



City of Manassas

# MS4 Annual Report

Permit 4/Year 5 MS4 General Permit VAR040063

Reporting Period: July 1, 2022 – June 30, 2023

City of Manassas  
Engineering Department  
Stormwater Division

Primary Contact:  
Susie Orndorff, Stormwater Administrator  
Phone: 703.257.8316  
Email: [sorndorff@manassasva.gov](mailto:sorndorff@manassasva.gov)

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## Annual Report Certification per Part III

"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."

Print Name: Lance Kusy

Title: CITY ENGINEER

Signature: LK. / KM

Date: 9/20/23

## Part I- MS4 Program Annual Report

### Background

In accordance with the requirements of Permit Number VAR040063, this Annual Report is hereby submitted in compliance with the City of Manassas General Permit for Small Municipal Separate Storm Sewer Systems (MS4). A link to the MS4 Program Plan and latest Annual Report can be found at:

[https://www.manassasva.gov/engineering/stormwater/stormwater\\_documents.php](https://www.manassasva.gov/engineering/stormwater/stormwater_documents.php)

A copy of the signed certification (Virginia Stormwater Management Program General Permit Registration Statement) and permit is attached in **Appendix 1**. This Annual Report covers all information required by the permit as described in 9VAC25-890, but is not intended to fully describe all activities the City has performed, programs the City has implemented, or plans the City has made or is making. Not all permit activities are required to be reported; therefore, omissions of this information should not be taken as an indication that the City is not fulfilling those requirements.

### Key Personnel in MS4 Permit Implementation

Changes in MS4 permit implementation staff occurred during the last reporting period. A summary of key personnel involved with MS4 permit implementation is located below in **Table 1**.

**Table 1. MS4 Program Implementation Staff Roster 2021-2022**

Name	Contact	Department	Role Summary
Lance Kilby	<a href="mailto:lkilby@manassasva.gov">lkilby@manassasva.gov</a>	Engineering	Engineering Director, VA Stormwater Management Program (VSMP) Administrator
Susie Orndorff	<a href="mailto:sorndorff@manassasva.gov">sorndorff@manassasva.gov</a>	Engineering-Stormwater	Stormwater Administrator, Responsible for overall program implementation, budgeting, and Total Maximum Daily Load (TMDL) tracking
David Ek (retired as of June 30, 2023)	<a href="mailto:dek@manassasva.gov">dek@manassasva.gov</a>	Engineering-Stormwater	Stormwater Analyst, Program support for all MCMs, MCM 3 and 6 lead
Olivia Mroczko	<a href="mailto:omroczko@ci.manassas.va.us">omroczko@ci.manassas.va.us</a>	Engineering-Stormwater	Stormwater Asset Manager, MCM 5 Lead
Colleen Burroughs	<a href="mailto:cburroughs@manassasva.gov">cburroughs@manassasva.gov</a>	Public Works- Refuse and Recycling	Hazardous household waste and recycling coordinator, Materials Reduction Site coordinator
Christen Fox	<a href="mailto:cfox@manassasva.gov">cfox@manassasva.gov</a>	Community Development- Parks, Culture, & Recreation	Public Involvement Contributor- Park Cleanups, Pet Waste Stations, Save the Bay Day

**Table 1. MS4 Program Implementation Staff Roster 2021-2022**

<b>Name</b>	<b>Contact</b>	<b>Department</b>	<b>Role Summary</b>
Ciaran Lowell	<a href="mailto:clowell@manassasva.gov">clowell@manassasva.gov</a>	GIS	GIS and Dry Weather Screening Field Application Support
Jim Hanley	<a href="mailto:jhanley@manassasva.gov">jhanley@manassasva.gov</a>	Office of Risk Management and Safety	Illicit discharges/Spill response program support
Greg Bokan	<a href="mailto:gbokan@manassasva.gov">gbokan@manassasva.gov</a>	Community Development	Development permitting - VSMP and Virginia Erosion and Sediment Control Program (VESCP) intake and processing
John Keenan	<a href="mailto:jkeen@manassasva.gov">jkeen@manassasva.gov</a>	Engineering	Stormwater management (SWM Plan) Review
Elden Riffle	<a href="mailto:eriffle@manassasva.gov">eriffle@manassasva.gov</a>	Engineering- Inspection and Compliance	Erosion and Sediment Control (ESC) Plan Review, ESC and SWM Construction Inspections, and Enforcement
Mike Nicholson	<a href="mailto:MNicholson@manassasva.gov">MNicholson@manassasva.gov</a>	Utilities - Water & Sewer	SMWF repair and maintenance support and drainage CCTV support
Matthew Holloway	<a href="mailto:mholloway@manassasva.gov">mholloway@manassasva.gov</a>	Utilities - Water & Sewer	Drainage CCTV support
Steve Schrank	<a href="mailto:sschrank@manassasva.gov">sschrank@manassasva.gov</a>	Public Works- Streets	Drainage maintenance and pollution prevention (P2) plan implementation support
Doug McCauley	<a href="mailto:dmccauley@manassasva.gov">dmccauley@manassasva.gov</a>	Public Works- Streets	P2 Plan Implementation Support
Daniel Spoden	<a href="mailto:dspoden@manassasva.gov">dspoden@manassasva.gov</a>	Public Works- Buildings & Grounds	Nutrient management support

## MCM 1: Public Education and Outreach

### High-Priority Stormwater Issues

The following is a list of the high-priority stormwater issues that the City continued to address in its public education and outreach program during Permit Year 3:

1. Illicit discharges and illegal dumping
2. Pet Waste and Bacteria Total Maximum Daily Load (TMDL)
3. Sediment pollution

### Communication Strategies

The City used a variety of strategies, including presentations, newsletters, written material, and online material, to communicate each high-priority stormwater issue to the intended audience as shown in **Table 2** below. Supporting documentation, including postcards, magazine blurbs, signs, and brochures, is provided **Appendix 2**.

The City's Stormwater Program provides a useful webpage containing educational information on basic stormwater knowledge, the MS4 permit, and City reports and plans. There is also guidance for using less salt, grease and oil disposal, cleaning up spills, dumpster management, pet waste management, landscape best practices for nutrient reductions and erosion control, and swimming pool and spa best practices. Refer to MCM #2 for a link to the website. In the 2021-2022 Permit Year, the City included a stormwater informational page in the November edition of the City Newsletter, which is mailed to 17,000 households. This article focused on the importance of the City's stormwater management facilities and how residents can extend their longevity by not littering and dumping into streams or the storm drain system. In addition, the City's Stormwater Staff often uses verbal communication as an effective communication strategy when visiting with residents regarding drainage complaints, projects, and other investigations.

During this reporting period, Stormwater Staff also provided a variety of presentations to the general public. On March 7, 2023, Stormwater Staff collaborated with Osborne High School on their "we all live downstream project" by presenting on how the City manages stormwater, and specific issues that the City faces in terms of stormwater pollution. On October 6, 2022, Stormwater Staff also presented to the City Leadership Academy on stormwater management and stormwater pollution. The City Leadership Academy is a 5-week course to give participants (City residents) a better understanding of the inner workings of the City of Manassas Government. On August 8, 2022, Stormwater Staff provided a community presentation to the Wellington Homeowners Association (HOA) regarding an upcoming stormwater retrofit project (Lucasville Pond). While this presentation mostly focused on the design plans, the presentation also covered basic stormwater concepts such as TMDLs and pollution reduction methods.

The City also relied on various other departments to help carry out our communication strategies. The Public Works Refuse and Recycling Program distributed multiple informational brochures during events, and their webpage included information on yard waste; composting; trash and recycling protocols; events; proper disposal of paint, chemicals, and electronics; and the Keep Manassas Beautiful program. In addition, this webpage hosted the City's Solid Waste Management Plan and Debris Management Plan.

All of this information promotes environmental awareness, which leads to less illegal dumping and illicit discharges. Refer to MCM #2 for a link to the website.

The Parks, Culture, and Recreation Department (Parks) provided park rules signs that are posted at every City Park. Specifically, the signs state illegal dumping is prohibited and pet owners must pick up their pet waste per City code. In addition, there are 24 pet waste stations for public use at 11 different City Parks – Four additional signs were added this Permit Year. In partnership with the Virginia Department of Conservation and Recreation, four “No Mow Zones” were identified in the City of Manassas. In an effort to educate and notify the public of these areas, signs were erected at each location. In addition, the Parks staff also worked directly with the pool contractor at Stonewall Park Pool, the City’s only municipally-run pool, to educate and ensure cleaning and dewatering are performed correctly. The preferred method to drain pool water was through the filtration trash line to the City’s waste water system. If a second method of draining was deemed necessary, the contractor was required to drain the pool water over vegetation that does not directly flow into City waterways. In addition, the filtration system was cleaned weekly where the dirty water was emptied through the trash line into the City’s waste water system. All chemicals located on site are properly stored separately with a protective containment barrier.

