64	100.0%	100.0%	100.0%	100.0%
	65 to 74	100.0%	100.0%	100.0%	100.0%
	75 or older	66.7%	50.0%	66.7%	66.7%
Locality	Alexandria	94.7%	94.1%	94.1%	87.5%
	Arlington	100.0%	80.0%	100.0%	80.0%
	Fairfax Co.	93.1%	88.0%	92.3%	82.1%
	Prince William & Stafford Co.	75.0%	83.3%	63.6%	91.7%
	Loudon Co.	92.0%	69.6%	88.0%	88.0%
Ethnicity	Not Hispanic/Latino	92.0%	81.0%	87.8%	84.3%
	Hispanic/Latino	87.5%	100.0%	100.0%	100.0%
Residence Years	Less than 1 year	80.0%	100.0%	80.0%	80.0%
	1 to 3 years	87.5%	75.0%	88.2%	75.0%
	4 to 9 years	93.9%	86.7%	93.3%	87.1%
	10 to 19 years	94.1%	76.5%	81.3%	88.2%
	20 or more years	91.7%	85.0%	90.5%	90.9%
Residence Type	Owned	91.7%	80.0%	88.1%	85.5%
	Rented	91.3%	90.9%	90.9%	86.4%
Income	Less than \$35,000	100.0%	100.0%	100.0%	100.0%
	\$35,000 to \$49,999	87.5%	85.7%	85.7%	57.1%
	\$50,000 to \$74,999	100.0%	93.3%	93.3%	86.7%
	\$75,000 to \$99,999	100.0%	72.7%	91.7%	100.0%
	\$100,000 to \$124,999	75.0%	83.3%	83.3%	91.7%
	\$125,000 to \$149,999	92.3%	83.3%	81.8%	75.0%
	\$150,000 to \$174,999	87.5%	75.0%	71.4%	100.0%

Demographic	Subcategory	MO Understand	Wants to Dispose Properly	Now Disposes Properly	Was Already Disposing Properly
	\$175,000 to \$199,999	100.0%	80.0%	100.0%	100.0%
	\$200,000 or greater	80.0%	66.7%	88.9%	55.6%

Figure 41. Ad impact on motor oil behaviors.



2.13.4 Impact of ads across years

Reported impact of the ads on behaviors regarding pet waste, fertilizer, and motor oil in across survey years can be seen below. The proportion of respondents who were already fertilizing less (prior to seeing the ad) is greater in 2026 than 2023. The proportion of respondents who want to change the way they dispose of motor oil is also greater in 2026 than in 2025. There are no other significant differences across years.

Table 50. Ad impact across years.

		Year of Survey			
Campaign Topic	Campaign Outcome	2023	2024	2025	2026
Pet Waste	Understands	85.5%	82.9%	92.1%	94.7%
	Wants to change	77.6%	70.3%	65.9%	79.5%
	Has picked up more	76.6%	73.3%	75.8%	79.8%
	Was already picking up	83.0%	84.9%	80.0%	88.8%
Fertilizer	Understands	85.0%	81.6%	88.8%	92.7%
	Wants to change	74.7%	78.2%	71.1%	78.3%
	Now fertilizes less	*	*	64.8%	80.9%
	Was already fertilizing less	71.4%	78.1%	80.4%	88.3%
Motor Oil	Understands	84.4%	87.8%	89.0%	91.6%
	Wants to change	75.7%	73.3%	61.3%	82.8%
	Now disposes of motor oil properly	79.3%	80.9%	79.4%	88.8%
	Was already disposing properly	82.0%	87.8%	82.4%	85.7%

* *Red font* indicates that the value significantly differs from the current 2026 value.
Asterisk (*) indicates that the survey question did not appear that year.

2.14 Perceptions of the Campaign Sponsor (NVCWP)

Survey respondents were asked about their perceptions of the campaign sponsor, the Northern Virginia Clean Water Partners, as perceptions of the campaign sponsor are known to impact consumer perceptions of the campaign. The table below shows the percentage of respondents that indicate that they “Agree” or “Strongly Agree” with statements about NVCWP, on a 5-point scale of “Strongly Disagree”, “Disagree”, “Neither agree nor Disagree”, “Agree” and “Strongly Agree”. The statements were:

- I was familiar with the NVCWP before this survey
- I trust information from the NVCWP
- I would contact the NVCWP if I had a question or concern about water quality
- The NVCWP shares my values when it comes to water quality

Forty percent (40.0%) of respondents report that they are familiar with NVCWP. In addition, 80.1% report trusting NVCWP, 78.2% share values with NVCWP, and 74.2% would contact NVCWP. More men than women report familiarity with NVCWP. Prince William and Stafford County residents report less trust in the NVCWP, compared to other localities. Those in owned homes more frequently report shared values with the organization, compared to those in rented homes.

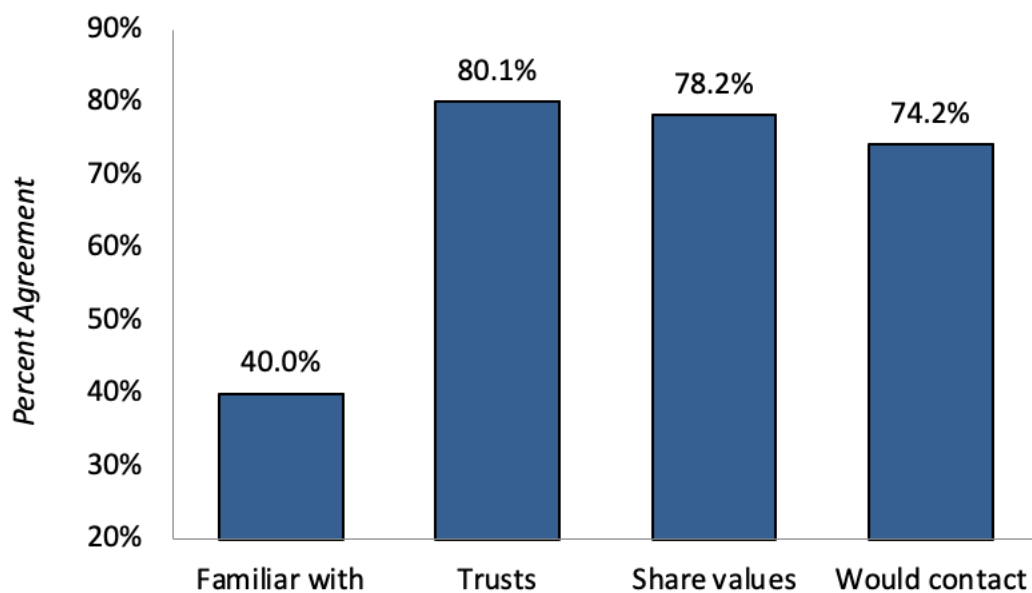
Table 51. Perceptions of the campaign sponsor, NVCWP, by demographic group.

Demographic	Subcategory	Familiar with NVCWP	Trusts NVCWP	Share Values with NVCWP	Would Contact NVCWP
	All Respondents	40.0%	80.1%	78.2%	74.2%
Gender	Male	47.7%	83.1%	78.8%	77.3%
	Female	32.7%	76.9%	77.3%	71.2%
Age	21 to 24	34.0%	87.2%	83.0%	87.2%
	25 to 34	51.9%	75.0%	72.1%	73.1%
	35 to 44	56.4%	80.9%	78.2%	82.7%
	45 to 54	46.3%	80.5%	81.7%	67.1%
	55 to 64	22.1%	76.6%	75.3%	64.9%
	65 to 74	23.7%	86.8%	84.2%	73.7%
	75 or older	14.8%	74.1%	74.1%	70.4%
Locality	Alexandria	43.3%	80.6%	67.2%	79.1%
	Arlington	44.8%	83.6%	77.6%	76.1%
	Fairfax Co.	38.2%	84.4%	82.7%	75.1%
	Prince William & Stafford Co.	27.9%	68.5%	73.0%	68.5%
	Loudon Co.	50.5%	82.9%	83.8%	74.3%
Ethnicity	Not Hispanic/Latino	39.0%	79.7%	78.4%	74.4%
	Hispanic/Latino	49.0%	84.3%	76.5%	72.5%
Residence Years	Less than 1 year	26.3%	76.3%	76.3%	81.6%
	1 to 3 years	34.3%	75.5%	65.7%	71.6%
	4 to 9 years	46.1%	75.0%	78.9%	71.7%
	10 to 19 years	45.4%	88.7%	86.6%	78.4%
	20 or more years	37.3%	84.3%	81.3%	73.9%
Residence Type	Owned	42.9%	82.5%	81.9%	73.3%
	Rented	35.5%	75.8%	72.6%	76.3%
Income	Less than \$35,000	28.6%	65.7%	67.1%	70.0%

Demographic	Subcategory	Familiar with NVCWP	Trusts NVCWP	Share Values with NVCWP	Would Contact NVCWP
	\$35,000 to \$49,999	45.5%	75.0%	72.7%	70.5%
	\$50,000 to \$74,999	46.8%	87.2%	76.6%	79.8%
	\$75,000 to \$99,999	41.7%	78.6%	81.0%	73.8%
	\$100,000 to \$124,999	39.0%	78.0%	84.7%	84.7%
	\$125,000 to \$149,999	47.6%	88.1%	81.0%	78.6%
	\$150,000 to \$174,999	36.8%	89.5%	81.6%	73.7%
	\$175,000 to \$199,999	50.0%	92.3%	88.5%	80.8%
	\$200,000 or greater	30.3%	77.3%	78.8%	59.1%

* *Red font indicates significant differences within a demographic subgroup.*

Figure 42. Perceptions of NVCWP.



Changes in perceptions of NVCWP across between 2023 and 2026 are shown in the table below. There are no significant differences between 2026 perceptions and perceptions in previous years.

Table 45. Perceptions of NVCWP across years.

	Survey Year			
	2023	2024	2025	2026
Familiar with NVCWP	42.2%	33.3%	37.4%	40.0%
Trusts NVCWP	73.5%	71.2%	72.7%	80.1%
Share Values with NVCWP	74.5%	69.7%	69.9%	78.2%
Would Contact NVCWP	70.9%	66.8%	69.7%	74.2%

2.15 Message Sources

2.15.1 TV Providers

Survey respondents were asked about their TV service provider and which channels they watch in order to get a better understanding of their sources of messaging. Provided options for TV service provider were “Verizon”, “Comcast”, “Cox”, “Xfinity”, “Do not have cable TV”, “Do not watch TV”, “I don’t know”, and the option to write-in another provider not listed.

Verizon is the most commonly used provider, particularly among Fairfax County and Loudon County residents.

Table 52. TV service providers among respondents by demographic group.

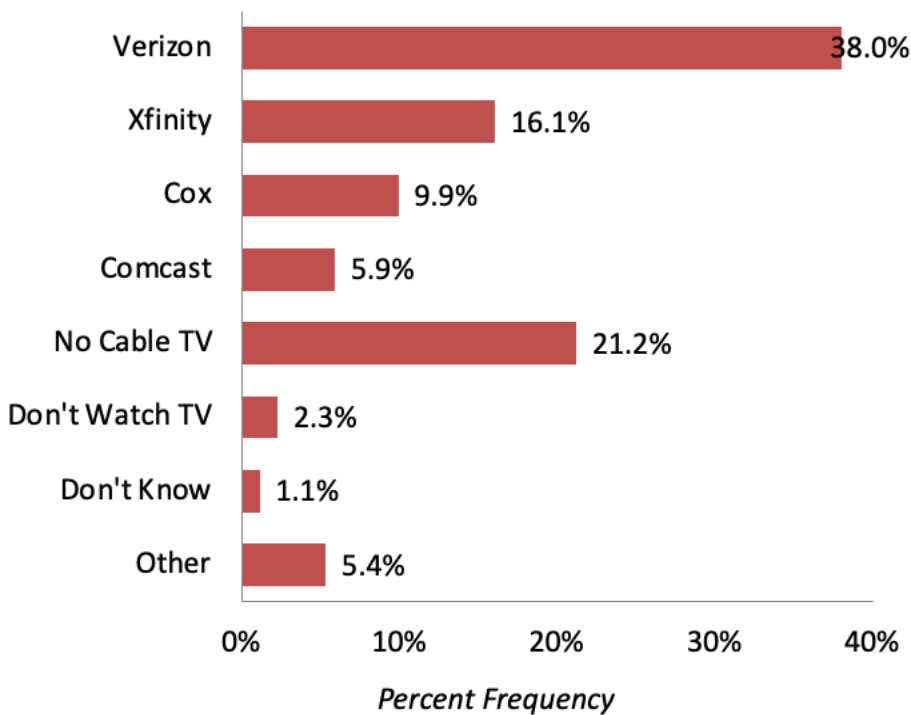
Demographic	Subcategory	TV Service Provider							
		Verizon	Comcast	Cox	Xfinity	No Cable TV	Don't Watch TV	Don't Know	Other
	All Respondents	38.0%	5.9%	9.9%	16.1%	21.2%	2.3%	1.1%	5.4%
Gender	Male	44.2%	6.9%	10.4%	12.7%	16.9%	2.3%	0.8%	5.8%
	Female	32.3%	5.0%	9.6%	19.2%	25.4%	2.3%	1.2%	5.0%
Age	21 to 24	31.9%	4.3%	6.4%	14.9%	29.8%	6.4%	4.3%	2.1%
	25 to 34	38.5%	6.7%	11.5%	19.2%	18.3%	2.9%	0.0%	2.9%
	35 to 44	46.4%	7.3%	4.5%	16.4%	16.4%	2.7%	0.9%	5.5%
	45 to 54	34.1%	9.8%	11.0%	9.8%	25.6%	1.2%	1.2%	7.3%
	55 to 64	37.7%	0.0%	9.1%	15.6%	27.3%	1.3%	1.3%	7.8%

Demographic	Subcategory	TV Service Provider							
		Verizon	Comcast	Cox	Xfinity	No Cable TV	Don't Watch TV	Don't Know	Other
	65 to 74	31.6%	3.9%	13.2%	21.1%	23.7%	0.0%	1.3%	5.3%
	75 or older	44.4%	11.1%	22.2%	11.1%	0.0%	3.7%	0.0%	7.4%
Locality	Alexandria	34.3%	6.0%	11.9%	20.9%	23.9%	1.5%	0.0%	1.5%
	Arlington	32.8%	7.5%	4.5%	23.9%	20.9%	4.5%	0.0%	6.0%
	Fairfax Co.	40.5%	4.0%	21.4%	7.5%	19.7%	1.7%	1.7%	3.5%
	Prince William & Stafford Co.	31.5%	4.5%	2.7%	24.3%	21.6%	3.6%	1.8%	9.9%
	Loudon Co.	46.7%	9.5%	1.0%	13.3%	21.9%	1.0%	1.0%	5.7%
Ethnicity	Not Hispanic/Latino	37.3%	5.9%	9.7%	16.3%	21.8%	2.1%	1.3%	5.5%
	Hispanic/Latino	45.1%	5.9%	11.8%	13.7%	15.7%	3.9%	0.0%	3.9%
Residence Years	Less than 1 year	23.7%	2.6%	0.0%	23.7%	23.7%	13.2%	7.9%	5.3%
	1 to 3 years	42.2%	6.9%	11.8%	17.6%	15.7%	0.0%	0.0%	5.9%
	4 to 9 years	36.2%	5.9%	9.2%	17.8%	25.7%	1.3%	0.0%	3.9%
	10 to 19 years	36.1%	8.2%	8.2%	15.5%	21.6%	1.0%	1.0%	8.2%
	20 or more years	42.5%	4.5%	13.4%	11.2%	19.4%	3.0%	1.5%	4.5%
Residence Type	Owned	43.6%	6.1%	10.7%	11.7%	20.2%	1.8%	0.6%	5.2%
	Rented	30.1%	5.9%	9.1%	22.6%	23.7%	1.6%	1.6%	5.4%
Income	Less than \$35,000	17.1%	8.6%	12.9%	18.6%	34.3%	2.9%	1.4%	4.3%
	\$35,000 to \$49,999	27.3%	6.8%	6.8%	20.5%	27.3%	2.3%	6.8%	2.3%
	\$50,000 to \$74,999	35.1%	4.3%	11.7%	21.3%	18.1%	3.2%	1.1%	5.3%
	\$75,000 to \$99,999	46.4%	4.8%	4.8%	8.3%	25.0%	3.6%	1.2%	6.0%
	\$100,000 to \$124,999	49.2%	5.1%	10.2%	18.6%	13.6%	0.0%	0.0%	3.4%
	\$125,000 to \$149,999	40.5%	2.4%	14.3%	14.3%	26.2%	0.0%	0.0%	2.4%
	\$150,000 to \$174,999	42.1%	10.5%	7.9%	21.1%	5.3%	2.6%	0.0%	10.5%
	\$175,000 to \$199,999	53.8%	3.8%	3.8%	7.7%	15.4%	3.8%	0.0%	11.5%

Demographic	Subcategory	TV Service Provider							
		Verizon	Comcast	Cox	Xfinity	No Cable TV	Don't Watch TV	Don't Know	Other
	\$200,000 or greater	40.9%	7.6%	13.6%	12.1%	18.2%	1.5%	0.0%	6.1%

* *Red font* indicates significant differences within a demographic subgroup.

Figure 43. TV service provider usage.



2.15.2 TV Channels

Finally, respondents were also asked what TV channels they watch. TV channel options provided in the survey were “HLN TV”, “Oxygen”, “Toon”, “ENT”, “Animal Planet”, “CNN”, “ESPN”, “History”, “National Geographic”, “Lifetime”, “The CW”, “Home and Garden”, and “None of the above”.

CNN and ESPN are viewed by the greatest proportion of respondents. Both channels are viewed by more men than women.

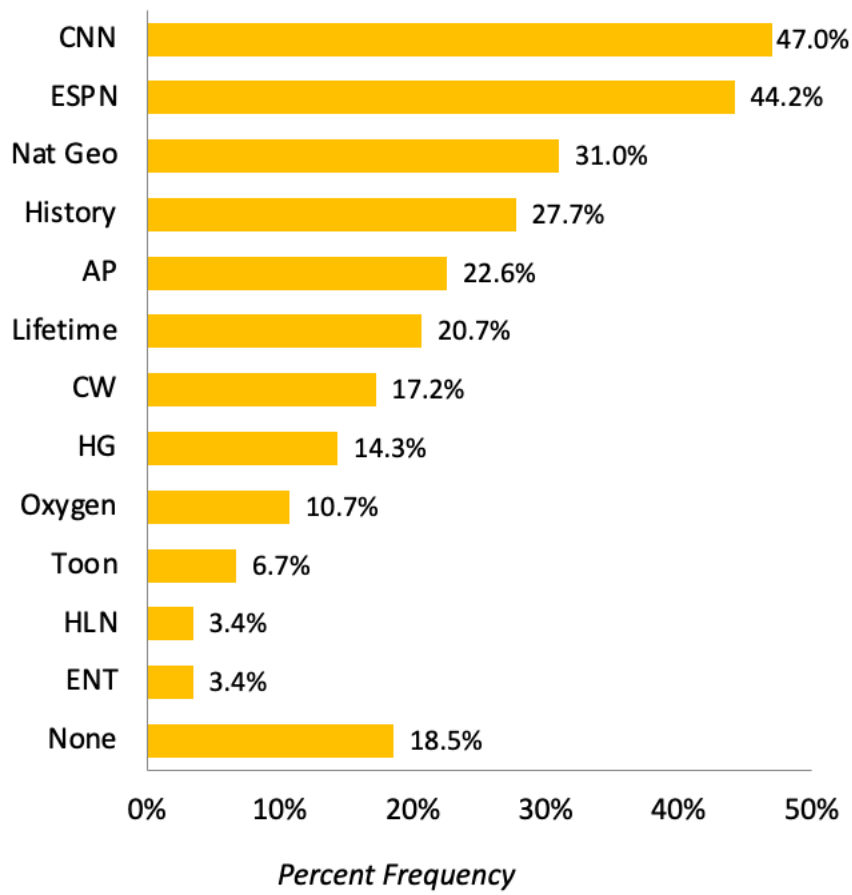
Table 53. TV channels that respondents report watching by demographic group.