The City was also a part of the Northern Virginia Clean Water Partnership (NVCWP) and participated in the “Only Rain Down the Storm Drain” initiative. The City utilized their website information, social media posts, and television commercials (media materials) as part of its public education communication strategy. A summary of their communication strategies is provided in **Appendix 2**.

#### Review of Effectiveness

The City has historically been effective at communicating issues regarding trash, recycling, and illegal dumping. This year, the City provided general stormwater education presentations to a variety of audiences, including but not limited to more pet waste stations for increased pet waste/pollution knowledge. These presentations touched on all of the City’s stormwater priority issues, which was a City goal this year. Overall, the City believes it was effective at community stormwater management and pollution topics to the public.



**Table 2. MCM 1 – Education & Communication Strategies**

High-Priority Stormwater Issue	Exhibit Type	Exhibit Description	Lead Department/ Division	Quantity
General SW Education + all High-Priority Stormwater Issue	Electronic & Mailed Newsletter	<i>Stormwater Ponds Help Keep Streams, Bay Cleaner</i> page in the City Newsletter ( <i>City Connection</i> )	Engineering - Stormwater	Sent to 17,000 households and available online
	Classroom Education	Osborne High School Stormwater Management in the City Presentation	Engineering - Stormwater	30 participants
	Community Presentation	<i>City Leadership Academy Presentation</i>	Engineering - Stormwater	20 participants
	Community Presentation	<i>Lucasville HOA Community Meeting</i>	Engineering - Stormwater	8 participants
	Traditional Written	<i>New IDDE Flyer</i>	Engineering - Stormwater	Approximately 50 distributed
	Media Material	Stormwater Website	Engineering - Stormwater	527 views
	Media Material	NVCWP and participates in the “Only Rain Down the Storm Drain” initiative	Northern Virginia Clean Water Partnership	See NVCWP summary in <b>Appendix 2.</b>
Illicit Discharges and Illegal Dumping	Traditional Written	<i>5 Simple Rules for Trash</i> Postcard	Public Works- Refuse & Recycling	1,500 distributed at events and 1,000 magnets provided to HOAs/residents
	Traditional Written	<i>Curbside Composting</i> Postcard	Public Works- Refuse & Recycling	2,000 distributed at events
	Media Material	Refuse and Recycling Website	Public Works- Refuse & Recycling	14,685 views
Illicit Discharges and Illegal Dumping, Pet Waste and Bacteria TMDL	Signage	City Park Rules Signs	Community Development- Parks, Culture, & Recreation	23 signs
	Traditional Written	Athletic Field Community Guide - includes rules about trash and pet waste	Community Development – Parks, Culture & Recreation	25 booklets
Pet Waste and Bacteria TMDL	Signage	Pet Waste Stations with Signs	Community Development- Parks, Culture, & Recreation	24 stations with signs
Sediment	Signage	No Mow Signs	Community Development- Parks, Culture, & Recreation	4 signs

## MCM 2: Public Participation and Involvement

### Summary of Public Input

The City did not receive public input on the MS4 program as a whole, including no comments on any MS4 Programmatic documents or procedures such as the MS4 Program Plan, annual reports, or TMDL action plans.

For stormwater-related issues, the City used a public reporting tool powered by GoGov. To submit reports through the online tool, citizens either visited the City of Manassas website or the City's stormwater page through the "Report a Concern" feature or downloaded the City's Go-Gov public reporting tool to submit concerns. In addition, since Stormwater Staff contact information is provided on the City's stormwater website, Stormwater Staff received many calls directly relating to drainage and stormwater issues. A summary of public input relating to drainage and stormwater issues is provided below in **Table 3**.

**Table 3. MCM 2 – Summary of Public Input Relating to Drainage/Stormwater Issues**

<b>Category of Drainage/Stormwater Complaint</b>	<b>Number Received</b>	<b>Number Evaluated</b>	<b>Number Closed</b>
Received during Reporting Year	35	35	34
Rolled-over from previous Reporting Years	41	41	31
<b>Total Complaints worked on in Reporting Year</b>	<b>76</b>	<b>76</b>	<b>65</b>

As shown in the table above, the City always takes the opportunity to evaluate an issue and meet with applicable parties to discuss responsibilities and encourage communication after receiving public input such as a drainage/stormwater complaint. The issues that remain open typically involve damaged stormwater infrastructure repair/replacement, which may take longer to secure funding and typically require engineering calculations/designs. Details on each complaint, including how the City responded, is available upon request.

### Public Involvement Activities

The City provided many public involvement activities through events aimed at creating environmental awareness and reducing pollution that may end up in our local waterways.

On April 1, 2023, the City hosted a large community-wide event celebrating 150 years as a community. During this event, the Engineering -Stormwater division set up a booth to hand out educational information (e.g., the IDDE flyer mentioned in MCM #1) and information on upcoming stormwater projects. The table also featured a model landscape and a variety of "pollutants." Residents of all ages were encouraged to add a pollutant to the landscape and stimulate rainfall. Residents could then see how the pollutants were washed downstream and into a nearby waterway. Pictures from this event are provided below. More information, including additional photographs, can be found here:

[https://www.manassasva.gov/connect/city\\_manager\\_s\\_office/city\\_s\\_150th\\_anniversary.php](https://www.manassasva.gov/connect/city_manager_s_office/city_s_150th_anniversary.php)

As mentioned above in MCM #1, the City partnered with Osborne High School in a "we all live downstream" project. After Stormwater Staff presented to a class of students on stormwater issues within the City, the class split into teams to develop a solution that the students could implement to

reduce stormwater pollution. The Stormwater Staff returned to Osborne Highschool on May 24, 2023, to listen and provide feedback on the students' projects.

The City, through our *Keep Manassas Beautiful* and *Adopta! Program*, engaged and empowered residents, businesses, and community groups to undertake litter clean-ups throughout the year. The *Adopta! Program* encouraged them to “adopt” a street, stream, park, ballfield or historic site, and the City provided all the materials needed to facilitate the cleanup activity. This year, the City hosted over 375 *Adopta!* cleanup events, which resulted in approximately 900 volunteers picking up 500 bags of trash, recycling, and yard waste. In addition, the City participated in *Save the Bay Day* on June 3, 2023, through stream cleanups of Cannon Branch and Cabin Run.

Through the Refuse and Recycling Program, the City hosted multiple *RecycleFest!* and Household Hazardous Waste and eWaste Drop-off day events throughout the year. These were special drop-off days at the Manassas Transfer Station where residents dropped off antifreeze, fertilizers, gasoline, glues, motor oil, paint, swimming pool chemicals, cell phones, TVs, computers, scanners, small copiers, game consoles, monitors. *RecycleFest!* events also allows for personal documents shredding . This year the City hosted three *RecycleFest!* events resulting in approximately 1,400 residents dropping off about 22 tons of material, and six Household Hazardous Waste and eWaste Drop-off days resulting in approximately 1,500 residents dropping off an additional 25 tons of material.

A summary of these activities, including metrics, is provided below in **Table 4**. Supporting documentation, including event flyers and event data, is provided **Appendix 3**.

The City strongly believes that these activities, which focus on citywide cleanups, proper disposal of solid wastes, illicit discharges, and general stormwater education had a beneficial effect on local water quality.

#### Collaboration with other Permittees

The City partnered with the NVCWP and participated in the “Only Rain Down the Storm Drain” initiative, which distributed surveys for public involvement. The 2023 NVCWP survey can be found in **Appendix 4**. In addition, Stormwater Staff also collaborated with the stormwater and environmental staff within Prince William County PWC to discuss or solicit program/implementation input and ideas.

#### MS4 Program/Stormwater Website

The City’s MS4 Program / Stormwater Website can be found at: <http://www.manassasva.gov/swm>.

The City’s Refuse and Recycling website can be found at:  
[http://www.manassasva.gov/public\\_works/trash\\_recycling/index.php](http://www.manassasva.gov/public_works/trash_recycling/index.php).