Demographic	Subcategory	TV Service Provider												
		HLN	Oxygen	Toon	ENT	AP	CNN	ESPN	History	Nat Geo	Lifetime	CW	HG	None
	All Respondents	3.4%	10.7%	6.7%	3.4%	22.6%	47.0%	44.2%	27.7%	31.0%	20.7%	17.2%	14.3%	18.5%
Gender	Male	5.0%	9.6%	8.8%	4.6%	26.5%	53.5%	60.0%	33.8%	39.6%	17.3%	18.8%	13.1%	14.2%
	Female	1.9%	11.9%	4.6%	2.3%	18.5%	40.4%	28.5%	21.5%	22.3%	24.2%	15.4%	15.8%	22.7%
Age	21 to 24	2.1%	12.8%	12.8%	4.3%	19.1%	29.8%	40.4%	17.0%	31.9%	21.3%	19.1%	17.0%	23.4%
	25 to 34	6.7%	13.5%	10.6%	3.8%	28.8%	44.2%	45.2%	22.1%	34.6%	22.1%	12.5%	10.6%	14.4%
	35 to 44	8.2%	16.4%	8.2%	8.2%	30.0%	60.9%	60.9%	36.4%	40.0%	24.5%	23.6%	15.5%	13.6%
	45 to 54	0.0%	12.2%	6.1%	1.2%	26.8%	50.0%	50.0%	35.4%	30.5%	25.6%	23.2%	20.7%	15.9%
	55 to 64	0.0%	3.9%	3.9%	1.3%	18.2%	40.3%	29.9%	20.8%	26.0%	16.9%	9.1%	7.8%	23.4%
	65 to 74	1.3%	6.6%	1.3%	1.3%	10.5%	43.4%	36.8%	23.7%	22.4%	13.2%	13.2%	17.1%	22.4%
	75 or older	0.0%	0.0%	0.0%	0.0%	7.4%	51.9%	22.2%	40.7%	18.5%	14.8%	22.2%	11.1%	29.6%
Locality	Alexandria	6.0%	13.4%	9.0%	7.5%	29.9%	52.2%	40.3%	22.4%	29.9%	29.9%	19.4%	9.0%	17.9%
	Arlington	4.5%	6.0%	7.5%	4.5%	17.9%	47.8%	55.2%	34.3%	32.8%	20.9%	16.4%	14.9%	16.4%
	Fairfax Co.	3.5%	9.2%	9.2%	3.5%	22.5%	48.6%	39.3%	25.4%	30.6%	14.5%	15.0%	12.7%	19.7%
	Prince William & Stafford Co.	3.6%	14.4%	3.6%	0.9%	18.0%	33.3%	37.8%	27.0%	23.4%	22.5%	21.6%	12.6%	22.5%
	Loudon Co.	1.0%	10.5%	3.8%	2.9%	25.7%	55.2%	54.3%	31.4%	39.0%	22.9%	15.2%	21.9%	14.3%
Ethnicity	Not Hispanic/Latino	3.6%	11.0%	6.4%	3.6%	21.8%	47.5%	43.6%	28.2%	30.7%	20.8%	17.8%	13.8%	19.5%
	Hispanic/Latino	2.0%	7.8%	9.8%	2.0%	29.4%	43.1%	49.0%	23.5%	33.3%	19.6%	11.8%	19.6%	9.8%
Residence Years	Less than 1 year	5.3%	5.3%	2.6%	2.6%	5.3%	18.4%	26.3%	7.9%	21.1%	18.4%	10.5%	5.3%	44.7%
	1 to 3 years	2.0%	9.8%	6.9%	2.9%	22.5%	52.9%	43.1%	23.5%	27.5%	22.5%	13.7%	9.8%	13.7%
	4 to 9 years	3.3%	12.5%	5.9%	2.0%	23.7%	45.4%	44.7%	27.0%	28.9%	22.4%	24.3%	14.5%	17.8%

Demographic	Subcategory	TV Service Provider												
		HLN	Oxygen	Toon	ENT	AP	CNN	ESPN	History	Nat Geo	Lifetime	CW	HG	None
	10 to 19 years	2.1%	10.3%	4.1%	5.2%	20.6%	51.5%	49.5%	36.1%	35.1%	24.7%	14.4%	22.7%	17.5%
	20 or more years	5.2%	11.2%	10.4%	4.5%	27.6%	49.3%	45.5%	31.3%	35.8%	14.9%	15.7%	14.2%	16.4%
Residence Type	Owned	4.9%	11.0%	6.1%	4.6%	24.8%	50.6%	47.9%	31.0%	33.4%	18.4%	17.8%	15.6%	16.0%
	Rented	1.1%	10.8%	7.0%	1.6%	19.4%	41.4%	38.7%	23.1%	26.9%	25.3%	16.1%	12.9%	22.6%
Income	Less than \$35,000	2.9%	8.6%	12.9%	2.9%	20.0%	31.4%	21.4%	27.1%	21.4%	20.0%	14.3%	10.0%	27.1%
	\$35,000 to \$49,999	0.0%	2.3%	11.4%	0.0%	11.4%	40.9%	31.8%	15.9%	25.0%	15.9%	20.5%	2.3%	25.0%
	\$50,000 to \$74,999	4.3%	14.9%	5.3%	5.3%	23.4%	43.6%	45.7%	30.9%	31.9%	18.1%	12.8%	12.8%	19.1%
	\$75,000 to \$99,999	1.2%	14.3%	7.1%	1.2%	26.2%	45.2%	45.2%	27.4%	36.9%	21.4%	20.2%	10.7%	16.7%
	\$100,000 to \$124,999	6.8%	8.5%	3.4%	3.4%	23.7%	50.8%	52.5%	25.4%	32.2%	28.8%	18.6%	16.9%	15.3%
	\$125,000 to \$149,999	4.8%	11.9%	7.1%	4.8%	26.2%	76.2%	47.6%	35.7%	40.5%	16.7%	21.4%	19.0%	9.5%
	\$150,000 to \$174,999	2.6%	15.8%	2.6%	2.6%	28.9%	55.3%	52.6%	34.2%	39.5%	36.8%	13.2%	21.1%	5.3%
	\$175,000 to \$199,999	7.7%	0.0%	0.0%	7.7%	38.5%	42.3%	57.7%	23.1%	38.5%	19.2%	23.1%	30.8%	19.2%
	\$200,000 or greater	3.0%	10.6%	6.1%	4.5%	13.6%	50.0%	53.0%	27.3%	21.2%	13.6%	16.7%	18.2%	22.7%

* *Red font indicates significant differences within a demographic subgroup.*

Figure 44. TV channels watched.



3 APPENDIX

3.1 Survey Instrument

2026 Stormwater Survey

Survey link, for testing only:

<https://survey.alchemer.com/collab/8841254/NoVA-Stormwater-Survey-2026>

Programming instructions

- Programming instructions are in [SQUARE BRACKETS].
- Skip/branch logic is in [RED SQUARE BRACKETS].
- All items are single-select unless otherwise noted.
- Retain response option order unless noted.
- Retain grid item order unless noted.
- Allow respondents to go back/forward.
- Respondents may skip any question, but give one prompt if they move forward without a response. Terminate if a screener question is skipped.

Consent and screening

We're conducting this survey to understand opinions related to storm water. Everything you say will be anonymous. You'll watch a couple short videos, so please make sure your sound is on. The survey should take about 10 minutes.

Do you want to proceed?

Yes

No [END SURVEY]

Section	Construct	Q #	Question
Demographics	Gender	S1	First, we'll ask a few questions about you. What is your gender identity? Male Female Non-binary/non-conforming Prefer not to answer
Demographics	Age	S2	Which of the following categories includes your age? Under 18 [END SURVEY] 18 to 20 [END SURVEY] 21 to 24 25 to 34 35 to 44 45 to 54 55 to 64 65 to 74 75 or older
Demographics	Residence Type	S3	Is your home...? Owned Rented Military housing Transitional housing Other (Please specify): None of the above [END SURVEY]
Demographics	VA Residency	S4	Do you live in the state of Virginia? Yes No [END SURVEY]

Demographics	NoVA Residency	S5	Do you live in one of the following towns, cities, or counties? Please select only one location. Alexandria Arlington Fairfax County: Fairfax City Fairfax County: Herndon Fairfax County: Vienna Fairfax County, but not one of the cities/towns listed Falls Church Henrico County [END SURVEY] Loudoun County: Leesburg Loudoun County, but not Leesburg Prince William County: Dumfries Prince William County: Manassas Prince William County: Manassas Park Prince William County, but not one of the cities/towns listed Richmond [END SURVEY] Stafford County Virginia Beach [END SURVEY] None of the above [END SURVEY]
Demographics	Occupation	S6 [REVISITED]	Do work in any of the following industries/sectors? Agriculture, forestry, fishing and hunting, or mining Landscaping, grounds keeping, or lawn care Waste management services Construction Manufacturing None of the above
Demographics	HH Income	S7	What is your household's annual income? Less than \$35,000 \$35,000 to \$49,999 \$50,000 to \$74,999 \$75,000 to \$99,999 \$100,000 to \$124,999 \$125,000 to \$149,999 \$150,000 to \$174,999 \$175,000 to \$199,999 \$200,000 or greater

Demographics	Ethnicity	S8	Which of the following describes your ethnicity? (Please select all that apply) African American/Black American Indian/Native Alaskan Asian Hispanic/Latino Native Hawaiian/Pacific Islander White/Caucasian Other: _____
Demographics	Language	S9	What is the main language spoken in your home? a. English b. Spanish c. Chinese d. Vietnamese e. Arabic f. Korean g. Tagalog (including Filipino) h. Urdu i. Amharic or Somali j. French (including Cajun) k. Persian (including Farsi, Dari) l. Other: _____
Demographics	Years in residence	Q1	How many years have you lived in your current residence? Less than 1 year 1 to 3 years 4 to 9 years 10 to 19 years 20 or more years
Behavior	Lawn or garden at residence	Q2	Does your home have a lawn or garden, no matter how small? Yes No
Behavior	Lawn care familiarity	Q3	[IF Q2 = YES] Are you familiar with how your garden or lawn is cared for (e.g., fertilizer use, mowing)? Yes No
Behavior	Lawn care use	Q4	[IF Q2 = YES] Do you use a lawn care service at least once a year? Yes No

Behavior	Vehicle owner	Q5	Do you own or lease a personal vehicle? Yes No																
Demographics	Own a dog	Q6	Is there one or more dogs in your home that you are at least partially responsible for? Yes No																
Knowledge	Watershed	Q7	Are you familiar with the term “watershed”? Yes No [DISPLAY TEXT ON NEXT PAGE AFTER RESPONSE HAS BEEN ENTERED.] A watershed is an area of land that channels rainfall and snowmelt to creeks, streams, and rivers, and eventually to outflow points such as reservoirs, bays, and the ocean.																
Knowledge	Reside within watershed	Q8	Do you live in the.... <table border="1"> <thead> <tr> <th></th><th>YES</th><th>NO</th><th>Don't Know</th></tr> </thead> <tbody> <tr> <td>Chesapeake Bay watershed?</td><td></td><td></td><td></td></tr> <tr> <td>Potomac River watershed?</td><td></td><td></td><td></td></tr> <tr> <td>Another watershed not listed?</td><td></td><td></td><td></td></tr> </tbody> </table> [IF “Another watershed not listed” = YES.] You selected “Another watershed not listed”. Please tell us the watershed: _____		YES	NO	Don't Know	Chesapeake Bay watershed?				Potomac River watershed?				Another watershed not listed?			
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Knowledge	Storm water final destination	Q9	“Stormwater” is rainwater that flows into the street, along the gutter and into the storm drain. To the best of your knowledge, where does stormwater in Northern Virginia then go? A wastewater treatment facility Potomac River and Chesapeake Bay All of the above None of the above Other: _____																

Behavior	Dog walk cleanup frequency	Q10	[IF Q6= YES] When taking your dog(s) for a walk, how often do you pick up after your dog(s)? Always Usually Sometimes Rarely Never Not applicable/I don't take the dog(s) on walks
Behavior	Dog yard clean up frequency	Q11	[IF Q6 = YES AND Q2 = YES] How often do you (or someone else from your household) remove your dog's waste from your yard? Not applicable – dog not allowed to go in the home's yard Daily Weekly Monthly Less often than once a month Never Not sure
Belief	Reason for dog clean up	Q12	[IF Q10 = (Always, Usually, Sometimes, Rarely) AND Q11 = (Daily, Weekly, Monthly, Less often than once a month)] What is the most important reason to pick up after your dog(s)? (Please select only one) City/county ordinance Don't want to step in it It causes water pollution It is gross It's what good neighbors do Odor Other reason None/no reason to

Behavior	Grass clippings handling	Q13	[IF Q3 = YES] How are grass clippings from your lawn disposed of? Bagged and put in the regular trash Bagged and put in compost/recycling bags for pick up Left on the lawn/garden Put in a compost pile/bin Not sure Other Not applicable/don't have grass clippings												
Behavior	Grass clippings on street handling	Q14	[IF Q3 = YES] After your grass has been mown, what is done if grass clippings end up in the street? They are left there. They are swept or blown back into the lawn. They are swept or blown into the storm drain Not applicable/don't have grass clippings Other: _____ Not sure												
Behavior	Lawn fertilization frequency	Q15	[IF Q3 = YES] Which of the following best describes how often your lawn is fertilized? 1 time a year 2 times a year 3 times a year 4+ times a year Only if/when if a soil test indicates the grass needs fertilizer Never Not sure												
Knowledge	Rain barrel familiarity	Q16	A rain barrel is a barrel you put under your downspout to collect rain water that you can use around your yard. Which of the following statements are true for you? <table border="1"> <thead> <tr> <th></th><th>YES</th><th>NO</th></tr> </thead> <tbody> <tr> <td>I have a rain barrel.</td><td></td><td></td></tr> <tr> <td>I am familiar with rain barrels.</td><td></td><td></td></tr> <tr> <td>I don't have a rain barrel but I'm interested in getting one.</td><td></td><td></td></tr> </tbody> </table>		YES	NO	I have a rain barrel.			I am familiar with rain barrels.			I don't have a rain barrel but I'm interested in getting one.		
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Knowledge	Rain garden familiarity	Q17	A rain garden is a bowl-shaped garden area where runoff can collect and soak into the ground. Which of the following statements are true for you? <table border="1"> <thead> <tr> <th></th><th>YES</th><th>NO</th></tr> </thead> <tbody> <tr> <td>I have a rain garden.</td><td></td><td></td></tr> <tr> <td>I am familiar with rain gardens.</td><td></td><td></td></tr> <tr> <td>I don't have a rain garden but I'm interested in installing one.</td><td></td><td></td></tr> </tbody> </table>		YES	NO	I have a rain garden.			I am familiar with rain gardens.			I don't have a rain garden but I'm interested in installing one.		
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Knowledge	Conservation landscaping familiarity	Q18	Conservation landscaping is replacing an area of lawn or bare soil in your yard with native plants. Which of the following statements are true for you? <table border="1"> <thead> <tr> <th></th><th>YES</th><th>NO</th></tr> </thead> <tbody> <tr> <td>I have conservation landscaping in my yard.</td><td></td><td></td></tr> <tr> <td>I am familiar with conservation landscaping.</td><td></td><td></td></tr> <tr> <td>I don't have conservation landscaping but I'm interested in installing it.</td><td></td><td></td></tr> </tbody> </table>		YES	NO	I have conservation landscaping in my yard.			I am familiar with conservation landscaping.			I don't have conservation landscaping but I'm interested in installing it.		
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Behavior	Vehicle oil handling	Q19	[IF Q5 = YES] When you need to change the oil in your car or truck, what do you do with the old motor oil? ☐ I don't change the oil myself/I take it to a garage/oil change service ☐ Take the old motor oil to a gas station or hazmat facility for recycling ☐ Store it in my garage ☐ Put it in the trash ☐ Dump it in the gutter or down the storm sewer ☐ Dump it down the sink ☐ Dump it on the ground ☐ Other: _____ [please specify]												
Behavior (for gating)	HHW drop off needs	Q19.1 [NEW]	Have you ever had household hazardous waste at home to dispose of? <i>Household hazardous waste includes items like batteries, automobile fluids, pesticides, herbicides, oil-based paint, paint thinners, etc.</i> ☐ Yes ☐ No ☐ Not sure												

Knowledge	HHW drop off knowledge	Q20 [REVISED]	<i>Household hazardous waste includes items like batteries, automobile fluids, pesticides, herbicides, oil-based paint, paint thinners, etc.</i> Do you know whether or not your locality has a specific place for residents to drop off household hazardous waste? Yes, we have a location for drop-offs. No, we do not have a location for drop-offs. I'm not sure.
Behavior	HHW drop off location	Q20.1 [NEW]	[IF Q19.1 = YES OR I'M NOT SURE] <i>Household hazardous waste includes items like batteries, automobile fluids, pesticides, herbicides, oil-based paint, paint thinners, etc.</i> How do you typically dispose of household hazardous waste? (Select all that apply) [MULTISELECT] At a county/city drop-off facility At a community HHW collection event At a retailer (e.g., batteries at Home Depot, electronics at Best Buy) With regular household trash Pour it down the storm drain or on the ground Other (please specify)
Behavior	Keep HHW (negative outcome)	Q20.2 [NEW]	[IF Q19.1 = YES OR I'M NOT SURE] <i>Household hazardous waste includes items like batteries, automobile fluids, pesticides, herbicides, oil-based paint, paint thinners, etc.</i> Have you ever kept household hazardous waste at home longer than necessary because you weren't sure how to dispose of it appropriately? Yes No Not sure

Behavior	Bulk trash removal	Q20.3 [NEW]]	How do you typically get rid of bulky trash items (e.g., furniture, appliances, mattresses)? (Select all that apply) [MULTISELECT] I've never had to get rid of bulky trash items Schedule a bulky item pickup through my trash/waste hauler Bring it to a transfer station, recycling center, or landfill Donate it to a thrift store or charity (e.g., Goodwill, Habitat ReStore) Give it away through community platforms (e.g., Facebook Marketplace, Nextdoor, Buy Nothing) Sell it at a garage sale or online Put it out on the curb for anyone to take Put it in my regular household trash Dump it in an alley, vacant lot, or other location other than my property Other (please specify)
Behavior	Wash vehicle at home	Q21	[IF Q5 = YES] In the past year, where have you washed your personal vehicle? Check all that apply. [MULTISELECT] At my home or someone else's home At a commercial car wash I haven't washed my vehicle Other: _____ [please specify]
Behavior	Wash vehicle at home frequency	Q22	[IF Q21 = At my/someone else's home] How often do you typically wash your car/truck at home? Less than once a year 1- 2 times per year 3-4 times per year 5-6 times per year 7-12 times per year 12+ times per year

Behavior	Wash vehicle method	Q23	[IF Q21 = At my/someone else's home] When you wash your car/truck at home, which of the following apply? <table border="1"> <thead> <tr> <th></th><th>YES</th><th>NO</th><th>NOT SURE</th></tr> </thead> <tbody> <tr> <td>I wash it on the grass, gravel or dirt</td><td></td><td></td><td></td></tr> <tr> <td>I use environmentally friendly detergent</td><td></td><td></td><td></td></tr> <tr> <td>I use water only (no soap or detergent)</td><td></td><td></td><td></td></tr> </tbody> </table>		YES	NO	NOT SURE	I wash it on the grass, gravel or dirt				I use environmentally friendly detergent				I use water only (no soap or detergent)			
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Knowledge	Pollution identification	Q24	Looking at the picture below, would you consider either to be a potential source of water pollution? [MEDIA: SurveyImage_POLLUTION.png] Yes No Not sure Cannot see image																
Knowledge	Pollution reporting knowledge	Q25	Do you feel that you know who to contact to report potential water pollution? I definitely know I think I know I don't think I know I definitely don't know																
Behavior	Likelihood to report pollution	Q26	What is the likelihood that you would call county or town officials to report potential pollution so they could investigate the cause? I definitely would I probably would I'm equally likely to call and to not call I probably would NOT I definitely would NOT																

Behavior	Reason for not reporting pollution	Q27	[IF Q26 = “Equally likely”, “Probably not” or “Definitely not”] What is the primary reason that you would not call county or town officials to report potential pollution? I’m too busy It’s not my responsibility It’s none of my business I prefer not to communicate with officials or authorities Other: _____
Behavior	Salt/abrasive	Q28	During snowy and icy conditions, how often (if at all) do you (or a family member) apply deicer (e.g., salt) at your residence? Always or most of the time Frequently Sometimes Occasionally Rarely Never Don’t know
Behavior	Salt/abrasive	Q29	[SKIP IF Q28 = “Rarely” OR “Never”] Do you (or a family member) typically apply deicer (e.g., salt) at your residence before, during, or after a winter storm event? (Select all that apply.) Before During After Depends / varies too much to say Other:_____ [please specify] Don’t know
Behavior	Salt/abrasive	Q30	During snowy and icy conditions, how often (if at all) do you (or a family member) apply <u>an abrasive for traction</u> (e.g., sand) at your residence? Always or most of the time Frequently Sometimes Occasionally Rarely Never Don’t know

Perception	Salt/abrasive	Q31	In general, how would you rate the impact (if any) on each of the following from using salt for winter storm events? That is, for each item, please indicate if you feel that applying salt for winter storm events has a very positive, somewhat positive, somewhat negative, very negative, or little or no impact on that item. [RANDOMIZE] <table border="1"> <thead> <tr> <th></th> <th>Very positive</th> <th>Somewhat positive</th> <th>No or little impact</th> <th>Somewhat negative</th> <th>Very negative</th> <th>Don't know/not sure</th> </tr> </thead> <tbody> <tr> <td>Tap/Drinking water</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Local waterways</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Emergency vehicle safety</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Motorist safety</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Pedestrian safety</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Economic and civic activity</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Very positive	Somewhat positive	No or little impact	Somewhat negative	Very negative	Don't know/not sure	Tap/Drinking water							Local waterways							Emergency vehicle safety							Motorist safety							Pedestrian safety							Economic and civic activity						
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Sources	TV service provider	Q32	What TV service provider do you use? [RANDOMIZE FIRST FOUR OPTIONS] Verizon Comcast Cox Xfinity Do not have cable TV Do not watch TV Other: _____ I don't know																																																	

Sources	TV channels	Q33	White of the following channels, if any, do you watch? [RANDOMIZE ALL BUT LAST] HLN TV Oxygen Toon ENT Animal Planet CNN ESPN History National Geographic Lifetime CW Home and Garden None of the above
Knowledge	Clean up activity awareness in past 12 months	Q34	Thinking about the last 12 months, have you heard about any opportunities to participate in a water quality activity, such as a stream clean up, helping to install storm drain labels, etc.? Yes No Not sure
Behavior	Cleanup activity participation in the past 12 months	Q35	[IF Q34 = YES] Thinking about the last 12 months, have you participated in a water quality activity, such as a stream clean up, helping to install storm drain labels, etc.? Yes No
Instruction			Please watch the video below, then we'll ask you a couple questions about it. [VIDEO ORDER RANDOMIZED: "Only Rain Down the Drain!", "Pollution Solutions"]
Awareness	Ad familiarity	Q36	Before this survey, had you seen this ad, or a similar one on TV, Facebook, or Twitter? Yes No Not sure Video did not play

Perception	Ad perceptions	Q37	[IF Q36 NOT = 'Video did not play'] Thinking of the ad video you just saw, indicate whether you agree or disagree with the following statements about it. <table border="1"> <thead> <tr> <th></th> <th>Strongly Disagree</th> <th>Disagree</th> <th>Neither disagree or agree</th> <th>Agree</th> <th>Strongly Agree</th> </tr> </thead> <tbody> <tr> <td>I understand the information in the ad.</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>The ad is relevant to me.</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>I trust the information in the ad.</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>The ad's message is important.</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>The ad is persuasive.</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>I think the ad would be effective.</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Strongly Disagree	Disagree	Neither disagree or agree	Agree	Strongly Agree	I understand the information in the ad.						The ad is relevant to me.						I trust the information in the ad.						The ad's message is important.						The ad is persuasive.						I think the ad would be effective.					
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Perception	Ad perceptions	Q39	[IF Q38 NOT 'Video did not play'] Thinking of the ad video you just saw, indicate whether you agree or disagree with the following statements about it.																																															
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Behavior	Ad impact	Q40	[IF Q38 = YES OR Q36 = YES] Thinking back to when you first saw the ad(s), please indicate if the following statements are true for you now compared to then? (Select all that apply.) <table border="1"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> <th>DOES NOT APPLY</th> </tr> </thead> <tbody> <tr> <td>I understand more about the impact of pet waste on water quality.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>I'd like to pick up pet waste more often, though I haven't made any changes yet.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>I now pick up pet waste more often.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>I was already doing what is recommended to reduce water pollution from pet waste</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> [PAGE BREAK. KEEP QUESTION AND RESPONSE LABELS ON SCREEN] <table border="1"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> <th>DOES NOT APPLY</th> </tr> </thead> <tbody> <tr> <td>I understand more about the impact of fertilizer on water quality.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>I'd like to fertilize fewer times during the year.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>I now fertilize fewer times during the year.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>I was already doing what is recommended to reduce water pollution from fertilizer.</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> [PAGE BREAK. KEEP QUESTION AND RESPONSE LABELS ON SCREEN.] <table border="1"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> <th>DOES NOT APPLY</th> </tr> </thead> <tbody> <tr> <td>I understand more about the impact of motor oil on water quality.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>I'd like to dispose of motor oil properly, though I haven't made any changes yet.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>I now properly dispose of motor oil.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>I was already doing what is recommended to reduce water pollution from motor oil.</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		YES	NO	DOES NOT APPLY	I understand more about the impact of pet waste on water quality.				I'd like to pick up pet waste more often, though I haven't made any changes yet.				I now pick up pet waste more often.				I was already doing what is recommended to reduce water pollution from pet waste					YES	NO	DOES NOT APPLY	I understand more about the impact of fertilizer on water quality.				I'd like to fertilize fewer times during the year.				I now fertilize fewer times during the year.				I was already doing what is recommended to reduce water pollution from fertilizer.					YES	NO	DOES NOT APPLY	I understand more about the impact of motor oil on water quality.				I'd like to dispose of motor oil properly, though I haven't made any changes yet.				I now properly dispose of motor oil.				I was already doing what is recommended to reduce water pollution from motor oil.			
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Awareness	Received info about water pollution	Q41	Have you seen or received information about reducing water pollution from any source in the past 12 months? Yes No Not sure
Awareness	Rain logo familiarity	Q42	Have you seen the logo below before? [MEDIA: SHOW SURVEYIMAGE_LOGO] Yes No Cannot see image

Perceptions	Sponsor awareness and perceptions	Q43	[DISPLAY TEXT ON SEPARATE PAGE.] <i>The Northern Virginia Clean Water Partners is a group of local governments, 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.</i> [PAGE BREAK.] Indicate whether you agree or disagree with the following statements about the Northern Virginia Clean Water Partners (NVCWP). <table border="1"> <thead> <tr> <th></th> <th>Strongly Disagree</th> <th>Disagree</th> <th>Neither disagree or agree</th> <th>Agree</th> <th>Strongly Agree</th> </tr> </thead> <tbody> <tr> <td>I was familiar with the NVCWP before this survey.</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>I trust information from the NVCWP.</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>I would contact the NVCWP if I had a question or concern about water quality.</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>The NVCWP shares my values when it comes to water quality.</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>							Strongly Disagree	Disagree	Neither disagree or agree	Agree	Strongly Agree	I was familiar with the NVCWP before this survey.						I trust information from the NVCWP.						I would contact the NVCWP if I had a question or concern about water quality.						The NVCWP shares my values when it comes to water quality.					
	Strongly Disagree	Disagree	Neither disagree or agree	Agree	Strongly Agree																																	
I was familiar with the NVCWP before this survey.																																						
I trust information from the NVCWP.																																						
I would contact the NVCWP if I had a question or concern about water quality.																																						
The NVCWP shares my values when it comes to water quality.																																						

[FINAL PAGE]

Thank you for completing the survey! The survey was sponsored by the Northern Virginia Clean Water Partners. To learn about the Northern Virginia Clean Water Partners, visit onlyrain.org.



**General VPDES Permit for
Small Municipal Separate Storm Sewer Systems**

Permit No. VAR040057

Year 3 Annual Report

July 1, 2025 – June 30, 2026

Appendix B

Minimum Control Measure #2, Public Involvement and Participation

1. [City's Webpage for Alex311](#)
2. [City's Webpage with MS4 Program Plan and Annual Report](#)
3. [City's Webpage for Earth Month](#)



**General VPDES Permit for
Small Municipal Separate Storm Sewer Systems**

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Year 3 Annual Report

July 1, 2025 – June 30, 2026

Appendix C

Minimum Control Measure #3, Illegal Discharge Detection and Elimination

1. MS4 Outfalls Map, Sept. 2025
2. MS4 Outfalls Table
3. Notice of Potential Interconnections (2009) and Resent 2020
4. Illicit Discharges to the MS4
5. Illicit Discharge Complaints
6. Outfall Inspections
7. EnerGov Code Case Search
8. Alex311 Web-based Form
9. CityWorks
10. [City's Household Hazardous Waste webpage](#)
11. State Permitted Discharges Map
12. State Permitted Discharges Table
13. Conditions Regarding Cooking Residue

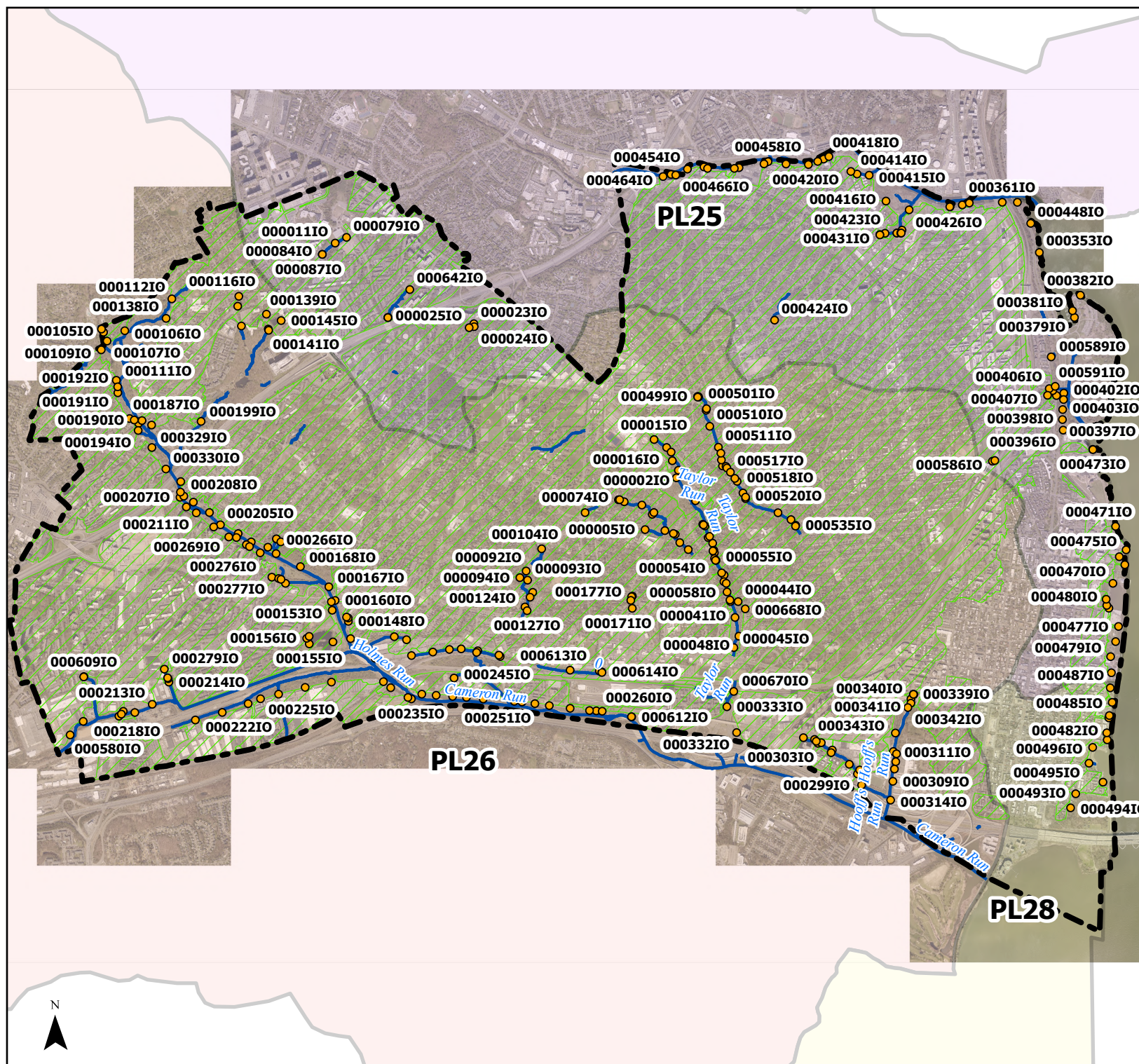


 Outfall
 City Boundary
 Stream Centerline
 MS4 Service Area

HUC

PL28

September 2026



City of Alexandria
Outfall and Point of Discharge Table

Outfall ID	Estimated MS4 Acreage Served (acres)	Receiving Water	Ultimate Receiving Water	Ultimate Receiving Water Impairment	TMDLs	Type	HUC	Latitude Decimal Degrees	Longitude Decimal Degrees
000001IO	7.89	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11886440.46	6984163.82
000002IO	13.11	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11887433.77	6985111.699
000003IO	7.70	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11886723.66	6983909.517
000004IO	6.82	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11886768.19	6983959.464
000005IO	9.26	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11886527.7	6983494.552
000008IO	5.16	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11885959.42	6984253.376
000010IO	28.90	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11884893.22	6983957.149
000015IO	260.86	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11886772.62	6985948.308
000016IO	10.53	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11887114.73	6985732.021
000017IO	6.29	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11887237.89	6985607.025
000041IO	31.67	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888852.69	6981534.963
000042IO	0.61	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888839.71	6981576.72
000043IO	2.93	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888978.05	6981101.434
000044IO	22.51	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11889063.01	6981533.091
000045IO	6.09	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888946.51	6980279.499
000048IO	26.41	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11889082.33	6980591.082
000050IO	13.52	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888159.24	6983592.744
000051IO	6.27	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888369.04	6983123.82
000052IO	2.35	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888399.7	6982932.266
000053IO	0.71	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888415.94	6982864.731
000054IO	0.94	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888419.47	6982706.854
000055IO	21.02	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888460.54	6982655.803
000056IO	17.93	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888447.75	6982658.441
000057IO	2.06	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888681.1	6982256.677
000058IO	2.47	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888674.7	6982076.896
000059IO	4.38	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888760.68	6981795.462
000060IO	4.15	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888738.67	6982030.953
000061IO	0.96	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888613.22	6982314.863
000062IO	3.21	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888098.71	6983638.702
000063IO	0.13	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888118.97	6983622.493
000064IO	3.77	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888245.47	6983276.601
000065IO	1.32	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888285.14	6983309.497
000067IO	1.74	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888375.89	6982913.114
000068IO	3.26	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11887349.24	6983366.923
000069IO	0.74	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11887298.84	6983388.581
000070IO	2.71	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11887704.72	6982949.739
000074IO	83.60	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11885800.97	6984307.115
000075IO	0.06	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11885834.11	6984309.427
000076IO	3.17	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11887379.89	6984905.205
000077IO	3.78	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11887269.74	6985371.613
000100IO	3.27	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11887473.68	6983140.415
000101IO	2.47	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11887067.13	6983467.829
000105IO	2.88	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11871772.65	6988871.466
000106IO	1.34	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11872351.47	6988913.388

City of Alexandria
Outfall and Point of Discharge Table

Outfall ID	Estimated MS4 Acreage Served (acres)	Receiving Water	Ultimate Receiving Water	Ultimate Receiving Water Impairment	TMDLs	Type	HUC	Latitude Decimal Degrees	Longitude Decimal Degrees
000107IO	0.54	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11871868.81	6988632.407
000108IO	0.18	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11871717.05	6988957.849
000109IO	21.82	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11871709.92	6988392.875
000111IO	6.81	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11872121.4	6987563.654
000112IO	12.47	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11873633.7	6989781.374
000116IO	24.22	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall - Pond	PL26	11875459.07	6989850.611
000137IO	2.90	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall - Pond	PL26	11875428.37	6989580.595
000138IO	54.02	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11873477.22	6989249.213
000139IO	13.28	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall - Pond	PL26	11876210.96	6989363.584
000140IO	36.50	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11876260.94	6988957.362
000141IO	7.02	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11876271.96	6988924.012
000144IO	39.79	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11875529	6989042.071
000145IO	23.06	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall - Pond	PL26	11876612.34	6989189.499
000148IO	2.62	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11878443.82	6980994.703
000149IO	174.66	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11878439.43	6981085.436
000150IO	1.08	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11878394.06	6981111.526
000160IO	10.72	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11878082.06	6981564.146
000167IO	19.08	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11877911.78	6981936.063
000168IO	6.11	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11877136.98	6982486.439
000187IO	33.71	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11872480.58	6986519.899
000188IO	0.14	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11872719.14	6986432.001
000189IO	53.32	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11872727.84	6986390.825
000190IO	0.20	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11872609.86	6986480.859
000191IO	18.63	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11872162.41	6987222.227
000192IO	3.49	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11872157.94	6987385.018
000193IO	9.44	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11872820.91	6986465.417
000194IO	5.16	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11872716.75	6986195.981
000196IO	26.43	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11873082.39	6986343.762
000199IO	19.72	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11874431.35	6986442.873
000205IO	2.79	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11874958.15	6983625.44
000206IO	17.30	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11874658.4	6983959.895
000207IO	37.93	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11873856.13	6984375.101
000208IO	1.33	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11873960.35	6984405.523
000209IO	15.08	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11874220.58	6984243.16
000210IO	2.83	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11874028.17	6984111.987
000211IO	54.30	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11874299.01	6983950.406
000261IO	25.97	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11875441.23	6983386.159
000262IO	139.25	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11875796.74	6983158.759
000263IO	10.01	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11876249.98	6983015.281
000264IO	119.20	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11876474.07	6982840.734
000266IO	31.26	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11876489.67	6983233.711
000267IO	0.29	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11876482.58	6983243.472
000268IO	85.06	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11876603.31	6983160.824
000269IO	43.19	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11875185.9	6983294.572