Variety of "pollutants" to add to the model landscape

Figure 1: Stormwater educational booth at the City of Manassas 150<sup>th</sup> Celebration Event

**Table 4. MCM 2 – Public Participation Events**

Activity Description	Lead Department/Division	Number of Events/Locations	Number of Participants	Metrics
<i>Save the Bay Day</i> Cleanup event	Community Development- Parks, Culture, & Recreation	2	26	7 bags of material collected
<i>Adopta!</i> Park Cleanup events	Community Development- Parks, Culture, & Recreation	187	422	76.5bags of material collected
<i>RecycleFest!</i>	Public Works- Refuse and Recycling	3	~1,400	22 tons of material properly recycled
Household Hazardous Waste and eWaste Drop-off days	Public Works- Refuse and Recycling	6	~1,500	25 tons of material properly recycled
<i>Adopta!</i> Street Cleanup events	Public Works- Refuse and Recycling	190	549	189.5 hours of cleanups 62.5 bags of recycling collected 305.5 bags of trash collected 45 bags of yard waste collected
City of Manassas 150 <sup>th</sup> Celebration Community Event – Stormwater Education Table	Engineering - Stormwater	1	~500	While the City estimated a total of 5,000 people attended the event, Stormwater Staff estimated about 500 people stopped by the Stormwater booth
Osborne High School – <i>We All Live Downstream</i> Project	Engineering - Stormwater	1	30	8 different student group presentations

## MCM 3: Illicit Discharge Detection and Elimination

### MS4 Map Updates

The City confirms that the MS4 map and information table have been updated to reflect any changes to the MS4 occurring on or before June 30 of the reporting year. The City’s current outfall map is provided in **Appendix 5**.

### Illicit Discharges to the MS4

The City’s Illicit Discharge Ordinance is located on the following webpage:

[https://library.municode.com/va/manassas/codes/code\\_of\\_ordinances?nodeId=PTIICOOR\\_CH118UT\\_ARTIVSESEDI\\_DIV5WADI\\_SDII\\_STPO](https://library.municode.com/va/manassas/codes/code_of_ordinances?nodeId=PTIICOOR_CH118UT_ARTIVSESEDI_DIV5WADI_SDII_STPO). During this reporting period, the City has been working to update this code to enhance our enforcement program. The City expects this updated ordinance to be in effect by the end of the next permit year (June 2024). A list of investigated illicit discharges to the City’s MS4 are provided in **Table 6 and Table 7**.

### Dry Weather Screening

The City is required to screen at least 50 of its MS4 outfalls each permit year. During this reporting period, the City screened 54 of its outfalls. A summary of the annual dry weather screening is provided below in **Table 5**. A map displaying the locations of the screened outfalls and a more detailed table with the outfall screening results can be found in **Appendix 6**.

**Table 5. MCM 3 – Dry Weather Screening Summary**

Illicit Discharge Category	Total No. Outfalls Screened	% of Screened Outfalls	Referred for Investigation	% investigations of Screened Outfalls
Unlikely	43	80.0%	1	1.9%
Potential (presence of two or more indicators)	0	0.0%	0	0.0%
Suspect (one or more indicators were ranked with a severity of 2 or 3)	10	18.5%	5	9.2%
<b>Total</b>	<b>54</b>	<b>100%</b>	<b>6</b>	<b>11.1%</b>

The City categorized the outfalls into “unlikely, potential, or suspect” based on illicit discharge indicators collected during the outfall screening. These illicit discharge indicators included the presence of deposits, stains, flow, and flow characteristics (e.g., color, turbidity, odor, sheen, etc.), which were then given a severity ranking of 1-3. An outfall was categorized as “unlikely” if no flow was observed or only one indicator was present. An outfall was categorized as “potential” if two or more indicators were present. An outfall was categorized as “suspect” if one or more indicators were ranked with a severity of 2 or 3. During screening, if follow-up in the form of an Illicit Discharge and Detection Elimination (IDDE) is identified, Stormwater Staff started as soon as possible. In addition, at the conclusion of the dry weather screening, City staff reviewed all results and determined if additional follow-up was needed. During this reporting period, the City flagged 6 outfalls for further investigation, which are discussed in **Table 6**. Investigations from other sources other than DWS are described in **Table 7**.

**Table 6. MCM 3 – Dry Weather Screening (DWS) -initiated Illicit Discharge Investigations**

Date	Address	Outfall	Observations from Dry Weather Screening	Notes	Status
4/25/2023	8651 Point of Woods Drive	STDP0059402	Flow present, plus green benthic pipe growth present	Investigation immediately following screening determined it was a likely leaking water main or groundwater infiltration.	Closed
5/18/2023	9420 Beauregard Avenue	STDP0059900	Flow present, plus green benthic pipe growth present	Investigation immediately following screening determined it was likely groundwater infiltration (the same conclusion found in 2021 DWS).	Closed
5/18/2023	9297 Corporate Circle	STDP0090420	No flow, but oil sheen in stagnant pool outside outfall that had clearly come from this outfall at some time earlier.	Stormwater Staff returned for investigation and could trace the discharge to a large row of autobody shops; however, specific businesses could not be determined as the source. Therefore, the City is currently working on warnings and educational information to distribute to each business in the vicinity.	Active Investigation
5/18/2023	10629 Speiden Trail	STDP0089766	No flow, but oil sheen in stagnant pool outside outfall that had clearly come from this outfall at some time earlier.	After further investigation, it appeared that the sheen on the surface was likely biological. Stormwater Staff returned a couple of times, and each subsequent return showed no signs of flow or illicit discharges.	Closed
6/27/2023	8513 Quarry Road	STDP0094343	No flow, but foam from potential chemicals mixing was observed downstream on the stream banks.	Outfall drains the Southerland Insulators property, which was an illicit discharge case described below in Table 7. Inspector could not prove that the foam observed downstream came from this outfall, but knew it was likely due to the history. The City has placed this outfall on a Watch List and frequently visits.	Closed - Watch List
6/26/2023	8932 Tarragon Court	STDP0059335	No flow, but white residue, possibly paint coating on bottom of pipe.	Investigation immediately following screening determined it was likely a one-time spill event that originated on the side of the street (i.e., not from a single business or resident that we could follow-up with). Inspectors returned several months later and confirmed that no new paint had been dumped.	Closed



**Table 7. MCM 3 – Other Illicit Discharge Investigations**

Date	Method Received	Name	Address	Notes	Closed Date
7/12/2022	Email	Mexico Lindo Restaurant (2)	8630 Mathis Ave.	The City received an email from a downstream property owner that grease and trash were entering their newly constructed underground stormwater facility. The City investigated and found oil and grease contaminated soils, ditches, inlets, and storm pipes. The City also caught employees dumping sudsy wash water into the parking lot, and an open/dripping grease bin. The City issued a Notice of Violation (NoV) on 7/20/22. After working with the owner and their lawyer, they hired a contractor to clean the contaminated soil, materials, storm inlets, and downstream stormwater management facility. The City also received a grease management plan and a staff training acknowledgement form. In addition, the restaurant is building a covered grease bay as part of their upcoming building expansion.	10/27/2022
7/25/2022	Email from City Employee	El Barco Mariscos Restaurant	9504 Liberia Ave.	The City received an email from our Code Enforcement Division that they would be sending the restaurant owners a NoV regarding the condition of their grease dumpster and the large amount of trash. Stormwater Staff also investigated the site and found grease stains and active liquid trash effluent running into a storm drain. Stormwater Staff mailed a NoV on 8/9/22. Stormwater Staff and Code Enforcement staff worked with the owner to clean up the site. The site was also placed on a "Watch List."	12/31/22 – Watch List
9/22/2022	Phone	Washington Glass Fabrication	8320 Quarry Rd.	Anonymous caller reported party was intentionally dumping water (mixed with a toxic green substance) into a water source, for approximately one month. Stormwater Staff investigated storm system and interviewed Washington Glass' President and General Manager, and the General Manager of the adjacent property Caliber Collision regarding their processes on 9/23/22. Stormwater Staff found no evidence of green liquid discharge or dumping. However, they still provided educational information.	9/23/2022
11/2/2022	Email	Southland Insulators	8521 Quarry Rd.	Fire Marshall responded to midnight complaint about chemicals being dumped in the storm drain. Fire Marshal determined that isocyanate was being put in barrels, and then into a dumpster. The dumpster was then propped on pallets to drain, and was leaking through holes in the dumpster. The Fire Marshall issued a NoV and required the company to level the dumpster, put down plastic and more absorbent to prevent runoff, and mitigate the area. Stormwater Staff were notified later that morning and conducted two follow-up investigations (11/2 and 11/14). Each time, no discharges were occurring, but the staff noticed a foam downstream of the outfall. The Stormwater Staff have placed this location on their Watch List.	11/14/2022 – Watch List
11/11/2022	Email	Tayson Brothers Auto Repair	9108 Euclid Ave. #203	Received email from the City's Utilities Department, who was working in the area, noticed oil staining. Stormwater Staff investigated on 11/14/2022. After much discussion, warnings, and educational information with the owner, the owner began cleaning up the site. This property was placed on the City's Watch List.	12/31/2023 – Watch List



**Table 7. MCM 3 – Other Illicit Discharge Investigations**

Date	Method Received	Name	Address	Notes	Closed Date
11/28/2022	Phone	Hood Guyz	8910 Mathis Ave.	Received a citizen report) that someone at the Malakhi Lounge and Jamaican Restaurant, located at 8910 Mathis Avenue, Manassas, Virginia, was cleaning the grease grill and pouring the greasy and chemical residues down the stormwater inlet located behind the restaurant. Stormwater Staff immediately investigated and found that “Hood Guyz” (a business specializing in cleaning commercial grease, fry, and restaurant kitchen facilities) was performing the illicit discharge. Stormwater Staff spoke with the staff and provided educational information. Stormwater Staff also called the corporate headquarters, where they assured us that this is not their standard practice. The City issued a NOV on 12/21/2022, and on January 5 <sup>th</sup> , the City received follow-up that all staff were trained on proper disposal processes.	1/5/2023
1/6/2023	Email	Unknown Petroleum Spill	8798 Grant Ave.	Received an email from a citizen regarding an oil or gas odor observed in a stream. Stormwater Staff investigated immediately and again on 1/11/2023, and they traced the odor somewhere between the stream’s crossing with Grant Ave and the crossing at Traveller St, but could not find a source. The Stormwater Staff reported this to DEQ, and spoke with DEQ’s Alan Lacy. He too had investigated and found no source. Staff returned to the site on 1/26/2023 and no longer found any evidence of pollution.	1/26/2023
2/2/2023	Phone	Manassas Ice and Fuel Company (MIFCO)	9011A Center St.	Received a call from a City contractor that an oil sheen was found in the stream. Stormwater Staff responded and began cleaning up the site using absorbent materials and haybales. The investigation led back to the MIFCO property, which is an active DEQ Pollution Complaint site (PC#2004-3184) . DEQ was notified, and CCTV investigations and waster sampling were conducted. DEQ became involved and performed their own investigation. DEQ required clean-up and additional monitoring. They ultimately concluded, based on monitoring results, the oil in the stream was likely a one-time dumping incident from (now evicted) tenants. The City then followed up with their own NoV on 6/5/2023, asking MIFCO to clean their storm sewer pipes for any residue oil that remained.	Open Investigation
2/8/2023	City Employee	Philadelphia Tavern	9413 Main St.	While investigating a separate incident, Stormwater Staff observed employees of Philadelphia Tavern dumping wash water down a storm drain. The City also observed evidence of grease around and in the storm pipes. The City sent a NoV on 2/22/2023. The restaurant owner agreed to train his employees on proper disposal practices and paid a contractor to clean the area and pipes, which was completed on 4/12/2023.	4/12/2023
2/27/2023	Phone	Abbott Road Paint	10313 Abbott Road	Received a call from resident stating that their neighbor’s contractor dumped paint down the storm drain. Stormwater Staff investigated, knocked on doors, and called the number of the supposed contractor. While no fault was admitted, the City provided educational information to all involved.	3/5/2023

**Table 7. MCM 3 – Other Illicit Discharge Investigations**

Date	Method Received	Name	Address	Notes	Closed Date
5/11/2023	Email from City Employee	CJ Finz / Fosters Grill Area Restaurants	9413 West Street	City of Manassas received an internal report that Water and Sewer staff observed a substantial amount of grease when trying to access a water gauge within the loading dock of 9411 West Street. Stormwater Staff responded immediately and observed a non-stormwater discharge – which appeared to be kitchen grease – heading toward a stormwater curb inlet at the corner of the road. The Stormwater Staff also observed staining likely from previous flow paths stormwater in the parking lot. Two businesses are located in this area, CJ Finz, and Foster’s Grille, but it could not be proven who was the responsible party for this discharge. Stormwater Staff met representatives from Foster’s Grill on May 23, 2023, and CJ Finz on June 7, 2023 to discuss their grease management practices and provide educational information. This area was also placed on the City’s Watch List.	6/30/2023 – Watch List
5/12/2023	Employee	Burger King	8889 Centreville Rd.	City of Manassas employees notified Stormwater Staff that they had witnessed Burger King employees making multiple trips out of a Burger King back door carrying buckets of what looked like sudsy grey wastewater and poured the contents of these buckets onto the pavement in the vicinity of Burger King’s grease dumpster. Stormwater Staff responded immediately and observed the grey sudsy wastewater actively flowing from the grease dumpster area across the parking lot, down the curb gutter, and into a City of Manassas stormwater inlet. Stormwater Staff spoke with the Burger King Manager and two assistant managers and provided educational information – informed them that their actions were a violation of the City Ordinance and the impacts of washing grease or sudsy water down the storm sewer system. The Burger King managers stated they did not know what they were doing was wrong. On May 13, 2023, Stormwater Staff checked all the nearby stormwater inlets and treatment ponds for any signs of grease accumulation, residue, or impact; however, no signs of grease accumulation or partial blockages were observed. The City also sent an official warning letter on 7/18/2023, and added the location to the City’s ‘watch” list to monitor for future incidences	7/18/2023 – Watch List
5/13/2023	Fire Department	Gaither Street Pool	8373 Gaither St.	Fire Department responded to a resident complaint that their neighbor was cleaning their pool and discharging waste into the storm drain. The Fire Dept. found the cleaning product to be muriatic acid, and gave them a warning not to discharge pool cleaning wastewater into stormwater.	5/14/2023

**Table 7. MCM 3 – Other Illicit Discharge Investigations**

Date	Method Received	Name	Address	Notes	Closed Date
5/15/2023	Phone Call from City Employee	Tom's Diner	9003 Centreville Rd.	City staff received an internal call about sewer backing up at 9003 Centreville Road. The City's Water & Sewer team investigated and found that the City's main and lateral lines in the area were flowing normally. However, the lateral from Tom's Diner, located at 9003 Centreville Road, was backed up. According to restaurant staff, the pipe had been backed up for at least a week, which caused the grease to overflow on the parking lot and into the storm drain. City staff investigation also revealed this restaurant had no grease traps and had dumped grease straight into the sanitary sewer drains for as long as staff could remember. City staff immediately initiated clean up and applied a grease absorber. The City posted a Notice of Unsafe on May 15, 2023, at the property that required the restaurant to be shut down until the sewer lateral repaired was completed and inspected. On May 16, 2022, a Notice of Violation was issued from the City's Code Enforcement program. They City re-inspected and approved Tom Diner's plumbing repair work on May 18th, 2023, and subsequently closed the investigation. The restaurant also installed a grease trap/separator.	5/18/2023

## MCM 4: Construction Site Runoff Control

The City implements the Virginia Erosion and Sediment Control Program (VESCP) consistent with the Virginia Erosion and Sediment Control Law (§ 62.1-44.15:51 et seq. of the Code of Virginia) and Virginia Erosion and Sediment Control Regulations (9VAC25-840). It shall be the goal of the County to maintain a rating of “consistent” for the County’s E&S Program during each permit cycle.

As part of the City’s VESCP, the City reviews erosion and sediment control plans and stormwater management plans for proposed land-disturbing activities of 2,500 square feet or greater. Projects must receive approval prior to the commencement of land-disturbing activities. During this reporting period, City engineers reviewed over 100 reviews for erosion and sediment control and stormwater management for both public and private developments. For public projects over 1 acre, the City developed its own construction SWPPP.

City inspectors maintain certification status to perform erosion and sediment control inspections and appropriate staff have received DEQ Stormwater Inspector Training in order to perform periodic comprehensive onsite construction stormwater pollution prevention plan (SWPPP) inspections. Inspectors complete inspection reports and note corrective action, as applicable. A list of applicable certifications can be found in the MCM 6 section.

### Confirmation Statement

The City confirms that all land disturbing projects that occurred during the reporting period were conducted in accordance with the City’s VESCP. The City has followed, to the MEP, all of their established department approved standards and specifications for erosion and sediment control for land disturbing projects that are covered by Virginia Erosion and Sediment Control Law and Regulations.

### VESCP Inspections and Enforcement Actions

The City conducted 409 erosion and sediment control inspections for development projects conducted within the MS4 area during the reporting period. Twenty-three of them were marked as non-compliant. All but three were resolved with verbal and non-formal written actions. The City wrote three follow-up violation inspection reports and zero Notice-to Comply statements.