City of Alexandria
Outfall and Point of Discharge Table

Outfall ID	Estimated MS4 Acreage Served (acres)	Receiving Water	Ultimate Receiving Water	Ultimate Receiving Water Impairment	TMDLs	Type	HUC	Latitude Decimal Degrees	Longitude Decimal Degrees
000270IO	8.66	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11875394.33	6983279.187
000271IO	7.08	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11874773.85	6983567.035
000274IO	0.95	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11875664.7	6983084.295
000275IO	0.89	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11875749.91	6983031.874
000276IO	5.38	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11876040.87	6982862.205
000277IO	17.22	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11876358.23	6982198.8
000278IO	3.14	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11876731.02	6982030.494
000299IO	1.45	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11892314.2	6976838.147
000300IO	2.08	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11892091.22	6977100.812
000301IO	0.03	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11892488.42	6976728.197
000302IO	7.41	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11892373.97	6976944.812
000303IO	0.10	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11891237.48	6977672.186
000305IO	0.19	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11891328.29	6977688.155
000306IO	24.47	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11891627.92	6977488.735
000307IO	2.03	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11891596.3	6977417.922
000308IO	1.80	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11893291.47	6977448.84
000309IO	0.00	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11893279.27	6976636.308
000311IO	0.00	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11893358.07	6977170.991
000312IO	0.00	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11893321.63	6976970.877
000313IO	0.00	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11893377.67	6977385.415
000314IO	0.00	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11893216.82	6976125.102
000315IO	0.88	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11892427.5	6976535.047
000329IO	13.88	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11873089.95	6985731.367
000330IO	45.37	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11873471.42	6985145.152
000332IO	3.19	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11889021.66	6977964.611
000333IO	2.47	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888756.38	6978667.449
000339IO	31.53	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11893835.8	6979007.152
000340IO	1.10	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11893771.36	6978878.931
000341IO	9.18	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11893770.71	6978765.68
000342IO	22.90	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11893687.46	6978645.541
000343IO	1.16	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11891144.8	6977778.141
000345IO	3.97	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11893347.93	6977952.632
000477IO	6.17	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11899425.95	6980856.343
000499IO	115.43	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11887957.9	6987122.845
000500IO	13.08	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11887977.39	6987119.421
000501IO	0.02	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11887985.29	6987106.255
000503IO	0.16	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11887961.33	6987104.763
000509IO	0.07	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888189.54	6986745.918
000510IO	14.54	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888289.4	6986308.817
000511IO	6.78	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888524.98	6985738.758
000512IO	1.76	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888635.96	6985228.64
000513IO	4.14	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888607.65	6985390.952
000514IO and 000516IO	1.94	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888733.03	6985216.088
000517IO	1.80	Hoofts Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888852.75	6985058.527

City of Alexandria
Outfall and Point of Discharge Table

Outfall ID	Estimated MS4 Acreage Served (acres)	Receiving Water	Ultimate Receiving Water	Ultimate Receiving Water Impairment	TMDLs	Type	HUC	Latitude Decimal Degrees	Longitude Decimal Degrees
000518IO	13.55	Hooffs Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11889036.06	6984809.284
000519IO	3.38	Hooffs Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11889194.24	6984492.096
000520IO	2.29	Hooffs Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11889264.36	6984339.698
000521IO	10.49	Hooffs Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888973.7	6984889.746
000522IO	3.85	Hooffs Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888592.34	6985576.612
000527IO	35.68	Hooffs Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11889265.48	6984379.21
000528IO	4.07	Hooffs Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11890503.11	6983766.34
000529IO	0.22	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11887734.92	6984458.919
000530IO	5.78	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11887900.99	6984281.077
000535IO	2.15	Hooffs Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11890630.67	6983613.107
000536IO	1.78	Hooffs Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11890625.82	6983589.708
000575IO	61.89	Hooffs Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11890841.65	6977825.425
000153IO	0.09	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11878002.88	6981297.641
000154IO	2.22	Backlick Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall - Pond	PL26	11878024.15	6980434.469
000155IO	2.41	Backlick Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall - Pond	PL26	11877378.05	6980380.58
000156IO	83.18	Backlick Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall - Pond	PL26	11877308.78	6980532.431
000158IO	45.24	Backlick Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall - Pond	PL26	11877375.12	6980585.74
000162IO	48.37	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11877978.71	6981527.501
000213IO	13.49	Backlick Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11873099.89	6978734.989
000214IO	0.22	Backlick Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11873553.67	6979339.892
000216IO	36.07	Backlick Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11871219.53	6978269.913
000218IO	0.53	Backlick Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11872192.49	6978410.296
000219IO	0.32	Backlick Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11872310.74	6978543.623
000220IO	0.31	Backlick Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11872625.8	6978511.084
000279IO	21.82	Backlick Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11873428.97	6979692.276
000608IO and 000609IO	152.21	Backlick Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11871233.5	6979481.27
000580IO	5.39	Backlick Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11870862.82	6977900.473
000146IO	143.54	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11880028.61	6980493.867
000147IO	9.96	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11878503.95	6980523.88
000159IO	23.57	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11879694.56	6980577.07
000098IO	77.58	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall - Pond	PL26	11886181.22	6981682.23
000099IO	4.21	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall - Pond	PL26	11886160.13	6981666.553
000151IO	0.00	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11879169.15	6979988.369
000171IO	1.13	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall - Pond	PL26	11886177.99	6981349.272
000175IO	5.45	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11885280.29	6979647.181
000177IO	9.62	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall - Pond	PL26	11886138.29	6981566.832
000222IO	13.74	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11875007.37	6978513.511
000223IO	4.80	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11875712.95	6978751.43
000225IO	28.11	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11876049.89	6978885.445
000230IO	10.54	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11876542.26	6979011.289
000232IO	18.68	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11874274.07	6978307.225
000233IO	15.55	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11877981.82	6979339.378
000234IO	0.29	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11880444.26	6979011.491
000235IO	2.06	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11880161.03	6978883.289

City of Alexandria
Outfall and Point of Discharge Table

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000236IO	2.68	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11880066.59	6978921.541
000237IO	5.60	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11879597.06	6979186.565
000239IO	18.36	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11879399.17	6979351.053
000242IO	15.37	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11877266.2	6979195.948
000243IO	0.61	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11880835.6	6978979.844
000244IO	0.55	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11881283.49	6978950.336
000245IO	14.37	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall - Pond	PL26	11881322.96	6979451.111
000247IO	1.61	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11883173.19	6978796.949
000248IO	3.90	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11882964.55	6978815.446
000249IO	1.14	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11881661.07	6978924.296
000250IO	1.65	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11882117.72	6978880.28
000251IO	4.70	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11883525.38	6978752.362
000257IO	0.02	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11885199.34	6978557.125
000258IO	9.15	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11885013.64	6978565.314
000259IO	2.07	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11884485.44	6978625.494
000260IO	0.73	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11885358.9	6978545.929
000611IO and 000612IO	183.43	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11886156.54	6978395.62
000614IO and 000615IO	22.16	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11885351.2	6979617.37
000613IO	50.79	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11884484.87	6979664.457
000023IO	21.09	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall - Pond	PL25	11881862.88	6989104.991
000024IO	1.83	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall - Pond	PL25	11881871.58	6989023.44
000025IO	27.84	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall - Pond	PL25	11881734.63	6988996.356
000294IO	28.57	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11879517.26	6989272.799
000295IO and 000603IO	165.48	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11879527.29	6989274.32
000414IO	0.44	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11892303.12	6993182.401
000415IO	5.16	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11892632.15	6993149.696
000416IO	12.84	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11893091.67	6992445.754
000417IO	129.85	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11891391.27	6993589.596
000418IO	0.87	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11891536.69	6993657.921
000419IO	0.89	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11891232.3	6993525.851
000420IO	2.37	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11890977.69	6993440.809
000422IO	44.02	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11892133.87	6993252.545
000423IO	0.93	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11893066.17	6991568.178
000424IO	49.26	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11890056.31	6989201.547
000426IO	14.14	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11893722.17	6992206.379
000427IO	1.93	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11893389.3	6991573.821
000428IO	4.76	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11893386.94	6991574.315
000429IO, 000605IO, 000606IO	283.02	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11893493.05	6991573.139
000430IO	0.58	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11893527.94	6991655.21
000431IO and 000432IO	175.22	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11892922.94	6991532.446
000450IO	8.16	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11895169.35	6992340.963
000451IO	5.87	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11895361.1	6992393.396
000452IO and 000600IO	18.22	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11894838.04	6992290.594

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000454IO	130.45	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11887681.57	6993316.229
000456IO	55.69	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11890367.89	6993456.194
000457IO	0.11	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11889812.16	6993494.613
000458IO	0.47	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11889878.84	6993519.764
000459IO	0.57	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11889767.66	6993458.942
000460IO	1.74	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11889087.66	6993356.607
000461IO	2.05	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11888131.58	6993375.136
000462IO	3.33	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11888229.8	6993334.763
000463IO	18.86	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11888959.42	6993335.478
000464IO	0.51	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11887016.52	6993114.02
000465IO	51.04	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11887236.44	6993171.464
000466IO	0.70	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11887363.62	6993154.696
000079IO	0.23	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11878392.77	6991456.818
000011IO	3.70	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11878084.23	6991300.581
000084IO	34.44	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11877732.58	6990995.936
000087IO	28.12	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall	PL25	11877733.56	6990992.406
000353IO	0.00	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11897269.55	6991045.02
000361IO	210.26	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11896259.78	6992413.289
000379IO	0.00	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11898226.43	6989274.819
000381IO	0.00	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11898173.26	6989458.104
000382IO	0.00	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11898387.87	6989880.871
000396IO	0.01	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11897918.7	6986205.557
000397IO	0.00	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11897899.31	6986492.831
000398IO	0.00	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11897905	6986765.268
000402IO	0.00	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11897936.5	6987212.757
000403IO	0.00	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11897929.62	6987038.286
000404IO	0.75	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11897735.5	6987146.48
000405IO	46.32	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11897635.48	6987281.737
000406IO	4.50	Potomac River	Potomac River	Yes	PCBs	Outfall - Pond	PL28	11897538.98	6987335.751
000407IO	45.04	Potomac River	Potomac River	Yes	PCBs	Outfall - Pond	PL28	11897493.34	6987153.774
000447IO	0.00	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11896671.66	6992411.516
000448IO	0.00	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11897034.41	6991838.966
000469IO	6.73	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11899598.7	6982537.477
000470IO	7.17	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11899274.57	6982030.579
000471IO	14.14	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11899346.02	6983582.765
000472IO	3.32	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11898724.86	6985681.776
000473IO	0.14	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11898729.15	6985674.047
000475IO	0.26	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11899632.92	6982943.543
000476IO	0.73	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11899447.45	6982756.021
000478IO	0.54	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11899164.11	6981353.557
000479IO	8.44	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11899211.91	6980033.524
000480IO	3.50	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11899106.9	6981429.171
000481IO	3.24	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11899090.24	6981596.498
000482IO	1.16	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11899118.54	6977767.156

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000483IO	3.70	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11899107	6977958.021
000484IO	4.21	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11899161.83	6978365.66
000485IO	0.09	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11899176.78	6978428.621
000486IO	5.22	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11899253.3	6978787.148
000487IO	17.16	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11899201.25	6979183.219
000489IO	8.53	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11899232.88	6979594.487
000491IO	6.02	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11899003.88	6976613.722
000493IO	1.46	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11898260.33	6976296.936
000494IO	2.06	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11898120.95	6975913.388
000495IO	16.77	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11898622.46	6977129.506
000495IO and 000496IO	5.25	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11898722.45	6977560.075
000092IO	96.39	Strawberry Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11883287.15	6982366.915
000093IO	7.97	Strawberry Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11883326.8	6982117.109
000094IO	17.66	Strawberry Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11883116.46	6982186.014
000095IO	2.77	Strawberry Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11883467.54	6981784.938
000104IO	39.49	Strawberry Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11883709.61	6982971.088
000119IO	56.24	Strawberry Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11882579.12	6980036.325
000120IO	3.64	Strawberry Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11882545.18	6980074.069
000124IO	2.60	Strawberry Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11883256.09	6981387.195
000127IO	5.10	Strawberry Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11883313.69	6981285.708
000128IO	1.17	Strawberry Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11881967.95	6980192.612
000130IO	7.41	Strawberry Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11881517.46	6980244.8
000133IO	9.57	Strawberry Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11880744.71	6980158.563
000134IO	23.40	Strawberry Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11881196.01	6980229.609
000135IO	8.69	Strawberry Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11881936.87	6980148.008
000610IO	3.93	Strawberry Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11880163.71	6980062.784
000586IO	1.44	Potomac River	Potomac River	Yes	PCBs	Outfall - Pond	PL28	11895991.98	6985357.602
000588IO	30.32	Potomac River	Potomac River	Yes	PCBs	Outfall - Pond	PL28	11896057.16	6985376.432
000589IO	35.57	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11897592.62	6988200.249
000591IO	19.13	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11897701.93	6987397.715
000592IO	5.47	Potomac River	Potomac River	Yes	PCBs	Outfall	PL28	11899348.09	6980443.038
000121IO	13.49	Strawberry Run				Outfall	PL26	11883394.31	6981652.8
000621IO and 000622IO	1247.79	Hooffs Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11893852.18	6979004.593
000624IO	10.25	Cameron Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11883917.66	6978699.662
000628IO	94.16	Backlick Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11872259.35	6978466.72
000642IO	47.22	Four Mile Run	Four Mile Run Tidal	Yes	E. Coli	Outfall - Pond	PL25	11880117.33	6990035.114
000647IO	51.29	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11873876.92	6984802.006
000647IO	51.29	Hooffs Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11890149.55	6983954.071
000660IO	0.02	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11873868.37	6984516.587
000661IO	52.35	Backlick Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11873534	6979431.994
000662IO	7.11	Backlick Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11873518.87	6979455.317
000668IO	4.62	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11889255.88	6981334.995
000668IO	4.62	Hooffs Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888200.33	6986790.098
000669IO	48.69	Hooffs Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11891191.4	6977728.452

City of Alexandria
Outfall and Point of Discharge Table

Outfall ID	Estimated MS4 Acreage Served (acres)	Receiving Water	Ultimate Receiving Water	Ultimate Receiving Water Impairment	TMDLs	Type	HUC	Latitude Decimal Degrees	Longitude Decimal Degrees
000670IO	0.31	Taylor Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11888943.74	6979086.277
000675IO	0.00	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11876609.36	6982136.583
000676IO	0.00	Holmes Run	Hunting Creek/Cameron Run/Holmes Run	Yes	E. Coli	Outfall	PL26	11876545.07	6982158.99



City of Alexandria

Department of Transportation and Environmental Services
Office of Environmental Quality
301 King Street
City Hall, Room 3000
Alexandria, VA 22314
www.alexandriava.gov/Environment

July 15, 2009

Gayle England
Stormwater Specialist
Department of Environmental Services
Arlington County, Virginia

DELIVERED VIA EMAIL: Gengland@arlingtonva.us

Subject: Notice of Potentially Interconnected Municipal Separate Storm Sewer System (MS4)

Attention: MS4 Permit Manager

The City of Alexandria operates as a Phase II MS4 community with coverage under the Virginia Stormwater Management Program (VSMP) General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (No. VAR 040057).

Pursuant to Section II.B.3.g of this permit, the City must "Notify, in writing, any downstream regulated MS4 to which the small regulated MS4 is physically interconnected of the small regulated MS4's connection to that system." This letter is to notify you of the potential for interconnections between the City's MS4 and the permitted stormwater system operated by Arlington County. Currently, we have not identified any points where the City's MS4 discharges stormwater into Arlington's regulated MS4; however, it is likely that interconnections exist.

As mentioned in our previous email correspondences and pursuant to Section II.B.3.b, the City is currently working on a mapping effort that will verify the "location of all known outfalls ...including those physically interconnected to a regulated MS4..." City GIS Staff will be contacting you very soon to share information in order to identify and map any interconnections that may exist between our regulated stormwater systems. The City is scheduled to provide this map with its Annual Report due no later than October 1, 2010 to DCR.

Best Regards,

A handwritten signature in black ink, appearing to read "Jesse E. Maines", is written over a faint, circular watermark of the City of Alexandria seal.

Jesse E. Maines
Water Quality Compliance Specialist
703-746-4071
Jesse.maines@alexandriava.gov

Cc: Mary Beth Fletcher, GIS Mapping Center Bureau Chief, mfletcher@arlingtonva.us

Jessica Lassetter

From: Jessica Lassetter
Sent: Thursday, July 30, 2020 9:42 AM
To: 'Jason Papacosma (Jpapacosma@arlingtonva.us)'
Subject: City of Alexandria Physical Interconnection
Attachments: Arlington County 071509.pdf

Hi Jason –

I hope you are doing well.

The City of provided a letter on July 15, 2009, to Ms. Gayle England, to satisfy the requirements indicated in the MS4 General Permit pertaining to physical interconnections (see attached). This letter referenced a regional stormwater flow map which was produced in September 2010 and included in the City's 2010-2011 MS4 Annual Report. This letter also satisfies the requirements outlined in the 2018-2023 MS4 General Permit, Part I. E.3.a.(5).

Please maintain this email and attached document in your MS4 program files and let me know if you have any questions.

Thank you,

Jessica

Jessica E. B. Lassetter
Senior Environmental Specialist/CE III
City of Alexandria, Virginia
T&ES Stormwater Management
Office: 703.746.4127
Cell: 703.915.5695
alexandriava.gov



City of Alexandria

Department of Transportation and Environmental Services
Office of Environmental Quality
301 King Street
City Hall, Room 3000
Alexandria, VA 22314
www.alexandriava.gov/Environment

July 15, 2009

Kate Bennett, MS4 Permit Coordinator
Fairfax County Stormwater Planning Division
10255 Fairfax County Parkway
Fairfax, Virginia 22035

DELIVERED VIA EMAIL:

Subject: Notice of Potentially Interconnected Municipal Separate Storm Sewer System (MS4)

Attention: MS4 Permit Manager

The City of Alexandria operates as a Phase II MS4 community with coverage under the Virginia Stormwater Management Program (VSMP) General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (No. VAR 040057).

Pursuant to Section II.B.3.g of this permit, the City must "Notify, in writing, any downstream regulated MS4 to which the small regulated MS4 is physically interconnected of the small regulated MS4's connection to that system." This letter is to notify you of the potential for interconnections between the City's MS4 and the permitted stormwater system operated by Arlington County. Currently, we have not identified any points where the City's MS4 discharges stormwater into Arlington's regulated MS4; however, it is likely that interconnections exist.

As mentioned in our previous email correspondences and pursuant to Section II.B.3.b, the City is currently working on a mapping effort that will verify the "location of all known outfalls ...including those physically interconnected to a regulated MS4..." City GIS Staff will be contacting you very soon to share information in order to identify and map any interconnections that may exist between our regulated stormwater systems. The City is scheduled to provide this map with its Annual Report due no later than October 1, 2010 to DCR.

Best Regards,

A handwritten signature in black ink, appearing to read "Jesse E. Maines", is written over a faint, large circular watermark of the City of Alexandria seal.

Jesse E. Maines
Water Quality Compliance Specialist
703-746-4071
Jesse.maines@alexandriava.gov

Cc: Mary Beth Fletcher, GIS Mapping Center Bureau Chief, mfletcher@arlingtonva.us

Jessica Lassetter

From: Jessica Lassetter
Sent: Thursday, July 30, 2020 9:41 AM
To: Ambrose, Heather
Subject: City of Alexandria Physical Interconnection
Attachments: Fairfax County 071509.pdf

Hi Heather –

I hope you are doing well.

The City of provided a letter on July 15, 2009, to Ms. Kate Bennett, MS4 Permit Coordinator, Fairfax County Stormwater Planning Division, to satisfy the requirements indicated in the MS4 General Permit pertaining to physical interconnections (see attached). This letter referenced a regional stormwater flow map which was produced in September 2010 and included in the City's 2010-2011 MS4 Annual Report. This letter also satisfies the requirements outlined in the 2018-2023 MS4 General Permit, Part I. E.3.a.(5).

Please maintain this email and attached document in your MS4 program files and let me know if you have any questions.