All inspections were conducted and saved within the City’s ArcGIS Online Construction Inspection Database. Reports for the 23 inspections marked as noncompliant and the three follow-up violation inspection reports have been exported and included in **Appendix 7**. All data and reports are available upon request.

## MCM 5: Post-Construction Stormwater Management

Per the City’s Design and Construction Manual (DCSM), stormwater management facilities must be properly designed and installed, to ensure proper function. The City reviews development site plans to ensure water quality and water quantity designs meet the requirements found in the VSMP regulations, the Virginia Stormwater BMP Clearinghouse, and approved design standards. Projects must use the Virginia Runoff Reduction Method spreadsheet to demonstrate compliance and project plans must contain a note that the stormwater facility will be installed under the supervision of the design professional and certified that it is constructed and installed as designed. Stormwater facilities must be installed under the general supervision of a design engineer, and as-built plan submission must be

signed/sealed by the design professional and include a signed/sealed separate certification that the facility was installed as designed.

#### Privately Owned Stormwater Management Facility (SWMF) Inspections and Enforcement

The City had a goal to inspect all of its private facilities in our inventory within this Permit Cycle, or approximately once every five years. After completing six formal inspection of private SWMFS this reporting period, this City completed this goal as shown in **Table 8**. During this reporting period the City had 51 private SWMFs in its inventory. However, one private SWMF was removed from the inventory and three private SWMFs were added, and will be included in next Permit Cycle’s inspection cycle (i.e., they are not reflected in the table below).

**Table 8. MCM 5 – Privately Owned SWMF Inspections**

Count	SWMF Name	SWMF Type	Most Recent Inspection	Permit Cycle Year
1	Chantilly Air	Underground Infiltration	6/29/2023	5
2	Holtzman Bioretention Basin	Bioretention	6/29/2023	5
3	Goddard School	Underground Infiltration	6/28/2023	5
4	Manassas Christian School	Infiltration Trench	6/28/2023	5
5	Manassas Station Redevelopment	Underground Infiltration	6/27/2023	5
6	Odend'hal Trench	Infiltration Trench	6/27/2023	5
7	Hastings Market Place Residential 1 (F2)	Underground Infiltration	7/7/2022	4
8	Clarksmill Pond	Dry Detention Pond	4/21/2022	4
9	Fairview Square Shopping Center #1 (south)	Underground Infiltration	4/13/2022	4
10	Sudley Professional Center, South	Dry Well	4/11/2022	4
11	Sudley Professional Center, North	Dry Well	4/11/2022	4
12	Manassas Learning Center DW-1	Dry Well	4/11/2022	4
13	Manassas Learning Center DW-2	Dry Well	4/11/2022	4
14	Manassas Learning Center DW-3	Dry Well	4/11/2022	4
15	Manassas Learning Center DW-4	Dry Well	4/11/2022	4
16	Manassas Learning Center DW-5	Dry Well	4/11/2022	4
17	Manassas Learning Center DW-6	Dry Well	4/11/2022	4
18	Liberty Commons_South	Underground Infiltration	4/11/2022	4
19	Liberty Commons_North	Underground Infiltration	4/11/2022	4
20	Van Metre at Old Town	Underground Infiltration	4/11/2022	4
21	Browns Manassas Kia	Underground Infiltration	4/11/2022	4
22	Home Depot	Dry Detention Pond	3/13/2022	4
23	Waste Management	Dry Detention Pond	8/24/2021	4
24	Waterford Drive	Wet Pond	8/6/2021	4
25	Davis Ford Crossing	Dry Detention Pond	8/6/2021	4
26	Cloverhill Court	Wet Pond	8/6/2021	4

**Table 8. MCM 5 – Privately Owned SWMF Inspections**

Count	SWMF Name	SWMF Type	Most Recent Inspection	Permit Cycle Year
27	Manassas Junction	Dry Detention Pond	7/30/2021	4
28	Merchants Tire	Dry Detention Pond	7/30/2021	4
29	Villages at Manassas	Wet Pond	7/15/2021	4
30	Pulte Warehouse	Dry Detention Pond	7/15/2021	4
31	Tudor Oaks	Dry Detention Pond	7/15/2021	4
32	Lockheed Martin Pond	Dry Detention Pond	7/14/2021	4
33	Bristoe-Caitlin	Dry Detention Pond	2/28/2020	2
34	Bristoe-Milroy	Dry Detention Pond	2/28/2020	2
35	Hastings Market Place Commercial 2 (E1)	Underground Infiltration	11/1/2019	2
36	Hastings Market Place Commercial 3 (C1)	Underground Infiltration	11/1/2019	2
37	Hastings Market Place Commercial 4 (A2)	Underground Infiltration	11/1/2019	2
38	Hastings Market Place Commercial 5 (B2)	Underground Infiltration	11/1/2019	2
39	Shemin Nursery	Dry Detention Pond	4/29/2019	2
40	Walmart	Dry Detention Pond	4/9/2019	1
41	Wildwood	Dry Well	9/29/2018	1
42	Manassas Lumber	Dry Detention Pond	9/28/2018	1
43	Barrington Park	Dry Detention Pond	9/28/2018	1
44	Wellington Berkshire	Dry Detention Pond	9/27/2018	1
45	Micron SW	Dry Detention Pond	9/27/2018	1
46	Micron SE	Dry Detention Pond	9/27/2018	1
47	Micron NW	Dry Detention Pond	9/27/2018	1
48	Micron NE	Dry Detention Pond	9/27/2018	1
49	Baldwin Hastings	Dry Detention Pond	9/26/2018	1
50	Baldwin Oakview	Dry Detention Pond	9/26/2018	1
51	Signal Hill Liberia	Dry Detention Pond	9/26/2018	1

A copy of the six City-inspected private SWMF inspection reports from this reporting period are provided in **Appendix 8**.

The City did not issue any new VSMP enforcement actions regarding privately-owned stormwater management facilities.

#### City Owned/Operated SWMF Inspections and Maintenance

During the reporting period, the City conducted annual inspections on all 26 SWMFs, including three wet ponds, six dry ponds, and one infiltration trench, as shown below in **Table 9**. A copy of these City-owned/operated SWMF inspection reports are provided in **Appendix 9**. Although the City did not

perform an official annual inspection on all 26 facilities, staff from the City’s Stormwater Program performed a site visit and informal inspection at least three times per year, on all 26 City-owned stormwater SWMFs. Three public SWMFs were added, and will be included in next Permit Cycle’s inspection cycle (i.e., they are not reflected in the table below).

**Table 9. MCM 5 – City-Owned and Operated SWMF Inspections**

Count	SWMF Name	SWMF Type	Most Recent Inspection
1	Cannon Industrial Park	Dry Detention Pond	4/11/2023
2	Euclid Industrial Park	Dry Detention Pond	6/28/2023
3	Fairview Bainbridge	Dry Detention Pond	6/28/2023
4	Fairview Riverdale	Infiltration Trench	6/28/2023
5	Hospital	Wet Pond	6/27/2023
6	Jackson Manor	Dry Detention Pond	4/13/2023
7	Kao Euclid Ave	Dry Detention Pond	4/11/2023
8	Kinsley Mill	Dry Detention Pond	4/11/2023
9	Lee Manor	Dry Detention Pond	4/13/2023
10	Lucasville Regional	Wet Pond	4/13/2023
11	Metz Middle School	Infiltration Trench	6/28/2023
12	Oakenshaw Downstream	Dry Detention Pond	6/28/2023
13	Oakenshaw Upstream	Dry Detention Pond	6/28/2023
14	Owens Brooke, Downstream	Wet Pond	4/13/2023
15	Owens Brooke, Upstream	Wet Pond	4/13/2023
16	Point of Woods	Wet Pond	6/29/2023
17	Public Works	Wet Pond	6/28/2023
18	Round Elementary School	Dry Detention Pond	4/13/2023
19	Signal Hill Richmond	Dry Detention Pond	6/28/2023
20	Sumner Pond	Wet Pond	6/27/2023
21	Wakeman Large	Wet Pond	4/11/2023
22	Wakeman Small	Wet Pond	4/11/2023
23	Winter's Branch Pond	Wet Pond	6/29/2023
24	Winter's Branch Wetland	Constructed Wetland	6/29/2023
25	Wintersect Hastings	Dry Detention Pond	4/13/2023
26	Wintersect Poe	Dry Detention Pond	4/13/2023

The City’s Public Works Department performed routine maintenance checks at least one a month, or after every heavy rain event for each facility. During this reporting period, City GIS staff developed an online form for all maintenance crews to use. Now all routine maintenance is documented with pictures and a description in the City’s ArcGIS Online Database, rather than on paper. This data is available to view upon request, but a screenshot from the ArcGIS Online application is shown below in **Figure 2**.