Thank you,

Jessica

Jessica E. B. Lassetter
Senior Environmental Specialist/CE III
City of Alexandria, Virginia
T&ES Stormwater Management
Office: 703.746.4127
Cell: 703.915.5695
alexandriava.gov



City of Alexandria

Department of Transportation and Environmental Services
Stormwater Management Division
2900-B Business Center Drive
Alexandria, VA 22314

May 24, 2018

Brenda Wasler
Environmental Protection Specialist
National Park Service
George Washington Memorial Parkway
700 George Washington Memorial Parkway
McLean, VA 22101

DELIVERED VIA EMAIL: brenda_wasler@nps.gov

Subject: Notice of Interconnected Municipal Separate Storm Sewer System (MS4)

Attention: MS4 Permit Manager

The City of Alexandria operates as a Phase II MS4 community with coverage under the Virginia Stormwater Management Program (VSMP) General VPDES Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (No. VAR 040057).

Pursuant to Section II.B.3.a of this permit, the City shall "notify in writing the downstream MS4 of any known physical interconnection." This letter is to notify you of the interconnection between the City's MS4 and the permitted stormwater system operated by the National Park Service, George Washington Memorial Parkway.

Thank you for providing your MS4 boundaries in April 2018. We confirmed that the City does operate outfalls that discharge into Jones Point Park in the southeast portion of the City and into the area east of the George Washington Memorial Parkway in the northeast portion of the City. We will review and update the City's MS4 boundaries as needed to ensure consistency between the data sets. After this is completed, the City's boundaries will be sent for your reference.

Sincerely,

A handwritten signature in black ink, appearing to read "Jesse E. Maines", is written over a faint, large circular watermark of the City of Alexandria seal.

Jesse E. Maines
Division Chief
Transportation and Environmental Services
Stormwater Management Division
Jesse.maines@alexandriava.gov

Cc: Hannah Dean via email – Hannah_Dean@nps.gov

Jessica Lassetter

From: Jessica Lassetter
Sent: Thursday, July 30, 2020 9:45 AM
To: robert_mocko@nps.gov
Subject: City of Alexandria Physical Interconnection
Attachments: GW Parkway.pdf

Mr. Mocko,

The City of provided a letter on May 24, 2018, to Ms. Brenda Wasler, to satisfy the requirements indicated in the MS4 General Permit pertaining to physical interconnections (see attached).

Please maintain this email and attached document in your MS4 program files and let me know if you have any questions.

Thank you,

Jessica

Jessica E. B. Lassetter
Senior Environmental Specialist/CE III
City of Alexandria, Virginia
T&ES Stormwater Management
Office: 703.746.4127
Cell: 703.915.5695
alexandriava.gov



City of Alexandria

Department of Transportation and Environmental Services
Office of Environmental Quality
301 King Street
City Hall, Room 3000
Alexandria, VA 22314
www.alexandriava.gov/Environment

July 15, 2009

Roy T. Mills
Location and Design Division
State Stormwater Program Administrator
Virginia Department of Transportation

DELIVERED VIA EMAIL: Roy.Mills@VDOT.Virginia.gov

Subject: Notice of Potentially Interconnected Municipal Separate Storm Sewer System (MS4)

Attention: MS4 Permit Manager

The City of Alexandria operates as a Phase II MS4 community with coverage under the Virginia Stormwater Management Program (VSMP) General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (No. VAR 040057).

Pursuant to Section II.B.3.g of this permit, the City must "Notify, in writing, any downstream regulated MS4 to which the small regulated MS4 is physically interconnected of the small regulated MS4's connection to that system." This letter is to notify you of the potential for interconnections between the City's MS4 and the permitted stormwater system operated by the Virginia Department of Transportation (VDOT). Currently, we have not identified any points where the City's MS4 discharges stormwater into VDOT's regulated MS4; however, it is likely that interconnections exist.

As mentioned in my July 15, 2010 email and pursuant to Section II.B.3.b, the City is currently working on a mapping effort that will verify the "location of all known outfalls ...including those physically interconnected to a regulated MS4..." We would like to work together and share information so that each party may have adequate information to identify any interconnections that may exist between our regulated stormwater systems. The City is scheduled to provide this map with its Annual Report due no later than October 1, 2010 to DCR.

Please contact me at your earliest convenience to work together on the mapping effort.

Best Regards,

A handwritten signature in black ink, appearing to read "Jesse E. Maines", is written over a faint, large circular watermark of the City of Alexandria seal.

Jesse E. Maines
Water Quality Compliance Specialist
703-746-4071
Jesse.maines@alexandriava.gov

Cc: Morris Z. Walton via email – Morris.Walton@VDOT.Virginia.gov

Jessica Lassetter

From: Jessica Lassetter
Sent: Thursday, July 30, 2020 3:56 PM
To: alex.foraste@vdot.virginia.gov
Subject: City of Alexandria Physical Interconnection
Attachments: VDOT 071509.pdf

Hi Alex,

The City of provided a letter on July 15, 2009, to Mr. Roy Mills, to satisfy the requirements indicated in the MS4 General Permit pertaining to physical interconnections (see attached). This letter referenced a regional stormwater flow map which was produced in September 2010 and included in the City's 2010-2011 MS4 Annual Report. This letter also satisfies the requirements outlined in the 2018-2023 MS4 General Permit, Part I. E.3.a.(5).

Please maintain this email and attached document in your MS4 program files and let me know if you have any questions.

Thank you,

Jessica

Jessica E. B. Lassetter
Senior Environmental Specialist/CE III
City of Alexandria, Virginia
T&ES Stormwater Management
Office: 703.746.4127
Cell: 703.915.5695
alexandriava.gov

FY2026 Illicit Discharges to the MS4

Tracking ID	Method of Discovery	Date Initiated	Date Closed	Problem Address	Incident	Narrative & Result	Reach MS4?
25-00032621	Reported by public	9/7/2025	9/10/2025	200 N Pickett St	Water Main Break	City T&ES staff investigated Holmes Run following the reported concern of muddy turbid water. During the survey, areas of elevated turbidity were observed in comparison to nearby sections of clearer flow; however, no specific illicit discharges were identified through a storm drain network investigation. Staff also inspected upstream reaches of Holmes Run and visited nearby construction sites to verify erosion and sediment controls were properly maintained and not contributing to the observed conditions. Based on the timing and characteristics of the incident, a recent water main break and subsequent repair are the most likely cause of the reported muddy water. At this time, the water quality conditions within Holmes Run are not anticipated to result in adverse impacts to wildlife or public health.	Yes
11/21/2025	Reported by public	11/21/2025	11/21/2025	4E Bellefonte Ave	Possible Illicit Discharge	City T&ES staff responded to a report of illicit discharge entering the MS4. Upon inspection, staff identified an active construction site at the reported property where wet saw cutting of bricks was occurring, with slurry discharging into the alley grate behind the property. T&ES staff addressed the issue on site and issued a warning, requiring immediate cleanup. Approximately one hour later, staff returned to verify that the area had been adequately addressed and that any future wet saw runoff would be contained to prevent entry into the MS4.	Yes
25-00030501	Reported by public	11/14/2025	12/29/2025	5312 Truman Ave	Possible Illicit Discharge	City T&ES staff reponded to a reported illicit discharge involving loose leaves entering the MS4. Staff met with the property owners to discuss proper handling and disposal of landscaping waste and to reinforce the importance of preventing organic debris from entering the storm drain system. Based on the site conditions observed at the time of the response, the reported incident did not pose a risk to wildlife or human health.	Yes
26-00001637	Reported by public	1/21/2026	1/21/2026	5300 Holmes Run Pkwy	Water Main Break	City of Alexandria T&ES staff investigated the reported turbid water conditions in the area. The investigation determined the turbidity was likely associated with a nearby water main break, which has since been resolved. Residual turbid appearance observed following the repair is consistent with partially frozen stream conditions and is expected to dissipate as the temperatures normalize. No ongoing impacts to the MS4 were identified at the time of the inspection.	Yes
1/23/2026	Reported by public	1/23/2026	2/18/2026	3700 Commonwealth Ave	Possible Illicit Discharge	Report of an individual dumping an unidentified white liquid into a tributary to Four Mile Run near 3700 Commonwealth Avenue. City AFM staff investigated the incident, identified the responsible individual, and confirmed through investigation that the material dumped into the waterway was milk. No fish kill or other adverse wildlife impacts were observed. The illicit discharge was documented as a first-offense warning, with additional enforcement to be considered if the activity recurs.	Yes
26-00011984	Reported by public	3/22/2026	3/23/2026	Holmes Run Parkway Creek heading West	Water Main Break	Report of brown discoloration and elevated turbidity in Holmes Run. City staff determined that the discoloration resulted from sediment introduced by a water-main break along Holmes Run Parkway. The water-main issue was resolved, and no continuing discharge or additional risk to human health or aquatic life was anticipated based on the available information.	Yes
26-00023361	Reported by public	6/12/2026	6/12/2026	247 Somerville St	Water Main Break	City staff conducted field observations and water-quality testing and traced the turbidity to a water-main break in Fairfax County. Sediment-laden water entered Backlick Run upstream and flowed into Alexandria. The condition was expected to diminish following completion of the repairs and settlement of suspended sediment. No adverse risk to public health, safety, or wildlife was anticipated, and City staff continued coordinating with the appropriate agencies and monitoring local conditions.	Yes
26-00023084	Reported by public	6/11/2026	6/12/2026	200 N Pickett St	Water Main Break	Report of elevated turbidity and discolored water within a City waterway. City staff investigated and determined that the turbidity resulted from an active water-main break. Virginia American Water conducted emergency repairs and implemented measures to minimize sediment transport to the storm drainage system and receiving waters. The condition was expected to subside following completion of repairs and stabilization of the affected area. No adverse risk to public health, safety, or wildlife was anticipated based on field observations.	Yes

FY2026 Illicit Discharge Complaints

Tracking ID	Method of Discovery	Date Initiated	Date Closed	Problem Address	Incident	Narrative & Result	Reach MS4?
25-00028969	Reported by public	8/10/2025	8/11/2025	704 Carpenter Rd	Water Quality Concern	Report of an unpleasant odor from a stormwater management pond associated with an algae bloom. The pond is a privately maintained stormwater best management practice owned by the Potomac Greens Homeowners Association. The City notified the HOA of the reported condition and reiterated its responsibility to address the algae bloom and maintain the BMP in proper operating condition. No illicit discharge was identified.	No
25-00027996	Reported by public	8/2/2025	8/4/2025	2401 Mill Rd	Possible Illicit Discharge	City staff responded to a report of a facilities contractor improperly washing filters near a storm drain. City staff inspected the affected portion of the storm sewer system and met with the Metro facility manager to discuss the findings. Staff reviewed proper filter-cleaning and washwater-disposal procedures and directed the facility to complete appropriate cleanup and routine maintenance to prevent future illicit discharges.	No
25-00032260	Reported by public	9/4/2025	9/5/2025	44 Canal Center Plz	Possible Illicit Discharge	T&ES staff inspected the waterfront along the Potomac River and neighboring properties in response to the resident's report of an orange-like substance floating in the water. Nearby construction sites were also reviewed to verify erosion and sediment controls were in good condition with no illicit discharges observed. Additional checks of several locations along the stormwater network were inconclusive in identifying any discharge connected to the report. It is noted that this area is prone to naturally occurring iron-rich groundwater discharges, which can periodically create orange discoloration and may be misidentified as pollutant discharges.	No
10/1/2025	Reported by City Staff	10/1/2025	10/1/2025	2922 Duke St	Possible Illicit Discharge	A City employee observed an unknown milky brown runoff in a local area and reported the observation to TES staff for response. A TES staff member investigated the site and determined that the runoff was associated with a recent grease or water spill originating from a location frequently used by a food truck (not present at the time of inspection). City staff immediately engaged with the property ownership to discuss responsibility for appropriate cleanup. The property ownership promptly initiated cleanup efforts on site. A follow-up inspection was conducted a few hours later to verify the adequacy of the cleanup. City staff confirmed that the impacted area had been adequately cleaned and spoke again with property representatives to reiterate proper cleanup protocol and preventive behavior for future incidents. The matter was resolved with no further action required at that time.	No
25-00031889	Reported by public	10/20/2025	10/22/2025	100 Somerville St	Possible Illicit Discharge	City T&ES staff investigated the reported discharge entering the stream. Upon inspection, staff observed a known groundwater discharge containing naturally occurring iron concentrations flowing from the identified pipe into the stream. No evidence of an illicit discharge was found. The observed condition is consistent with natural groundwater seeps and does not pose any threat to public health or the environment.	No
25-00038408	Reported by public	10/27/2025	11/3/2025	3225 Colvin St	Possible Illicit Discharge	City T&ES Stormwater Management Division Staff and AFM responded to the report of improper disposal of waste product and inspected the stormwater system along Colvin Street. At the time of inspection, no active illicit discharge was observed; however, staff will continue to monitor the location for compliance with all applicable regulations. Staff have engaged with the facility to reinforce proper sanitation and waste-handling requirements.	No
10/27/2026	Reported by public	10/27/2026	10/27/2026	3314 Richmond Highway	Possible Illicit Discharge	Report of improper grease and food-service waste handling by a food truck operating within the Potomac Yard area. City staff confirmed evidence of an illicit discharge from a grease leak associated with a food truck. Residual material had traveled off-site into the Montrose Avenue gutter however no evidence was found that the discharge entered the MS4. The operator was directed to dry sweep and properly dispose of the material, clean the affected property and gutter, and implement appropriate waste-handling practices. A follow-up inspection was scheduled to verify cleanup and confirm that no additional discharges occurred.	No

FY2026 Illicit Discharge Complaints

Tracking ID	Method of Discovery	Date Initiated	Date Closed	Problem Address	Incident	Narrative & Result	Reach MS4?
25-00035265	Reported by public	9/29/2025	10/30/2025	4638 Strathblane PI	Possible Illicit Discharge	T&ES staff investigated a reported private pool drainage concern. The activity observed was not identified to adversely impact local waterways or the surrounding environment. Staff engaged with the homeowner to provide guidance on proper pool care and seasonal discharge practices to ensure continued protection of public health and the environment.	No
25-00039555	Reported by public	11/6/2025	11/6/2025	3235 Colvin St	Possible Illicit Discharge	City of Alexandria T&ES staff visited the facility to investigate the reported concern of improper vehicle washing entering the MS4. At the time of inspection, no active illicit discharges were observed. Staff discussed proper handling and housekeeping practices with the facility owner. While no recent illicit discharge could be confirmed, T&ES had conducted follow up inspections to confirm an IDDE was not present or had occurred.	No
25-00041125	Reported by public	11/20/2025	11/20/2025	200 N Pickett St	Possible Illicit Discharge	City T&ES staff investigated the area associated with the reported 311 concern. At the time of inspection, turbidity levels in Holmes Run had returned to normal conditions. A recent nearby water main break, along with ongoing in-stream construction activities, are the likely causes of the observed water quality changes. Based on current conditions, the reported issue does not pose a risk to public health or the surrounding ecosystem.	No
25-00043284	Reported by public	12/14/2025	12/15/2025	218 N Lee St	Possible Illicit Discharge	City T&ES staff investigated a report of illicit dumping involving an unknown liquid along Thompsons Alley from a nail salon. At the time of the site investigation, no unidentified substance was observed within the alley. Based on additional information provided by the submitter, T&ES staff contacted the staff and manager of Asil Nail to advise that the discharge of any substance into the allet is prohibited. They were further informed that any future illicit discharges may result in enforcement action, including the issuance of violations by AFMO. T&ES staff conducted follow-up site visits to verify that no further illicit discharges occurred.	No
26-00000395	Reported by public	1/6/2026	1/7/2026	Maris Ave & N Van Dorn St	Possible Illicit Discharge	City T&ES staff investigated the report of illegal vehicle maintenance and draining of mechanical fluids into the MS4. At the time of inspection, no active or visible discharges were observed. Staff conducted follow-up site visits to verify that no illicit discharges are occurring in the vicinity. The reporting resident was contacted, and additional contextual information was gathered to support ongoing assessment of the event.	No
1/16/2026	Reported by public	1/16/2026	1/16/2026	Duke St and N Ripley St	Possible Illicit Discharge	Report of a possible paint spill near the intersection of Duke Street and North Ripley Street. City staff inspected the reported location and determined that the material had not entered the MS4 and was unlikely to affect the storm sewer system. Minor scattered litter was observed, and the responsible party was notified to complete appropriate cleanup. No illicit discharge to the MS4 was identified.	No
1/28/2026	Reported by public	1/28/2026	1/28/2026	GW Pkwy North Potomac Yard	Possible Illicit Discharge	Report of discolored runoff and possible erosion or sediment discharge to the Potomac River near North Potomac Yard. City staff investigated the reported condition and determined that the discoloration originated from naturally occurring, iron-rich groundwater. Nearby construction sites were also inspected, and no active dewatering or erosion and sediment control deficiencies were observed. No illicit or construction-related discharge was identified.	No
26-00011984	Reported by public	3/22/2026	3/23/2026	Holmes Run Parkway Creek heading West	Water Main Break	Report of brown discoloration and elevated turbidity in Holmes Run. City staff determined that the discoloration resulted from sediment introduced by a water-main break along Holmes Run Parkway. The water-main issue was resolved, and no continuing discharge or additional risk to human health or aquatic life was anticipated based on the available information.	Yes
26-00020693	Reported by public	5/28/2026	5/28/2026	6270 Edsall Rd	Possible Illicit Discharge	Report of pool water being discharged from a residential property along Edsall Road, creating runoff and a potential non-stormwater discharge. City staff contacted the property management company and provided guidance on properly draining pools without causing runoff, erosion, property damage, or the release of chlorinated water into the storm sewer system.	No

FY2026 Illicit Discharge Complaints

Tracking ID	Method of Discovery	Date Initiated	Date Closed	Problem Address	Incident	Narrative & Result	Reach MS4?
26-00021645	Reported by public	6/3/2026	6/3/2026	707 Beverley Dr	Possible Illicit Discharge	Report of sediment- or material-laden wash water flowing from a property into the public roadway near storm drain infrastructure. City staff confirmed that the residual material originated from wash water generated during landscaping activities. The responsible party was directed to stop the discharge and implement corrective measures, which began during the inspection. No storm drain blockage or impacts to public health, wildlife, or receiving waters were observed. The case was resolved with no further action required.	No

FY 2026 Outfall Inspections

OUTFALL ID	DATE	FLOW DESCRIPTION	ILLICIT DISCHARGE CHARACTERIZATION	OBSERVATIONS AND FOLLOW UP ACTIVITIES	FOLLOW UP NEEDED?	COMMENTS
000002IO	01/12/26	TRICKLE	NONE		No	
000015IO	01/12/26	TRICKLE	NONE		No	
000016IO	01/12/26	TRICKLE	NONE		No	
000047IO	01/12/26	TRICKLE	NONE		No	
000076IO	01/12/26	NONE	NONE		No	
000077IO	01/12/26	NONE	NONE		No	
000092IO	01/08/26	MODERATE	NONE		No	
000093IO	01/08/26	TRICKLE	NONE		No	
000095IO	01/08/26	NONE	NONE		No	
000119IO	01/07/26	TRICKLE	NONE		No	
000120IO	01/07/26	NONE	NONE		No	
000122IO	01/07/26	TRICKLE	NONE		No	
000124IO	01/08/26	NONE	NONE		No	
000125IO	01/08/26	MODERATE	NONE		No	
000128IO	01/07/26	NONE	NONE		No	
000130IO	01/07/26	TRICKLE	NONE		No	
000131IO	01/07/26	TRICKLE	NONE		No	
000134IO	01/07/26	TRICKLE	UNLIKELY		No	
000135IO	01/07/26	TRICKLE	NONE		No	
00017IO	01/12/26	NONE	NONE		No	
000187IO	01/12/26	TRICKLE	NONE		No	
000188IO	01/12/26	NONE	NONE		No	
000189IO	01/12/26	MODERATE	NONE		No	
000190IO	01/12/26	NONE	NONE		No	
000194IO	01/12/26	NONE	NONE		No	
000196IO	01/12/26	TRICKLE	NONE		No	
000222IO	01/07/26	NONE	NONE		No	
000225IO	01/07/26	NONE	NONE		No	
000230IO	01/07/26	MODERATE	NONE		No	
000232IO	01/07/26	NONE	NONE		No	
000233IO	01/07/26	NONE	NONE		No	
000242IO	01/07/26	TRICKLE	NONE		No	
000426IO	01/15/26	NONE	NONE		No	
000511IO	01/07/26	TRICKLE	NONE		No	
000513IO	01/08/26	NONE	NONE		No	
000514IO	01/07/26	TRICKLE	NONE		No	
000517IO	01/07/26	TRICKLE	NONE		No	
000518IO	01/07/26	NONE	NONE		No	
000519IO	01/07/26	NONE	NONE		No	
000520IO	01/07/26	TRICKLE	NONE		No	
000521IO	01/07/26	NONE	NONE		No	
000522IO	01/07/26	NONE	NONE		No	
000527IO	01/07/26	NONE	NONE		No	
000529IO	01/12/26	TRICKLE	NONE		No	
000540IO	01/06/26	NONE	NONE		No	
000610IO	01/07/26	TRICKLE	UNLIKELY		No	
000613IO	01/07/26	TRICKLE	NONE		No	
000614IO	01/08/26	TRICKLE	NONE		No	
000231IO	01/07/26	NONE	NONE		No	

Code Case Search

Search Export Action

Code Case Search

Name

Downloaded from <http://ajphaphysocpharm.sagepub.com/>



Shared

Note: name is only required if criteria needs to be saved.



Mail Merge Result



Map Results

Drag a column header and drop it here to group by that column

 Save Layout Clear Layout

	☐	Case Number	Main Address	Case Type	Assigned To	Case Status	Open Date
>	☐	 FIR2019-00172	612 S PICKETT ST C	Fire Marshal Complaints		Closed - Resolved	7/2/2019
	☐	 FIR2019-00173	5405 DUKE ST	Fire Marshal Complaints		Closed - Resolved	7/2/2019
	☐	 FIR2019-00174	602 NOTABENE DR	Fire Marshal Complaints		Closed - Resolved	7/2/2019
	☐	 FIR2019-00175	6101 EDSALL RD 303	Fire Marshal Complaints		Closed - Resolved	7/5/2019
	☐	 FIR2019-00176	5219 HOLMES RUN PKWY	Fire Marshal Complaints		Closed - Resolved	7/5/2019
	☐	 FIR2019-00177	5951 STEVENSON AVE E	Fire Marshal Complaints		Closed - Resolved	7/5/2019
	☐	 FIR2019-00178	5453 SHEFFIELD CT	Fire Marshal Complaints		Closed - Resolved	7/5/2019
	☐	 FIR2019-00179	5733 LEVERETT CT	Fire Marshal Complaints		Closed - Resolved	7/5/2019
	☐	 FIR2019-00180	5797 RAYBURN AVE	Fire Marshal Complaints		Closed - Resolved	7/5/2019
	☐	 FIR2019-00181	5802 SANGER AVE	Fire Marshal Complaints		Closed - Resolved	7/5/2019
	☐	 FIR2019-00182	5611 DERBY CT	Fire Marshal Complaints		Closed - Resolved	7/5/2019



Service

Sewer Infrastructure
Issues



Location



Details



Contact



Submit

Where is the service location? * Required

Search for addresses

Set service location

City of Alexandria, GIS

Powered by Esri



FOIA Requests
Privacy & Legal
Public Meetings

Visitor Information
VisitAlexandriaVA.com

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Open Cases

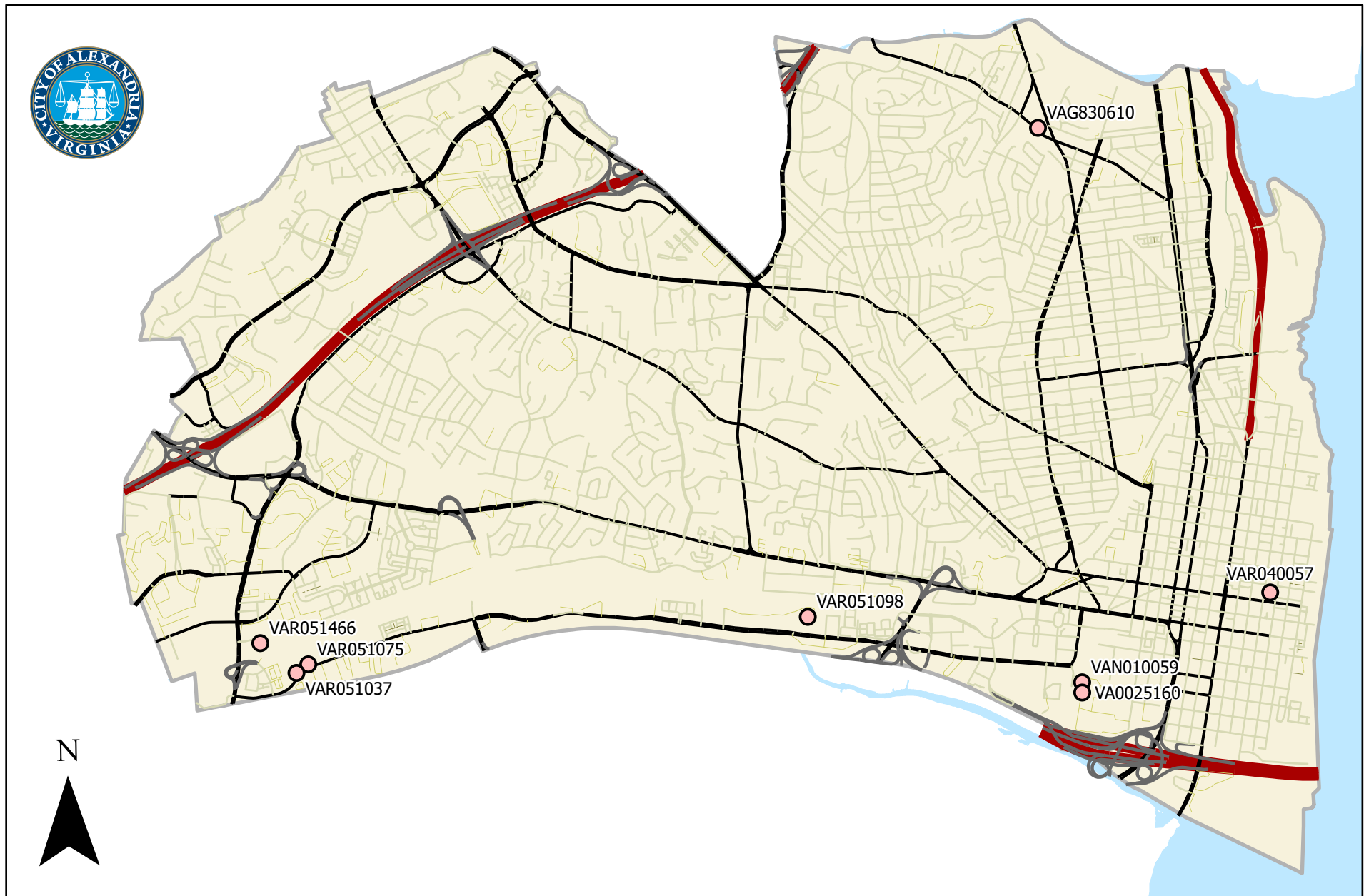
Salesforce Alex311 Open Cases

Open
Print
Expand
Configure
Map

Search

	Sr	Date Initiated	Description	Priority	Category	Submit To	Dispatch To	Address
☐	206645	2020-09-24 11:19 AM	TRAFFIC SIGNS	3	TES_SIGNS	TRFSIGNS TOP TES,		4550 N PEGRAM ST
☐	206645	2020-09-24 11:17 AM	TRAFFIC SIGNS	3	TES_SIGNS	TRFSIGNS TOP TES,		1235 N PICKETT ST
☐	206642	2020-09-24 10:09 AM	SEWERS	2	TES_SEWERS	SEWERS PWS TES,		2 B FORREST ST
☐	206640	2020-09-24 9:29 AM	LOW HANGING WIRE	1	TES_ROW	TES, GROUP LOW WIRE		326 E MASON AVE
☐	206639	2020-09-24 9:17 AM	STREET CLEANING	3	TES_STCLEAN	STRTMAINT PWS TES		1600 IVANHOE CT
☐	206638	2020-09-24 8:49 AM	PARKING METERS	2	TES_METERS	METERS TOP TES,		301 KING ST
☐	206637	2020-09-24 8:35 AM	TREE REQUEST / PROBLEM	3	RPCA_TREES	RPCA, TREES		929 N LINDSAY PL
☐	206636	2020-09-23 10:31 PM	TREE REQUEST / PROBLEM	3	RPCA_TREES	RPCA, TREES		922 SLATERS LN
☐	206635	2020-09-23 8:53 PM	TREE REQUEST / PROBLEM	3	RPCA_TREES	RPCA, TREES		109 W MASONIC VIEW
☐	206634	2020-09-23 6:27 PM	STREETS POTHOLES	2	TES_POTHOLES	STRPOTHOLE PWS TES,		220 CENTURY PL
☐	206633	2020-09-23 5:33 PM	SEWERS	2	TES_SEWERS	SEWERS PWS TES,	Pelitteri, Gavin	707 E TIMBER BRANC
☐	206629	2020-09-23 4:59 PM	STREET MAINTENANCE	2	TES_STMAINT	STRTMAINT PWS TES		809 CAMERON ST
☐	206628	2020-09-23 4:33 PM	STREET CLEANING	3	TES_STCLEAN	STRTMAINT PWS TES		1218 W ABINGDON DR
☐	206627	2020-09-23 4:17 PM	SEWERS	2	TES_SEWERS	SEWERS PWS TES,		24 E LINDEN ST
☐	206625	2020-09-23 3:17 PM	TREE REQUEST / PROBLEM	3	RPCA_TREES	RPCA, TREES		901 SECOND ST
☐	206624	2020-09-23 2:57 PM	TREE REQUEST / PROBLEM	3	RPCA_TREES	RPCA, TREES		611 S COLUMBUS ST
☐	206623	2020-09-23 2:53 PM	TREE REQUEST / PROBLEM	3	RPCA_TREES	RPCA, TREES		611 S COLUMBUS ST

City of Alexandria Permitted Discharges MS4 Reporting Year 2025-2026



VPDES Permits FY26

Classification	Permit Type	Facility Name	Permit Number	Expiration Date	Physical Location Address	Physical Location City	Physical Location State
Active	Mun. Sep. Storm Sewer Sys. GP	Alexandria City - MS4	VAR040057	10/31/2028	301 King Street	Alexandria	VA
Active	Individual Permits	Alexandria Renew Enterprises WRRF	VA0025160	06/30/2026	1500 Eisenhower Ave	Alexandria	VA
Active	Stormwater Industrial GP	Virginia Paving Company - Alexandria Plant	VAR051466	06/30/2029	5601 Courtney Ave	Alexandria	VA
Active	Stormwater Industrial GP	WMATA - Alexandria Metro Rail Yard	VAR051098	06/30/2029	3101 Eisenhower Ave	Alexandria	VA
Active	Stormwater Industrial GP	Reworld Alexandria Arlington Limited Liability Co	VAR051075	06/30/2029	5301 Eisenhower Ave	Alexandria	VA
Active	Stormwater Industrial GP	United Parcel Service - Alexandria	VAR051037	06/30/2029	5601 Eisenhower Ave	Alexandria	VA
Active	Nutrient Trading GP	Alexandria Renew Enterprises WRRF	VAN010059	12/31/2026	1500 Eisenhower Ave	Alexandria	VA
Active	Petroleum Discharge GP	AHDC Glebe Mount Vernon	VAG830610	02/29/2028	221 W Glebe Rd	Alexandria	VA
Active	Petroleum Discharge GP	King Street Library	VAG830525	2/29/2028	4368 King St	Alexandria	VA
Active	Petroleum Discharge GP	Landmark INOVA Hospital Campus	VAG830630	2/2/2028	6001 Duke St	Alexandria	VA
Active	Petroleum Discharge GP	Heritage at Old Town Block 4	VAG830639	2/29/2028	510 S Patrick St	Alexandria	VA
Active	Petroleum Discharge GP	425 Montgomery Street	VAG830633	2/29/2028	425 Montgomery St	Alexandria	VA

Strikethrough = No longer indicated in the permit table

Source Information: <https://www.deq.virginia.gov/permits/water/surface-waters-vpdes> (Downloaded 9/2/2026)

Stormwater Management
SUP2025-00039

Conditions:

1. Exterior power washing of the building shall not be completed using any kind of detergents. (T&ES)
2. Chemicals, detergents or cleaners stored outside the building shall be kept in an enclosure with a roof. (T&ES)
3. If used cooking oil is stored outside, the lid of the used cooking oil drum shall be kept securely closed (using a secure stopper) when not receiving used oil. The drum shall be placed on secondary containment and situated under cover to prevent rainwater from falling on it. (T&ES)
4. Trash and garbage shall be stored inside or in sealed containers that do not allow odors to escape, invasion by animals, or leaking. No trash or debris shall be allowed to accumulate outside of those containers. Outdoor containers shall be maintained to the satisfaction of the Directors of P&Z and T&ES, including replacing damaged lids and repairing/replacing damaged dumpsters. (P&Z) (T&ES)
5. Kitchen equipment, including floor mats, shall not be cleaned outside, nor shall any cooking residue or wash water be washed into the streets, alleys or storm sewers. (T&ES)
6. The applicant shall control cooking odors, smoke and any other air pollution from operations at the site and prevent them from leaving the property or becoming a nuisance to neighboring properties, as determined by the Department of Transportation & Environmental Services. (T&ES)
7. All waste products including but not limited to organic compounds (solvents and cleaners) shall be disposed of in accordance with all local, state and federal ordinances or regulations. (T&ES)
8. Litter on the site and on public rights-of-way and spaces adjacent to or within 75 feet of the premises shall be picked up at least twice a day and at the close of business, and more often if necessary, to prevent an unsightly or unsanitary accumulation, on each day that the business is open to the public. (T&ES)



**General VPDES Permit for
Small Municipal Separate Storm Sewer Systems**

Permit No. VAR040057

Year 3 Annual Report

July 1, 2025 – June 30, 2026

Appendix D

Minimum Control Measure #4, Construction Site Stormwater Runoff Control

1. [E&SC Ordinance](#); *Alexandria, Virginia - Code of Ordinances, TITLE 5 - Transportation and Environmental Services, CHAPTER 4 - Erosion and Sediment Control*



**General VPDES Permit for
Small Municipal Separate Storm Sewer Systems**

Permit No. VAR040057

Year 3 Annual Report

July 1, 2025 – June 30, 2026

Appendix E

**Minimum Control Measure #5, Post-Construction Stormwater Management for New
Development and Development on Prior Developed Lands**

1. Local VSMP Authority Approval Letter, 2014
2. [Environmental Management Ordinance](#)
3. Stormwater Management Facilities Installed this Permit Year
4. City Stormwater BMP Location Map
5. Stormwater BMP Maintenance Agreement example
6. Letter to owners of Single-Family Lot BMPs
7. Sample Single-Family Educational Materials for Single-Lot BMPs
8. [Development Forms Webpage](#)
9. Oronoco Remediation Update



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

December 22, 2014

(804) 698-4000
1-800-592-5482

Rashad M. Young, City Manager
City of Alexandria
301 King Street, Room 3500
Alexandria, Virginia 22314

Dear Mr. Young:

In accordance with §62.1-44.15:27 G of the Virginia Stormwater Management Act (Act), Department of Environmental Quality (DEQ) has completed the review of the City of Alexandria's final Virginia Stormwater Management Program (VSMP) application package submitted on November 4, 2014. Based on this review, DEQ has determined that the City of Alexandria's VSMP is consistent with the Act, the VSMP regulation and the General VPDES Permit for Discharges of Stormwater from Construction Activities.

In light of this determination, DEQ approves the City of Alexandria's VSMP and the City is authorized to operate a VSMP as of July 1, 2014. Please note that this approval is based on the content of the application package. Any changes made to the documents in the package after the approval date, including changes to the adopted ordinance, may necessitate DEQ evaluation as part of its compliance review of your approved VSMP.

Thank you for your cooperation in developing a VSMP. We look forward to continuing to assist the City with the implementation of its VSMP.

Sincerely,

A handwritten signature in black ink, appearing to read "David K. Paylor".

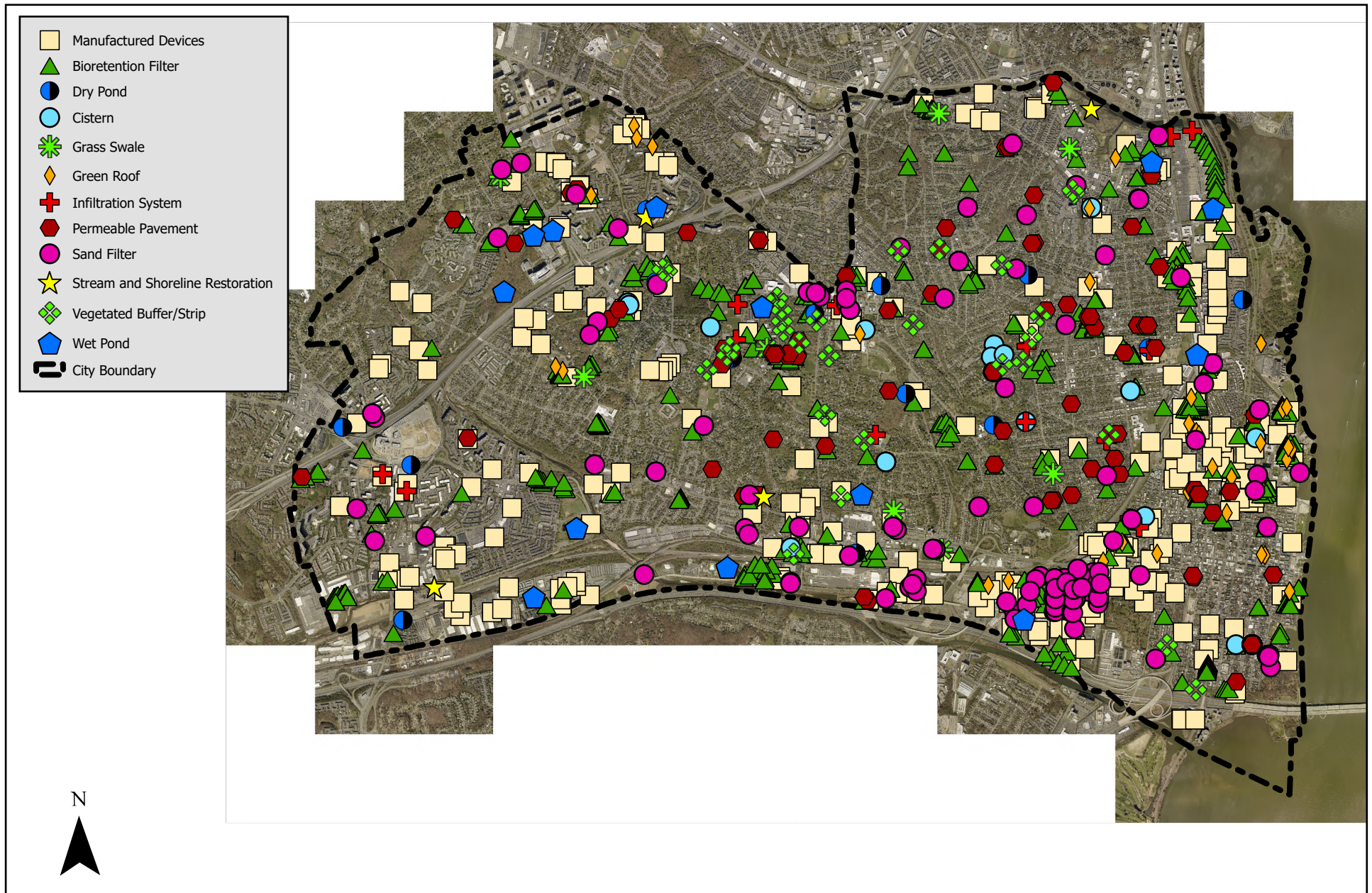
David K. Paylor

cc: Melanie Davenport, Director, Water Division
Frederick Cunningham, Director, Office of Water Permits
Joan Salvati, Manager, Local Government Stormwater Programs