## Winterset Poe Inspected 6/14/2023, 11:50 AM

CreationDate	6/14/2023, 11:50 AM
Creator	adonovan8
Facility ID	STFM0090073
Maintenance Performed	Trash,Debris,Fencing
Comments	One Inlet coming into pond needs attention and outfall needs attention also, there is new signage.
Pond Name	Winterset Poe



**Figure 2:** Screenshot of the City’s Routine Maintenance ArcGIS Online Database

Also for routine maintenance, the City has a contract in place with Solitude Lake Management to monitor the City’s wet ponds for water quality and perform aquatic weed control, shoreline weed control, and fountain services approximately two times per month. The City also has a mowing contractor that mows each facility on a set schedule.

In addition to the routine maintenance described above, a list of non-routine maintenance work or tasks associated with future non-routine maintenance work on City-owned or operated SWMFs that were started or completed during this reporting period is shown below in **Table 10**.



**Table 10. MCM 5 – City-Owned and Operated SWMF Non-Routine Maintenance Tasks**

<b>SWMF Name</b>	<b>Status</b>	<b>Description of Work</b>
Hospital Pond	Completed	Hired consultant to conduct an aquatic shelf/vegetation assessment.
Sumner Lake	Completed	Finalized update maintenance agreement between the Sumner Lake HOA and the City.
Winters Branch	Completed	
Cannon Industrial Park	In process	Performed maintenance assessment, and created contractor purchase order to include sediment removal, riser repair, and outfall pipe repair. To be completed in Fall 2023.
Winterset Poe	In process	Performed maintenance assessment, and created contractor purchase order to include dam and outfall pipe repair, vegetation removal, and sediment removal. To be completed in Fall 2023.
Sumner Lake	In process	Performed maintenance assessment, and created contractor purchase order to include culvert repairs. To be completed Summer 2023.
Lucasville Pond	In process	Retrofit design completed. Project went out to bid for construction.
Winters Branch Pond	In process	Retrofit design completed. Project went out to bid for construction.
Sill Warehouse Pond	In process	Retrofit design completed. Submitted floodplain study to FEMA.
Kao Euclid Avenue	In process	Drained pond to assess clogging/maintenance needs. Created a consultant work order to include a drainage and retrofit feasibility study.
Public Works Pond	In process	Created a consultant purchase order to design the retrofit of this pond.
Round Elementary School	In process	Created a consultant purchase order to design the retrofit of this pond.
Public Works Pond	Continuous	Stormwater Staff frequently visit this pond (more often than our routine maintenance schedule) to unclog the riser.
Oakenshaw Downstream	Continuous	Stormwater Staff frequently visited this pond (more often than our routine maintenance schedule) to unclog the riser and trickle ditch.
Round Elementary School	Continuous	Stormwater Staff frequently visited this pond (more often than our routine maintenance schedule) to unclog the riser and trickle ditch.
Jackson Manor	Continuous	Stormwater Staff frequently visited this pond (more often than our routine maintenance schedule) to unclog the riser .
Fairview Bainbridge	Continuous	Stormwater Staff frequently visited this pond (more often than our routine maintenance schedule) to unclog the riser.

During this reporting period, the City also maintained funding for the Capital Maintenance Project, *D-029 SWMF Annual/Deferred Maintenance*. With this project, the City set aside \$1,650,000 to spend in fiscal years (FY) 2023 – FY2025 for SWMF annual/deferred maintenance. This demonstrates the City’s commitment to improving and investing in our stormwater management facilities. Details regarding our stormwater capital improvement and maintenance projects can be found using the link below: [https://www.manassasva.gov/finance/budget\\_division/capital\\_improvement\\_program.php#outer-1933](https://www.manassasva.gov/finance/budget_division/capital_improvement_program.php#outer-1933).

#### Virginia Construction Stormwater General Permit Database

The City confirms that it submitted stormwater management facility information through the Virginia Construction Stormwater General Permit database for those land disturbing activities for which the City was required to obtain coverage under the General Virginia Pollutant Discharge Elimination System (VPDES) Permit for Discharges of Stormwater from Construction Activities.

#### Virginia Department of Environmental Quality (DEQ) BMP Warehouse

The City confirms that it electronically reported SWMFs using the DEQ BMP Warehouse in accordance with Part I E 5 g. The information was submitted in September 2022.

#### Additional Stormwater Projects/Repairs

In addition to the stormwater facility projects and repairs mentioned above in Table 10, the City has completed or has in progress several additional projects that will improve the City’s streams, floodplain maps, and infrastructure – which all ultimately help reduce the City’s pollution load and extend the longevity out of stormwater facilities and MS4 infrastructure.

- Liberia House Stream Restoration (in progress): repairs approximately 1,800 linear feet (LF) of eroded stream banks along Flat Branch Creek through the Liberia historic site. The goal of the project is to stabilize and protect the stream from further erosion, and stabilize the streambank near a historic feature. This project will result in Total Maximum Daily Load (TMDL) program credit.
- Round Elementary Pond Stream Restoration (in progress): repairs approximately 1,100 linear feet (LF) of eroded stream banks along Cannon Branch through Round Elementary School property. The goal of the project is to stabilize and protect the stream from further erosion, and stabilize City outfall structures. This project will result in Total Maximum Daily Load (TMDL) program credit.
- Oil-water Separator Installation (completed): an oil-water separator was installed within the City’s Public work yard – at a concrete wash bay. The oil-water separator now discharges into the sanitary sewer, rather than directly into the City’s New Britain (PW) stormwater management wet pond.
- Cannoneer Ct Outfall Stabilization (in progress): Design (completed) and construction of for an eroded outfall channel.
- KAO Euclid Outfall Stabilization (in progress): Mitigation strategies to repair eroded channel in progress. May result in TMDL credit.
- Bull Run Watershed Study (in progress): A Watershed study aimed to improve water quality within the City’s Bull Run Watershed by prioritizing and planning how impaired streams,

stormwater management facilities, and other stormwater infrastructure can be improved and/or restored. Sites will be evaluated based on their potential to address infrastructure concerns like eroding streams, potential flooding hazards, and improving stormwater management facilities. To ensure that the City is evaluating all potential projects a survey will be distributed and a community meeting will be held next reporting period.

- Storm Pipe Repair Prioritization (in progress): The City is undergoing a massive effort to systematically flush and CCTV/inspect its storm sewer system to prioritize repairs. During this reporting period, the City flushed and CCTVed all pipes within the Round Elementary Pond drainage area, the Euclid/Sills Pond drainage area, and half of the pipes within the Lucasville Pond drainage area.
- Grant Ave Channel Stabilization (in progress): Design and construct drainage improvements for an existing drainage channel failure in the vicinity of 9116 Grant Avenue.
- Battle/Ewell/West St. Drainage Evaluation (in progress): Improve street drainage system to reduce localized flooding and address citizen's concerns. Scope includes improving drainage channels and providing adequate outfall to West Street.
- Floodplain Mapping Update Program (in progress): Reoccurring project to update FEMA floodplains that have fallen out of date.

## [MCM 6: Pollution Prevention and Good Housekeeping for Municipal Operations](#)

### Summary of Any Operational Procedures Developed or Modified

No new operational procedures were developed or modified during this reporting period. The City continues to implement and train on those previously developed, including the series of pollution prevention and good housekeeping procedures outlined below.

- Non-Stormwater Discharges
- Landscaping and Grounds Maintenance
- Land Disturbance
- Vehicle/Equipment Maintenance and Repair
- Vehicle/Equipment Fueling
- Vehicle/Equipment Parking and Storage
- Vehicle/Equipment Washing
- Road, Street, & Parking Lot Maintenance
- Loading & Unloading Operations
- Storm Sewer System Cleaning/Maintenance
- Waste Management
- Material Storage
- Pool Operation and Maintenance
- Salt and Brine Storage Management

These procedures are provided in **Appendix 10**.

## Stormwater Pollution Prevention Plans (SWPPPs)

The City has one active high-priority municipal site within the MS4 service area - the Materials Reduction Site managed the Public Works Department. During this reporting period, the SWPPP for this site was modified to include an updated site map, updated training information, and pollution prevention/good housekeeping procedures. The City did not develop any new SWPPPS during this reporting period. The City also has an Industrial SWPPP at the Public Works and Utility Maintenance Facility; however, this facility is not located within our MS4 service area. For both the MRS SWPPP and the Industrial Public Works SWPPP, stormwater staff ensure that the sites are inspected quarterly, an annual comprehensive SWPPP evaluation is conducted, SWPPP training is conducted, and the SWPPP binders are kept up-to-date.