City of Alexandria | FY2026 BMPs
July 1, 2025 - June 30, 2026

BMP ID	BMP Name	Acres Treated	Impervious Acres Treated	Phosphorous Removal (lbs/yr)	Nitrogen Removal (lbs/yr)	Total Suspended Solids Removal (lbs/yr)
2017-0014 01	Permeable Pavement 1	0.06	0.06	0.06	0.55	28.152
2017-0014 02	Bioretention 1	0.03	0.02	0.03	0.3	14.076
2017-0014 03	Manufactured Treatment Device - Hydrodynamic	0.5423	0.5285	0.23	0	107.916
2017-0014 04	Urban Bioretention	0.06	0.05	0.06	0.06	28.152
2017-0014 05	Urban Bioretention	0.06	0.05	0.06	0.06	28.152
2018-0016 01	Manufactured Treatment Device - Filtering	1.79	1.43	10.56	0	4954.752
2018-0016 02	Manufactured Treatment Device - Filtering	0.53	0.48	1.92	0	900.864
2018-0016 03	Manufactured Treatment Device - Filtering	0.74	0.53	2.67	0	1252.764
2019-0007 01	Vegetated Roof 2	0.19	0.19	0.25	0	117.3
2019-0007 02	Manufactured Treatment Device - Hydrodynamic	0.69	0.69	0.33	0	154.836
2020-10019 01	Urban Bioretention	0.21	0.15	0.1	1.53	46.92
2020-10019 02	Urban Bioretention	0.009	0.004	0.004	0.06	1.8768
2020-10019 03	Urban Bioretention	0.15	0.11	0.07	1.1	32.84
2020-10019 04	Urban Bioretention	0.15	0.12	0.07	1.12	32.84
2020-10019 05	Urban Bioretention	0.34	0.31	0.16	2.62	70.38
2020-10019 06	Urban Bioretention	0.44	0.41	0.21	3.41	93.84
2020-10019 07	Manufactured Treatment Device - Hydrodynamic	0.53	0.52	0.32	0	150.144
2020-10019 08	Permeable Pavement 1	0.06	0.06	0.08	0.55	37.536
2020-1031 01	Vegetated Roof 1	0.29	0.29	0.28	1.61	131.376
2020-1031 02	Manufactured Treatment Device - Hydrodynamic	0.53	0.53	0.3	6.54	140.76
2021-1021 01	Manufactured Treatment Device - Hydrodynamic	0.19	0.19	0.08	0	37.536
2021-0001 01	Dry Swale 1	0.18	0.11	0.14	1.03	65.688
2022-0023 01	Permeable Pavement 1	0.0485	0.0485	0.06	0.44	28.152
2025-0002 01	Bioretention 1	0.18	0.18	0.08	1.42	37.536

City of Alexandria Stormwater BMP Locations MS4 Reporting Year 2025-2026





260006881

0284

STORMWATER MANAGEMENT / BMP FACILITIES OPERATION AND MAINTENANCE AGREEMENT

THIS AGREEMENT, made and entered into this 23rd day of October, 2025, by and between, Landmark 100, LLC hereinafter called the "Landowner", and the City of Alexandria, Virginia (the "City");

WITNESSTH:

WHEREAS, the Landowner is the owner of certain real property described as tax map # , block # , parcel(s) # 047.03-04-22 & 047.03-04-23 as acquired by deed in the land records of the City of Alexandria, Virginia, Deed book Page # (Instrument # 240008999), hereinafter called the "Property".

WHEREAS, the Landowner is proceeding to build on and develop the property; and

WHEREAS, Landmark Overlook - Phase 3,
DSUP#2025-10010 (formerly DSUP#2021-10014), hereinafter called the "Plan", which is expressly made a part hereof, as approved or to be approved by the City, provides for detention and/or on-site treatment of stormwater within the confines of the property; and

WHEREAS, the City and the Landowner, its successors and assigns agree that the health, safety and welfare of the residents of the City of Alexandria, Virginia, require that on-site stormwater management/Best Management Practices (BMP) facilities be constructed and maintained on the property; and

WHEREAS, the City requires that on-site stormwater management/BMP facilities as shown on the Plan be constructed and adequately maintained by the Landowner, its successors and assigns.

NOW, THEREFORE, in consideration of the foregoing premises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The on-site stormwater management/BMP facilities shall be constructed by the Landowner, its successors and assigns, in accordance with the plans and specifications identified in the plans.

2. The Landowner, its successors and assigns, shall maintain the stormwater management/BMP facilities in good working conditions, acceptable to the City, so that they are performing their design functions.

3. The Landowner, its successors and assigns, hereby grant permission to the City, its authorized agents and employees, to enter upon the property and to inspect the stormwater management/BMP facilities whenever the City deems necessary. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the entire facility including, berms, inlet and outlet structures, vegetation, infiltration media, pond areas, access roads, etc. When deficiencies are noted, the City shall notify the Landowner, its successors or assigns, and provide information about the inspection findings and evaluations.

4. The Landowner shall develop and attach to this "STORMWATER MANAGEMENT / BMP FACILITIES OPERATION AND MAINTENANCE AGREEMENT" a "BMP MAINTENANCE SCHEDULE AND GUIDELINE" that has been reviewed and approved by the City or its designee. This BMP Maintenance Schedule and Guideline shall describe the maintenance practices to be performed for the facilities and include a maintenance schedule for implementation of these practices.

5. In the event the Landowner, its successors and assigns, fail to maintain the stormwater management/BMP facilities in good working condition acceptable to the City, the City may enter upon the Property and take whatever steps it deems necessary to maintain said stormwater management/BMP facilities and to charge the costs of the repairs to the Landowner, its successors and assigns. This provision shall not be construed to allow the City of Alexandria to erect any structure of a permanent nature on the land of the Landowner, outside of an easement belonging to the City. It is expressly understood and agreed that the City is under no obligation to maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation on the City.

6. The Landowner, its successors and assigns, will perform maintenance in accordance with the maintenance schedule and guidelines for the stormwater management/BMP facilities, including sediment removal, as outlined on the approved plans and the following specific requirements:

Maintenance of the following Best Management Practice(s):

- *Two (2) Level 1 Street Bioretention Planters
- *One (1) Level 1 Bioretention Planter (on building)
- *Level 2 Green Roof
- *Level 1 Permeable Pavement

shall conform to the requirements contained in the Virginia Stormwater BMP Clearinghouse, the attached maintenance schedule and guidelines, and/or specific maintenance requirements established by the BMP manufacturer as approved by the Director of Transportation and Environmental Services (T&ES) prior to the release of the Final Site Plan. Specific manufacturer maintenance requirements for proprietary BMPs will be submitted to the City of Alexandria, T&ES.

7. In the event the City, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials and the like on account of the Landowner's or its successors' and assigns' failure to perform such work, the Landowner, its successors and assigns, shall reimburse the City, upon demand, within 30 days of receipt thereof for all costs incurred by the City hereunder. If not paid within such 30-day period, the City shall have a lien against the property in the amount of such costs, plus interest at the Judgment Rate, and may enforce it in the same manner a lien for real property taxes may be enforced.

8. The Landowner, its successors and assigns, shall indemnify and hold harmless the City and its agents and employees for any and all damages, accidents, casualties, occurrences or claims which might arise or be asserted against the City for the construction, presence, existence or maintenance of the stormwater management/BMP facilities by the Landowner, its successors and assigns.

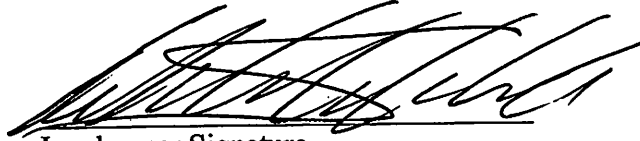
9. In the event a claim is asserted against the City, its agents or employees, the City shall promptly notify the Landowners, their successors and assigns, and they shall defend, at their own expense, any suit based on such claim. If any judgment or claim against the City, its agents or employees shall be allowed, the Landowner, its successors and assigns shall pay all costs and expenses in connection therewith.

10. The Landowner, its successors and assigns, hereby grants permission to the city, its authorized agents, employees, guests, and consultants to enter upon the property to install, operate and maintain equipment to monitor the flow characteristics and pollutant content of the influent and effluent, and at intermediate points in the facility. The Landowner further agrees to design and construct the facility to provide access for monitoring as outlined in the Virginia Stormwater BMP Clearinghouse and/or in the manufacturer's manual for the BMP.

11. The Landowner, its successors and assigns, hereby grants permission to the City, its authorized agents, employees and guests to enter upon the property whenever the City deems necessary, with a ten day advance notice, to conduct tours of the stormwater management/BMP facilities. The purpose of such tours is to expand the base of knowledge in the stormwater management/BMP field amongst planners, engineers, scientists and other interested parties.

12. This Agreement shall be recorded among the land records of the City of Alexandria, Virginia, and shall constitute a covenant running with the land/or equitable servitude, and shall be binding on the Landowner, its administrators, executors, assigns, heirs and other successors in interest.

WITNESS the following signatures and seals:


Landowner Signature

ROBERT S. HEKEMIAN, Jr.
Print or Type Name

managing member
Title

ATTEST:

Irene B. D'Andrea

COMMONWEALTH OF New Jersey

CITY OF Hickensack

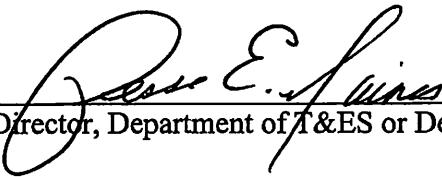
I, Irene B. D'Andrea, a Notary Public in and for the City and
Commonwealth aforesaid, whose commission expires on the 25 day of
July, 2026 do hereby certify that ROBERT S. HEKEMIAN,
whose name(s) is/are signed to the foregoing Agreement bearing date of the 23rd
day of Oct, 2025, has acknowledged the same before me in my said City and State.

GIVEN UNDER MY HAND THIS 23 day of October, 2025.

Irene B. D'Andrea
NOTARY PUBLIC

Irene P. D'Andrea
Notary Public
State of New Jersey
My Commission Expires July 25, 2026
Commission #50042198

WITNESS the following signatures and seals.


 Director, Department of T&ES or Designee

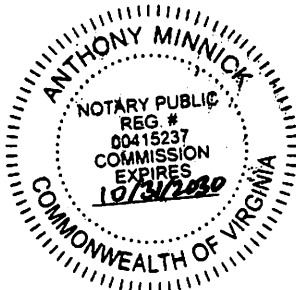
Jesse E. Maines
 Print or Type Name

ATTEST:

 COMMONWEALTH OF _____
 CITY OF _____

I, Anthony Minnick, a Notary Public in the City of Alexandria and for the Commonwealth of Virginia, whose commission expires on the 31 day of October, 2030, do hereby certify that Jesse E. Maines, representative for the City of Alexandria, whose name is signed to the foregoing Agreement bearing the date of the 17 day of June, 2026 has acknowledged the same before me in the City and Commonwealth aforesaid.

GIVEN UNDER MY HAND THIS 17 day of June, 2026.




 NOTARY PUBLIC

Bioretention Area Maintenance Schedule and Guidelines

This document must be recorded as an addendum to the stormwater management/ BMP facilities operation and maintenance agreement

First Year Maintenance Guidelines

Successful establishment of bioretention areas requires that the following tasks be undertaken in the first year following installation:

- Initial inspections. For the first 6 months following construction, the bioretention area should be inspected at least twice after storm events that exceed 1/2 inch of rainfall.
- Spot reseeding. Inspect for bare or eroding areas in the contributing drainage area or around the bioretention area, and make sure they are immediately stabilized with grass cover.
- Watering. Watering is needed once a week during the first 2 months, and then as needed during first growing season (April-October), depending on rainfall.
- Remove and replace dead plants.

Routine Maintenance Guidelines

Bioretention areas must be inspected to ensure that they operate in good working condition and in accordance with the approved design and specifications. Items in need of repair must be immediately addressed.

<u>Routine Maintenance Tasks</u>	<u>Frequency</u>
Remove trash and debris	As needed
Check and repair eroded areas	Annually
Inspect for and remove excess sediment	Annually
Mow grass filter strips and bioretention turf cover	At least four times per year
Weed and rake mulch	Twice during the growing season
Inspect plant composition for consistency with approved plans and correct any deficiencies	Annually
Remulch to maintain a three inch layer	Annually
Prune trees and shrubs	Annually
Inspect for clogging or ponding water in the filter bed	Annually
Remove invasive plants	As needed
Replace dead or damaged plant material	As needed
Repair broken pipes	As needed
Remove sediment in pretreatment cells and inflows	Every 2-3 years
Replace the mulch layer	Every 3 years

Vegetated Roof Maintenance Schedule and Guidelines

This document must be recorded as an addendum to the stormwater management/ BMP facilities operation and maintenance agreement

First Year Maintenance Guidelines

Successful establishment of vegetated roofs require that the following tasks be undertaken during the first year following construction:

- Initial inspections. The roof should be inspected monthly during the vegetation establishment period, and then every six months thereafter to assess the state of vegetative cover and to look for leaks, drainage problems and other functional or structural concerns

Routine Maintenance Guidelines

Vegetated roofs must be inspected to ensure that they operate in good working condition and in accordance with the approved design and specifications. Items in need of repair must be immediately addressed.

The use of herbicides, insecticides, fungicides, and fertilizers should be avoided, since their presence could hasten degradation of the waterproof membrane. Also, power-washing and other exterior maintenance operations should be avoided so that cleaning agents and other chemicals do not harm the vegetated roof plant communities.

Routine Maintenance Tasks	Frequency
Remove trash and debris	Semi-annually
Inspect waterproof membrane for leaks or cracks and repair any damage	Semi-annually
Remove invasive plants	Semi-annually
Inspect and remove overgrowth and debris from roof drains, scuppers and gutters	Semi-annually
Inspect plant composition for consistency with approved plans and correct any deficiencies	Semi-annually
Replace any dead or dying plants	Semi-annually
Remove excess debris, fallen leaves, and overgrowth	Semi-annually
Check and repair areas of erosion	Semi-annually
Water to promote plant growth and survival	As needed

Permeable Pavement Maintenance Schedule and Guidelines

This document must be recorded as an addendum to the stormwater management/ BMP facilities operation and maintenance agreement

Routine Maintenance Guidelines

Permeable pavement must be inspected to ensure that it operates in good working condition and in accordance with the approved design and specifications. Items in need of repair must be immediately addressed.

<u>Routine Maintenance Tasks</u>	<u>Frequency</u>
Remove trash and debris	As needed
Check and repair eroded areas	Annually
Inspect for and remove excess sediment	Annually
Inspect facility for clogging and repair any clogging and improper drainage	Annually
Inspect for and repair any structural damage	Annually
Inspect for repair any clogged or damaged inlets and outlets	Annually

INSTRUMENT 260006881
RECORDED IN THE CLERK'S OFFICE OF
ALEXANDRIA CIRCUIT COURT ON
JUNE 17, 2026 AT 01:48 PM
GREG PARKS, CLERK
RECORDED BY: EMP



City of Alexandria, Virginia
Department of Transportation & Environmental Services
Stormwater and Sanitary Infrastructure Division
1800 Limerick Street, Suite 500
Alexandria, VA 22314
www.alexandriava.gov

11/20/2025

Dear Facility Owner:

Your property contains a stormwater Best Management Practice (BMP) that functions to treat stormwater runoff and improve the quality of the water in and around the City of Alexandria. This letter serves as an annual reminder that routine inspection and maintenance is an essential part of the ownership of any BMP. Regular maintenance ensures that BMPs do not generate additional pollutants, become nuisances, or pose safety issues, and that they function properly. When maintenance problems do exist, they are most often less costly to correct when they are caught early. BMP maintenance is not only an integral part of BMP ownership, but is also a requirement of the City's local stormwater program. City ordinance {13-109(G)} states that all stormwater BMPs must be adequately maintained by their owners to ensure that the BMPs function as designed.

Examples of stormwater BMPs include rain barrels, bioretention filters, sand filters, and permeable pavement, to name a few. These BMPs improve the quality of stormwater runoff from a developed site by reducing pollutants such as sediment, oil, litter, and excess nutrients that may enter our streams and waterways, such as Four Mile Run, Holmes Run, the Potomac River and Chesapeake Bay.

In October 2018, City Council adopted a Credit Policy that provides opportunities for all property owners to lower their fees by implementing select practices that reduce stormwater runoff or improve stormwater quality. Each year you maintain the BMP on your property in functioning condition, you are then eligible for a reduction from your annual Stormwater Utility Fee for a combination of practices. Credits include:

- Rain barrels
- Cisterns
- Rain gardens, flow thru planter boxes, bioretention filters, sand filters, infiltration systems
- Permeable pavement
- Green roof
- and more!

The annual credit application window opens December 1st through February 15th. Visit www.alexandriava.gov/Stormwater to learn more about the City's credit policies and how to apply.

Please contact me at (703) 746-4132 or by email at Anthony.Minnick@alexandriava.gov if you have any questions regarding your BMP. Your time and cooperation are greatly appreciated and working together will help to achieve our goal of protecting our streams, the Potomac River, and the Chesapeake Bay.

Sincerely,

Anthony Minnick

Anthony Minnick
Water Quality Compliance Specialist



Rain Barrel BMP Fact Sheet

DID YOU KNOW...polluted stormwater runoff is the number one cause of water pollution in Northern Virginia? That's right; the very same rain that runs over streets, yards, and parking lots can send chemicals, dirt, and trash down the storm drains and into our local water bodies like the Potomac River and Chesapeake Bay!

Did you know your property is designed to improve water quality? Your property has a Best Management Practice (BMP) onsite that is used to treat stormwater runoff before it enters our local waterways.

What is a BMP? Stormwater runoff is water that flows over land, through drainage systems, and into our local waterways during and after rain storms or snow melts. Untreated stormwater can carry excess nutrients, sediment, and other contaminants into our waters. BMPs are structural practices that treat, store, or infiltrate runoff onsite before it can affect water bodies downstream. BMPs include structures such as ponds, sand filters, and bioretention areas to name a few. The use of stormwater BMPs helps to manage stormwater and to protect our City's lands and streams from erosion, flooding, and pollutants. When BMPs are maintained and function properly, they can help to improve water quality. When BMPs fail or cease to function, they can actually make water quality worse!



Example Rainwater Harvesting

Rain Barrels

Rain barrels intercept and store rainfall for future use. Rain barrels typically consist of a gutter system and storage tank that can be located on a land surface or underground. Water in the storage tank can be used for non-potable uses such as irrigation or exterior washing.

Maintenance of your BMP is a VITAL to keep it functioning properly and it is required by City Ordinance!

Common maintenance issues associated with rainwater harvesting:

- Leaves and debris in gutters and downspouts
- Clogging of screens
- Not using the stored water resulting in the rain barrel being unable to store additional runoff during storms

A BMP maintenance guideline is included with this document. Performing these routine maintenance tasks helps to ensure the function and performance of your BMP.

If you have any questions regarding your inspection and maintenance responsibilities, please call the City of Alexandria, Virginia Department of Transportation and Environmental Services, Stormwater and Sanitary Infrastructure Division at 703.746.4071.

Rain Barrel Maintenance Guidelines

Routine Maintenance Guidelines

Rain barrels must be inspected to ensure they operate in good working condition and in accordance with the approved design and specifications. Items in need of repair must be immediately addressed.

Routine Maintenance Tasks	Frequency
Remove leaves and debris from gutters and downspouts	Semi-annually
Remove any algae growth	Semi-annually
Inspect and clean prescreening devices and first flush diverters	Quarterly
Inspect and clean storage tank lids	Annually
Inspect and repair any clogging	Annually
Inspect and repair mosquito screens	Annually
Inspect tank and remove sediment build up	Every 3 years
Clear overhanging vegetation and trees over roof	Every 3 years
Replace damaged or defective system components	As needed



Permeable Pavement BMP Fact Sheet

DID YOU KNOW...polluted stormwater runoff is the number one cause of water pollution in Northern Virginia? That's right; the very same rain that runs over streets, yards, and parking lots can send chemicals, dirt, and trash down the storm drains and into our local water bodies like the Potomac River and Chesapeake Bay!

Did you know your property is designed to improve water quality? Your property has a Best Management Practice (BMP) onsite that is used to treat stormwater runoff before it enters our local waterways.

What is a BMP? Stormwater runoff is water that flows over land, through drainage systems, and into our local waterways during and after rain storms or snow melts. Untreated stormwater can carry excess nutrients, sediment, and other contaminants into our waters. BMPs are structural practices that treat, store, or infiltrate runoff onsite before it can affect water bodies downstream. BMPs include structures such as ponds, sand filters, and bioretention areas to name a few. The use of stormwater BMPs helps to manage stormwater and to protect our City's lands and streams from erosion, flooding, and pollutants. When BMPs are maintained and function properly, they can help to improve water quality. When BMPs fail or cease to function, they can actually make water quality worse!



Example Permeable Pavement

Permeable Pavement

Permeable pavement is an alternative type of paving that allows stormwater to filter through voids to a stone reservoir.

Water is temporarily stored in the reservoir and may be infiltrated into the ground. Permeable pavement can consist of pervious concrete, porous asphalt, or interlocking pavers. Permeable pavement works to reduce the amount of runoff and to remove nutrients during rain events.

Maintenance of your BMP is a VITAL to keep it functioning properly and it is required by City Ordinance!

Common maintenance issues associated with permeable pavement:

- Clogging of the pavement
- Organic debris and sediment accumulation on the pavement
- Structural cracking or breaking

A BMP maintenance guideline is included with this document. Performing these routine maintenance tasks helps to ensure the function and performance of your BMP.

If you have any questions regarding your inspection and maintenance responsibilities, please call the City of Alexandria, Virginia Department of Transportation and Environmental Services, Stormwater and Sanitary Infrastructure Division at 703.746.4071.

Permeable Pavement Maintenance Schedule and Guidelines

Routine Maintenance Guidelines

Permeable pavement must be inspected to ensure that it operates in good working condition and in accordance with the approved design and specifications. Items in need of repair must be immediately addressed.

Routine Maintenance Tasks	Frequency
Remove trash and debris	As needed
Check and repair eroded areas	Annually
Inspect for and remove excess sediment	Annually
Inspect facility for clogging and repair any clogging and improper drainage	Annually
Inspect for and repair any structural damage	Annually
Inspect for repair any clogged or damaged inlets and outlets	Annually



Bioretention BMP Fact Sheet

DID YOU KNOW...polluted stormwater runoff is the number one cause of water pollution in Northern Virginia? That's right; the very same rain that runs over streets, yards, and parking lots can send chemicals, dirt, and trash down storm the drains and into our local water bodies like the Potomac River and Chesapeake Bay!

Did you know your property is designed to improve water quality? Your property has a Best Management Practice (BMP) onsite that is used to treat stormwater runoff before it enters our local waterways.

What is a BMP? Stormwater runoff is water that flows over land, through drainage systems, and into our local waterways during and after rain storms or snow melts. Untreated stormwater can carry excess nutrients, sediment, and other contaminants into our waters. BMPs are structural practices that treat, store, or infiltrate runoff onsite before it can affect water bodies downstream. BMPs include structures such as ponds, sand filters, and bioretention areas to name a few. The use of stormwater BMPs helps to manage stormwater and to protect our City's lands and streams from erosion, flooding, and pollutants. When BMPs are maintained and function properly, they can help to improve water quality. When BMPs fail or cease to function, they can actually make water quality worse!



Example Bioretention

Bioretention

A bioretention area is a shallow landscaped depression that captures runoff. During rain events, water ponds six to twelve inches above the bottom of the depression, then filters through special media installed underground called the filter bed. A typical bioretention area consists of a filter bed, landscaping, a mulch or turf layer, an underdrain, and an outlet. Bioretention areas remove pollutants through filtration, biological uptake, and microbial activity.

Maintenance of your BMP is a VITAL to keep it functioning properly and it is required by City Ordinance!

Common maintenance issues associated with bioretention areas:

- Loss of plants
- Trash and debris accumulation
- Sediment accumulation
- Mulch layer less than 3 inches deep or over 3 years old
- Clogging
- Erosion

A BMP maintenance guideline is included with this document. Performing these routine maintenance tasks helps to ensure the function and performance of your BMP.

If you have any questions regarding your inspection and maintenance responsibilities, please call the City of Alexandria, Virginia Department of Transportation and Environmental Services, Stormwater and Sanitary Infrastructure Division at 703.746.4071.

Bioretention Area Maintenance Schedule and Guidelines

First Year Maintenance Guidelines

Successful establishment of bioretention areas requires that the following tasks be undertaken in the first year following installation:

- Initial inspections. For the first 6 months following construction, the bioretention area should be inspected at least twice after storm events that exceed 1/2 inch of rainfall.
- Spot reseeding. Inspect for bare or eroding areas in the contributing drainage area or around the bioretention area, and make sure they are immediately stabilized with grass cover.
- Watering. Watering is needed once a week during the first 2 months, and then as needed during first growing season (April-October), depending on rainfall.
- Remove and replace dead plants.

Routine Maintenance Guidelines

Bioretention areas must be inspected to ensure that they operate in good working condition and in accordance with the approved design and specifications. Items in need of repair must be immediately addressed.

Routine Maintenance Tasks	Frequency
Remove trash and debris	As needed
Check and repair eroded areas	Annually
Inspect for and remove excess sediment	Annually
Mow grass filter strips and bioretention turf cover	At least four times per year
Weed and rake mulch	Twice during the growing season
Inspect plant composition for consistency with approved plans and correct any deficiencies	Annually
Remulch to maintain a three inch layer	Annually
Prune trees and shrubs	Annually
Inspect for clogging or ponding water in the filter bed	Annually
Remove invasive plants	As needed
Replace dead or damaged plant material	As needed
Repair broken pipes	As needed
Remove sediment in pretreatment cells and inflows	Every 2-3 years
Replace the mulch layer	Every 3 years

City of Alexandria, VA

Department of Transportation and Environmental Services

Oronoco Street MS4 Outfall Update

July 2025 through June 2026

Virginia Remediation Program (VRP) Site Number: 00241

The City of Alexandria (City) operated a manufacturing gas plant near the corner of North Lee and Oronoco Streets for a portion of time from 1851 to 1946, with the other owner of the site being Washington Gas. This plant produced coal-derived gas for residents and businesses in the City. The production of manufactured gas produced coal tar wastes, some of which remain at the former site today. When the site was redeveloped in the 1970s into commercial townhomes, some efforts were made to remediate the site at that time. However, after the development of the site, coal tar began migrating from the site and found its way into the surrounding soils and groundwater which led to intrusion into the storm sewer located on Oronoco Street, leading to discharges of coal tar into the Potomac River (River). The City subsequently entered the site into the VRP in 2000.

To date, several corrective actions have taken place to mitigate coal tar discharges into the River:

- Installation and operation of the floating oil containment boom around the outfall discharge area with additional oil absorbent booms installed and replaced periodically on the interior to collect contaminants.
- The ongoing operation of a free product removal system that includes recovery wells installed in the source area. The removal of free product from the subsurface makes future remedial efforts more efficient.
- Relining the Oronoco Street storm sewer in 2007 between Lee and Union Streets and in 2014 from Union Street to the outfall. The relining reduced the volume of oily substances infiltrating into the pipe and subsequently reduced the amount of impacted material being discharged to the Potomac River.
- In 2013, the City installed a groundwater treatment system beneath Oronoco Street. The system treats dissolved-phase groundwater. After nearly ten years of operation, quarterly groundwater monitoring of wells located downgradient from the system continue to indicate that the system is functioning properly.
- With VDEQ approval, the City began planning additional remedial actions to address the contaminated sediments located below the Oronoco Street storm sewer outfall to the Potomac River. In 2015, VDEQ approved the City's Remedial Action Plan (RAP) to dredge and cap the residual coal tar-impacted sediments within the Potomac River. The bulk of affected sediments were removed, and a reactive cap was installed over the remaining sediments to eliminate future seepage of coal tar into the river and cut off potential exposure pathways to human and ecological populations. The dredge and cap project was completed in April 2018.
- In September 2019, the City cleaned and repaired a stormwater pipe in the 100 block of Oronoco Street to clear the residual coal tar from the pipeline floor and grout it.

- The City has installed a series of coal tar recovery wells over the years. The most recent installation was the installation of five new recovery wells along Oronoco Street in August 2024. The installation of these wells significantly increased the amount of coal tar recovery around and beneath the stormwater pipe. Coal tar is typically recovered twice a month. Historically, the amount of coal tar recovery ranged from 2-20 gallons per month. However, free product recovery significantly slowed down in May 2025. The City plans to perform another TarGOST survey to identify measure areas of recoverable free product following the replacement of Manhole 92.
- Inspection of the stormwater pipe in June 2022 showed a crack in Manhole 92, which is a manhole between where the pipe has been lined using CIPP (cured in place pipe) and where the pipe was sprayed with shotcrete. Several repairs have been made to the manhole, but the repairs only worked temporarily. The decision was then made to replace Manhole 92.

The City continues its remedial activities related to mitigation of coal tar infiltration into and discharges from the stormwater pipe located at the end of Oronoco Street. A summary of activities between July 2025 and June 2026 is discussed below:

- The groundwater treatment system installed in 2013 continues to perform well. Site visits are conducted twice per month with shutdowns only occurring as part of conducting routine onsite maintenance. Inspections of the permeable reactive media have shown that the media are in “like new” condition.
- The City continues to operate and maintain the boom system to prevent any potential sources of coal tar from discharging from the immediate area into the Potomac River.
- Twice per year the City submits an operations report that summarizes site remediation operations.
- Design began for the replacement of Manhole 92 and a construction contract award was made in March 2026. Construction began in June 2026 and is expected to be completed this fall.
- Removal of the Robinson Terminal North (RTN) pier, located north of the outfall, was completed in October 2025. Subsequent sediment sampling was completed in December 2025. The sampling results showed areas where concentrations of total PAHs were above the Probable Effect Concentration. A draft Sediment Remedial Action Plan (RAP) was submitted for review/comment in June 2026. The proposed remediation includes dredging, in-situ treatment, and sediment capping.

For the upcoming year, additional actions are planned to assist in removing coal tar from the site and further protect contaminants from entering the pipe. Manhole 92 will be fully replaced, which is the location where the pipe liner failed. The replacement of this manhole also presents an opportunity to remove free product from the excavation site. Following the replacement of the manhole, another TarGOST survey will be performed to identify areas of NAPL thickness. New wells will be installed in areas where the thickness is greater than 3 feet. The City also plans finalize the RAP and begin preparing design documents for the remediation work to be completed.



**General VPDES Permit for
Small Municipal Separate Storm Sewer Systems**

Permit No. VAR040057

Year 3 Annual Report

July 1, 2025 – June 30, 2026

Appendix F

**Minimum Control Measure #6, Pollution Prevention and Good Housekeeping for Facilities
Owned or Operated by the Permittee within the MS4 Service Area**

1. Staff Training Documentation
2. [City's Webpage for Alex311](#)



FY2026 MS4 Annual Staff Training: IDDE

April 14, 2026

Trainers: Anthony Minnick & Gavin Pellitteri

Department: Street & Sewer Maintenance / Permits & Inspection

Name	Department	Signature
Harold Shaw	Street Maint.	Harold Shaw
Jose Gil	street maint.	Jose A. Gil
Bill Benson Jr	street maint.	Bill Benson Jr
Marlon Serapio	street maint.	Marlon Serapio
Edward Gunt	street maint.	Edward Gunt
Karen Giuseppe	TES, Str. & Sewer Maint.	Karen Giuseppe
Paisa coicedo	Street mainte	Paisa coicedo
James 12-15	STREET	James 12-15
Tennell Jager	TES sewer	Tennell Jager
ANDREW SMITH	MAINTENANCE	Andrew Smith
Malvin Entwistle Jr	TES Sewer Maint	Malvin Entwistle Jr
Sergio Clara	TES	Sergio Clara
Tom Dyer	TES	Tom Dyer
Derek Wab	TES	Derek Wab
Cheryl Williams	TES	Cheryl Williams



FY2026 MS4 Annual Staff Training: IDDE

April 14, 2026

Trainers: Anthony Minnick & Gavin Pellitteri

Department: Street & Sewer Maintenance / Permits & Inspection

Name	Department	Signature
Gregory Dunn Jr	TES	
Anthony Miller	TES	
Clayton John	TES	
Nathaniel Marshall	TES	
Royce Mark	FES	
David C. Thomas	TES	
Robney Young	TES	
Keith Gray	TES	
Dionicio Ferrington	TES	
DENNIS WISE	TES	
Dale Norman	TES	
John Taylor	"	
Mary Alice Pinder	TES	
Terry Stanley	TES	
Dwaine Padon	TES	



FY2026 MS4 Annual Staff Training: IDDE

April 14, 2026

Trainers: Anthony Minnick & Gavin Pellitteri

Department: Street & Sewer Maintenance / Permits & Inspection

Name	Department	Signature
Anthony McKnight	TES	
Abdufbra. Dankely	TES	
Christopher Allen	TES	
Homayun Darwisch	TES	
Yusufan Bahlbi Y	TES	
Dawel Siri	TES	
Lisa J	TES	
AS I J	TES	
MUHAMMAD IRFAN	TES	
Carl Long	TES	
Dante Parker	TES	



FY2026 MS4 Annual Staff Training: IDDE

April 20, 2026

Trainers: Anthony Minnick & Gavin Pellitteri

Department: Resource Recovery

Name	Department	Signature
David Washington	Solid Waste	D. Wase
Kendall Wallace	Solid waste	Kendall Wall
Tony Findley	Solid waste	Tony Findley
milce Hawkins	Solid waste	Milce Hawkins
José Alvarado	solid waste	José Alvarado
Scott DARRING	TES	Scott Darrin
Matthew Lawry	TES	Matthew Lawry
M. Tuck	TES	M. Tuck
D. Kyko	TES TES	D. Kyko
Curtis Greathouse	TES	Curtis Greathouse
Steve Waller	TES	Steve Waller
Anthony Jones	TES	Anthony Jones
Keno Kolledrew	TES	Keno Kolledrew
Davon Melkon	TES	Davon Melkon
Josh Gilbert	TES	Josh Gilbert

[illegible]



FY2026 MS4 Annual Staff Training: IDDE

April 20, 2026

Trainers: Anthony Minnick & Gavin Pellitteri

Department: Resource Recovery

Name	Department	Signature
FREDERICK Bell	TES	Fred Bell
Bruce Boyd	Tes	B. Boyd
Jerrod Woodson	TES	Jerrod
BRENDAN BRASH	TES	B. Brash
CARLOS SCALES	Clean Team	CS
Greg Talbot	TES	Greg Talbot
Matthew Buchanan	TES	MB
Artavarn Wagner	Clean Team	Artavarn Wagner
WILL Anderson	TES	Will Anderson
ARTHUR BYR!	Tes	Arthur Byr!
Keiona Carter	TES	Keiona Carter
LOUIS SIMMS	TES	Louis Simms
Marcus Hawkins	TES	M. Hawkins



FY2026 MS4 Annual Staff Training: IDDE

April 20, 2026

Trainers: Anthony Minnick & Gavin Pellitteri

Department: Resource Recovery

Name	Department	Signature
Bernard Banks	TES	Banks
George R. Martin	T.E.S.	
Andre Delatch	T.E.S.	Andre Delatch
Oswald Knox	Temp	
Allan Brown	T+ES	Allan Brown
Marvin Timmons	TES	Marvin Timmons
Rodney Pitts	TES	Rodney Pitts
Willie Banks	Tes	
PAT KIRBY	tes	Pat Kirby
Dontae Shepard	TES	Dontae Shepard

[illegible]



FY2026 MS4 Annual Staff Training: IDDE

April 21, 2026

Trainers: Anthony Minnick & Gavin Pellitteri

Department: Recreation, Parks & Cultural Activities

Name	Department	Signature
MARVIN PAZ	RPCA	[Signature]
Willie Ruffin	RPCA	[Signature]
Ralph Wanzor	RPCA	[Signature]
Charles [Signature]	RPCA	[Signature]
Stacey Reese	RPCA	[Signature]
Vanessa Halsey	RPCA	[Signature]
Michael Reid Jr	RPCA	[Signature]
Eric Gresham	RPCA	[Signature]
D. Bates	RPCA	[Signature]
KRITH BRASILE	RPCA	[Signature]
Daniel Reyes	RPCA	[Signature]
Keeon Beafare	RPCA	[Signature]
DION BATES JR	RPCA	[Signature]
Gary Lopez	RPCA	[Signature]
Anthony Smith	RPCA	[Signature]

[illegible]

[illegible]

FY26 MS4 Annual Staff Training IDDE
May 14, 2026
Trainer: Anthony Minnick

NAME	DEPARTMENT	Signature
Bryan Anderson	Fleet	Bryan Anderson
Nilson Correas	Fleet	Nilson Correas
Tim Trout	Fleet	Tim Trout
Bill Jones	Fleet	Bill Jones
Brand Madison	Fleet	B. Madison
Daniel Sublett	Fleet	Daniel Sublett
Thomas Cotten	Fleet	Thomas Cotten
Dennis Jones Sr	TIES Fleet	Dennis Jones Sr
Matthew Pitt	Fleet	Matthew Pitt
Von Livingston Sr	Fleet	Von Livingston Sr
Robinson, SEAN	"	SEAN
Hussam Zarkani	Fleet	Hussam Zarkani
Linwood Parks	Fleet?	Linwood Parks

MS4 Annual Training IDDE
Traffic Operations
June 3, 2026

Name

Signature

Alvin Jefferson



James Ploss

James E. Ploss

Heenan Brown



Sayed Mehrwarz



Basile Nickita



Scott Roberson



Lewis Parker

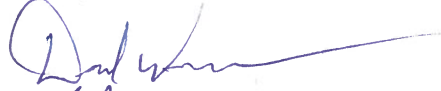


Mike Otach

Ed Johnson Jr.

Ed Johnson Jr.

David Weathers



Abraham Kifle



Rock Ashm



Durvell Venay



Tim Sykes

Tim Sykes

Alex Ublez



Kevin Gaskins

Kevin Gaskins

Tuwon Afinni

Tuwon Afinni

Jonathan Carpenter



Juquan Daniels

Juquan Daniels

Danielle Parker

D. Parker

David Jordan

Ken Johnson

John Yarbrough



**General VPDES Permit for
Small Municipal Separate Storm Sewer Systems**

Permit No. VAR040057

Year 3 Annual Report

July 1, 2025 – June 30, 2026

Appendix G

TMDL Special Conditions

1. [Phase 3 Chesapeake Bay TMDL Action Plan](#)
2. [Bacteria TMDL Action Plan, Updated April 2025](#)
3. [Tidal Potomac PCB TMDL Action Plan, Updated 2025](#)