Previously reported high-priority sites (police vehicle impound yard, fire stations, and water storage facilities) were delisted during Permit Year 3 (July 1, 2020 – June 30, 2021).

As previously mentioned in the MCM 4 section, the City also develops SWPPPS for public construction sites over 1 acre, and periodically inspects private developments with SWPPPS.

## Turf and Landscape Nutrient Management Plans (NMPs)

During this reporting period, the City developed two new Nutrient Management Plans, and updated/renewed its previous five NMPs as shown below in **Table 11**. All seven of these plans were approved by the Virginia Department of Conservation and Recreation. The approval letters for each NMP are provided in **Appendix 11**.

**Table 11. MCM 6 – Current and Future Nutrient Management Plans**

Site	Status	Acreage	Expiration Date
E.G. Smith (IBM) Ball Fields	Updated	16.43	2/28/2026
Manassas Museum	Updated	3.55	2/28/2026
Jennie Dean Ball Fields	Updated	5.73	2/28/2026
Byrd Park Ball Fields	Updated	2.62	2/28/2026
Public Works Hillside	Updated	2.41	2/28/2026
Osborn High School	New	9.80	2/28/2026
Metz Middle School	New	7.80	2/28/2026

## Training Events

During this reporting period, the City Stormwater Staff held a large stormwater management awareness and pollution prevention training for municipal employees on three separate days to ensure all applicable staff could attend. This training was mandatory for all Public Work and Utilities employees. Two days were held as stand-alone events in the auditorium of Metz Middle School, and one day was part of a training hosted by the City of Manassas Public Schools, which required all bus drivers to be present. Topics included general stormwater management, illicit discharge detection, SWPPPS, spill response, and pollution prevention measures with specific focus on the new operational procedures for good housekeeping and pollution prevention that were developed at the end of last year's reporting cycle. The topics for these procedures are bulleted above. Materials used in training included a

PowerPoint presentation and handouts. A summary of attendance is provided below in **Table 14**, and supporting document including sign-in sheets and the training material is provided in **Appendix 12**.

**Table 14. MCM 6 – Stormwater Training Summary**

Department	Division	Attendees		
		7/14/2021	7/21/2022	7/27/2022
Public Works	Fleet Maintenance	-	8	-
	Streets	11	-	14
	Buildings & Grounds	9	1	2
	Refuse & Recycling	1	-	-
	Purchasing/Warehouse	1	-	-
Utilities	Electric		10	13
	Water & Sewer	8	4	1
City of Manassas Public Schools	Transportation	-	-	65
	Maintenance	1	-	16
Engineering	Engineering/Stormwater	1	2	3
Community Development	Parks, Culture, & Recreation	1	-	-
<b>Total:</b>		<b>33</b>	<b>25</b>	<b>114</b>

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The City held a Debris Management Training on January 19, 2023, to discuss and train pertinent staff on the procedures contained with the City’s Debris Management Plan. Stormwater Staff presented during a portion of this training to discuss general stormwater pollution prevention awareness and how debris management affects stormwater. The stormwater presentation and sign in sheet is provided in **Appendix 12**.

The City’s Risk and Safety Analyst also held several hazard communication trainings throughout the reporting period for staff in Public Works and Utilities, as shown below in **Table 15**. These training discussed proper storage and disposal of hazardous chemicals as well as spill response procedures.

**Table 15. MCM 6 – Spill Response Training Summary**

Department - Division	Attendees	Date
Public Works Buildings & Grounds	12	3/17/2023
Utilities Water & Sewer	11	3/17/2023
Public Works Fleet Maintenance Division	7	7/19/2023
<b>Total:</b>	<b>30</b>	

Many City staff hold certifications related to stormwater and/or the reduction of pollutants into stormwater. As such, these staff members took stormwater-related courses and training for continuing education credits to keep their certifications up-to-date. Staff certifications related to stormwater and pollution prevention are summarized below in **Table 16**.

**Table 16. MCM 6 – Staff Certifications**

<b>Staff Certifications</b>	<b>Number of PY 22-23 Staff Certifications</b>
DEQ Stormwater Inspector	6
DEQ Stormwater Plan Reviewer	6
DEQ Stormwater Program Administrator	5
DEQ Erosion and Sediment Control Inspector	6
DEQ Erosion and Sediment Control Plan Reviewer	6
DEQ Erosion and Sediment Control Program Administrator	5
DCR Nutrient Management Planner	2
Certified Pesticide/Fertilizer Applicator	2
Certified Registered Pesticide/Fertilizer Technician	17

## Part II- TMDL Special Conditions

### Chesapeake Bay TMDL Action Plan

The City recently reviewed its schedule of best management practices as listed in the Chesapeake Bay TMDL Action Plan document and updated project information, including updated pollutant reduction calculations.

No new structural stormwater best management practices were implemented during the reporting period. However, the City continues to evaluate practices in meeting its TMDL nutrient reduction goals as shown below in **Table 17**. In addition, the following progress towards meeting its goals during this reporting period are listed below.

- Lucasville Regional SWMF Retrofit to Level 2 Wet Pond - Design completed and put out to bid for construction. Construction to start September, 2023.
- Sills Warehouse SWMF Retrofit to Level 1 Extended Detention Pond – 95% design completed and floodplain study submission to FEMA. Construction estimated to start Spring/Summer 2024.
- Liberia Plantation Stream Restoration - 65% design completed. Construction estimated to start Winter 2023.
- 30% Design for Round Elementary Stream Restoration. Construction estimated to start Fall 2024.
- 30% Design for New Britain (Public Works) Regional Pond Retrofit. Construction estimated to start Fall 2024.
- An additional outfall stabilization project is in evaluation near the City's KAO Euclid Pond.

### Summary of Meeting the 2028 Pollution Reduction Goals

The City anticipates that the implementation of the projects listed in **Table 17** below will result in the pollutant reductions necessary to meet 100% of those. However, given the varying stages of project implementation, the City may rely on credits obtained through the Private Exchange mechanism. The City has entered a legal agreement with the Upper Occoquan Service Authority (UOSA), wastewater reclamation plant, to obtain any necessary nutrient credits through December 31, 2036 (**Attachment 13**). During compliance year 2021, 5,050 nitrogen credits were available to the City 2021. In compliance year 2022, 3,020 nitrogen credits were available. Nutrient credits must be acquired annually and they are not guaranteed from year-to-year; however, it is expected that the UOSA plant will continue to provide sufficient nutrient credits to ensure the City meets its L2 Run reduction requirements while progressing with its Phase III Chesapeake Bay TMDL Action Plan. The 2021 and 2022 credits alone, are enough to demonstrate and bridge any gaps in the required reduction compliance.

**Table 17. Chesapeake Bay TMDL Progress Summary**

<b>Determining compliance with 2028 Goals</b>	<b>Total Nitrogen (TN) lbs/yr</b>	<b>Total Phosphorus (TP) lbs/yr</b>	<b>Total Suspended Solids (TSS) lbs/yr (Sediment)</b>	<b>Notes</b>
<b>Required Reductions by 2023:</b>	1,685.00	240.00	206,300.00	-
<b>Required Reductions by 2028:</b>	4,212.50	600.00	515,750.00	-

<b>Complete and 2023 Projects/Credits:</b>	<b>TN</b>	<b>TP</b>	<b>TSS</b>	<b>Notes</b>
Manassas Station Redevelopment (complete prior to July 1, 2018)	8.59	1.2	143.3	Credits obtained from exceeding land development requirements
Hospital Pond (complete prior to July 1, 2018)	641.87	146.95	86,977.51	-
D-039 Lucasville Regional SWMF Retrofit (in design - construction starts 2023)	1,251.00	131.25	44,976.00	Retrofit existing pond to a Level 2 wet pond to provide TMDL credit and necessary maintenance at same time.
D-027 Liberia House Stream Restoration (construction starts Winter 2023)	369.93	247.72	660,580.00	Highly degraded stream channel. Stabilize and protect the stream from further erosion + protect downstream pond rehabilitation.
Upper Occoquan Service Authority (UOSA) Credits Used to Meet 2028 Goals*:	As Needed*	As Needed*	n/a	*Reliance on UOSA nutrient credits will adjust as individual projects progress. In 2021, the City received 5,050 of lbs. of nitrogen and 583 lbs. of phosphorus, and in 2022 received 3,020 lbs. nitrogen and 583 lbs. phosphorus.
<b>Total Reductions Still Required by 2023</b>	<b>(586.39)</b>	<b>(287.12)</b>	<b>(586,376.81)</b>	<b>2023 goals met</b>

<b>In Progress Projects (Construction to start in 2024)</b>	<b>TN</b>	<b>TP</b>	<b>TSS</b>	<b>Notes</b>
D-009 Euclid/Sills Warehouse Facility Retrofit (construction starts 2024)	57.00	6.45	27,345.98	Retrofit existing dry pond to a Level 1 Extended Detention facility that provides water quality and quantity controls. Also provides necessary maintenance at same time.
D-043 New Britain (Public Works) Pond Retrofit (construction start est. 2024)	534.00	125.00	23,522.20	Retrofit of existing City stormwater facility to restore functionality, remove sediment, receive TMDL credits, and remove pond from state-regulated dam list.
D-036 Round Elementary Stream Restoration (construction start est. 2024)	162.00	112.00	8,929	Highly degraded stream channel. Stabilize and protect the stream from further erosion + protect downstream pond rehabilitation.
C-017 Dean Park (construction started 2023)	0.79	-	-	Excess credits received past VRRM Compliance.
Upper Occoquan Service Authority (UOSA) Credits Used to Meet 2028 Goals*:	1,187.32	0.00	n/a	*Reliance on UOSA nutrient credits will adjust as individual projects progress.
<b>Total Reductions Still Required by 2028</b>	<b>0.00</b>	<b>(170.57)</b>	<b>(336,723.99)</b>	<b>2028 goals met</b>



Additional Projects Programmed as Future FY Projects in CIP Book	TN	TP	TSS	Notes
D-042 Oakenshaw Ponds (construction start est. 2025-2026)	270.72	66.00	37,361.60	Retrofit pond to enhance stormwater quantity and quality for TMDL credit. Also provides necessary maintenance for persistent drainage issues.
C-048 Stonewall North - New Facility (construction start est. 2025)	34.35	5.53	7,617.00	Stormwater management enhancement at Stonewall Park. Coincides with park facility upgrades under C-048.
D-028 Sumner Lake Stream Restoration (feasibility/construction TBD)	TBD	TBD	TBD	Both stream projects have known eroding streambanks - to be evaluated in the Bull Run Watershed Study.
D-040 Cannon/Flat Branch Stream Restoration (feasibility/construction TBD)	TBD	TBD	TBD	
D-034 Public Facilities SW Management Improvements (feasibility/construction TBD)	TBD	TBD	TBD	Allow for additional stormwater management facilities for TMDL credit on City-owned properties during future redevelopment projects. These projects will build TMDL program pollution reduction credits and serve as centerpieces of the MS4 education program
<b>Total Potential Additional Credits</b>	<b>305.07</b>	<b>71.53</b>	<b>44,978.60</b>	-

## Local TMDL Action Plans

The City has a Local TMDL for Bacteria and Sediment for the Bull Run Watershed. In 2021, the City reviewed its schedule of best management practices as listed in the Local TMDL Action Plan document and has updated project information, including updated pollutant reduction calculations. During this reporting period, no changes were made to the Action Plan, which can be found on the City's stormwater website:

[https://www.manassasva.gov/engineering/stormwater/stormwater\\_documents.php#outer-1332](https://www.manassasva.gov/engineering/stormwater/stormwater_documents.php#outer-1332).

### Bull Run Benthic (Sediment) TMDL

In order to meet the required sediment load reductions, the City evaluated several SWMF retrofits and stream restoration projects. **Table 18** below shows a summary of the City's progress to meet its sediment reductions goals, including current and proposed projects.

In addition to MS4 Program Plan requirements that reduce the discharge of sediment to Bull Run, the City also implemented the following BMPs:

- Implementation of VESCP requiring land disturbing permits for the land disturbing activities exceeding 2,500 square feet (although not in the Chesapeake Bay Preservation Area);
- Situational stream assessments investigating stream bank conditions;
- Pond retrofit assessments;
- Street Sweeping within the City;
- A Sanitary Sewer Overflow (SSO) and cross connection elimination program;
- A robust hazardous waste and recycling program; and
- Signage for materials handling areas reminding staff of good housekeeping procedures.

**Table 18. Local Sediment TMDL Progress Summary (Bull Run Watershed)**

	Total Suspended Solids (TSS) lbs/yr (Sediment)
Local TMDL Required Nutrient Reduction:	396,816.00
Credit Received prior to July 1, 2018:	TSS
Hospital Pond	86,977.00
Total Prior Credit:	86,977.00
Local TMDL Projects in progress	TSS
Euclid/Sills Warehouse Facility Retrofit (in design - construction 2024)	27,345.98
Liberia House Stream Restoration (in design - construction 2024)	660,580.00
New Britain (Public Works) Pond Retrofit (feasibility study in progress)	23,522.20
Total prior and In-progress projects:	798,425.18
Total reductions still needed:	(401,609.18)
Projects Evaluated / Identified	TSS
Oakenshaw Upstream Pond Retrofit (programed 2025)	37,361.60
Stonewall North - New Wet Pond (evaluated - potential project)	7,617.00
Total-Including all Evaluated Projects	843,403.78
Total reductions still needed:	(446,587.78)

Bull Run Bacteria TMDL

In order to reduce bacteria loads to the Bull run watershed, the City evaluated its BMPs described in its Local Bacteria TMDL Action Plan. A summary of these Action Plan BMPs is provide below in **Table 19**.

**Table 19. Local Bacteria TMDL Summary**

Action Plan Implementation Item	Description	Status
MS4 Program Plan	The City will continue to implement the MS4 Program Plan, including elements related to E. coli, in accordance with the schedule provided for in the MS4 Program Plan.	Ongoing – completed current reporting period.
Pet Waste Programs	The City will assess the trail system within the MS4 portion of affected watersheds for opportunities to install signage reminding pet owners to clean up pet waste.	The City completed the assessment during Permit Year 3 (July 1, 2020 – June 20 – 2021), and as of June 20, 2022, standard park rules signs are placed at every City park. These signs state that illegal dumping is prohibited and per City code owners must pick up after their dogs. At 11 of the 24 parks, pet waste stations are provided for public use. All of the parks have trash receptacles for park users to dispose of their trash and pet waste.
Wildlife Management Programs	Perform monitoring program for the Public Works and Point of Woods stormwater ponds.	Evaluation was completed during Permit Year 2 (July 1, 2019 – June 30, 2020). The assessment determined that the waterfowl population within certain stormwater BMPs (especially within the Bull Run Watershed) were high enough to warrant a strategic population reduction program and strategy. To date, no reduction plan has been implemented, but the City continues to monitor population trends.
Sanitary Sewer Management	The City will implement their Sanitary Sewer Overflow (SSO) and cross connection elimination program, which includes sewer inspections, maintenance, and repair	Ongoing – including during current reporting period.
Enhanced Education, Outreach, and Training.	City will become an active member of the Northern Virginia Clean Waters Partnership. The educational material provided through this forum to be distributed to appropriate City residents.	The City became a member during Permit Year 3 and continued this membership during the current reporting period.
Enhanced Education, Outreach, and Training.	The City will update the stormwater webpage to include an education guide to reducing bacteria.	The City updated its website during Permit Year 3 to include tips for residents ( <a href="https://www.manassasva.gov/public_works/stormwater/tips_for_residents.php">https://www.manassasva.gov/public_works/stormwater/tips_for_residents.php</a> ).

## Self-Evaluation of MS4 Program Implementation

During this Permit Cycle and Permit Year, the City made great strides to secure funding and build its MS4 program for future success. In the past five years, the City developed and funded ten stormwater capital improvement projects and four stormwater capital maintenance projects. These projects have and will continue to help the City meet their TMDL goals and inspect, maintain, and repair stormwater infrastructure, including structural SWMFs.

During this reporting period, the City hired a stormwater asset manager (new position), who will help ensure inspection and maintenance of all public and private assets. The City also continued to make great strides regarding the City's Stormwater Database and integrating ArcGIS into our MS4 program. During this reporting period, the City implemented applications created last reporting cycle to track our erosion and sediment control inspections, annual dry weather screening, stormwater infrastructure inspections, maintenance, and cleaning. The City also secured funding for Cartegraph, an asset management software. Between new staff, software, applications, and secured funding through our capital improvement program, the City believes the MS4 Program will continue to make significant improvements in terms of MS4 and environmental compliance.

The City does note, however, that the MS4 Program Plan requires updating. The City plans to update this MS4 Annual Report to reflect current implementation conditions after the implementation of the new MS4 Permit. The City also continued to improve its enforcement procedures. During this reporting period the City has begun to update its Illicit Discharge Ordinance.