Municipal Separate Storm Sewer System (MS4) Program Plan U.S. Army Garrison Fort Belvoir, Virginia

General VPDES Permit for Discharges of Stormwater from Municipal Separate Storm Sewer Systems

Permit VAR040093

18 June 2024

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Quality Information

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ACRONYMS AND ABBREVIATIONS

AAFES	Defense Army and Air Force Exchange Services
ADF-E	Aerospace Data Facility – East
ASIP	Army Stationing and Installation Plan
BMP	Best Management Practice
CDR	Contractor Deficiency Report
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CGP	Construction General Permit
COR	Contracting Officer Representative
CPS	Contract Performance Specialist
CWA	Clean Water Act
DAAF	Davison Army Airfield
DCAA	Defense Contract Audit Agency
DES	Directorate of Emergency Services
DEQ	Department of Environmental Quality
DFMWR	Directorate of Family and Moral, Welfare, and Recreation
DLA	Defense Logistics Agency
DoD	Department of Defense
DPW	Directorate of Public Works
DPW ED	Directorate of Public Works Environmental Division
EISA	Energy Independence and Security Act
EPA	Environmental Protection Agency
ESC	Erosion and Sediment Control
FBNA	Fort Belvoir North Area
FOG	Fat, Oil, and Grease
GIS	Geographic Information Systems
HPF	High Priority Facility
HQDA	Headquarters, Department of the Army
HUC	Hydrologic Unit Code
HVAC	Heating, Ventilation, and Air Conditioning
IAA	Interagency Agreement
ID	Identifier
IDDE	Illicit Discharge Detection and Elimination
INSCOM	Intelligence and Security Command
ISSA	Inter Service Support Agreement
ISW	Industrial Stormwater
KO	Contracting Officer
MCM	Minimum Control Measure
MDA	Missile Defense Agency

MEP	Maximum Extent Practicable
MICC	Mission and Installation Contracting Command
MS4	Municipal Separate Storm Sewer System
MWR	Morale, Welfare, and Recreation
NEC	Network Enterprise Center
NEPA	National Environmental Policy Act
NGA	National Geospatial Agency
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
OWS	Oil/Water Separator
O&M	Operations and Maintenance
PAO	Public Affairs Office
PCB	Polychlorinated Biphenyl
PM	Project Manager
POC	Pollutant of Concern
PWO	Project Work Order
PWS	Performance Work Statement
RCI	Residential Communities Initiative
RCRA	Resource Conservation and Recovery Act
RO	Representative Outfalls
SaMS	Salt Management Strategy
SMF	Stormwater Management Facility
STEAM	Science, Technology, Engineering, Art, and Math
SWCB	State Water Control Board
SWM	Stormwater Management
SWPPP	Stormwater Pollution Prevention Plan
TE	Technical Exhibit
TMDL	Total Maximum Daily Load
TN	Total Nitrogen
TP	Total Phosphorus
TSS	Total Suspended Solids
USAG, FB	United States Army Garrison, Fort Belvoir
USEPA	United States Environmental Protection Agency
VAC	Virginia Administrative Code
VADEQ	Virginia Department of Environmental Quality
VESCP	Virginia Erosion and Sediment Control Program
VDOT	Virginia Department of Transportation
VPDES	Virginia Pollutant Discharge Elimination System
VSMP	Virginia Stormwater Management Program
WIP	Watershed Implementation Plan
WLA	Waste Load Allocation

1. PLAN PURPOSE AND REVISIONS

Fort Belvoir has been authorized to discharge stormwater from its Municipal Separate Storm Sewer System (MS4) by the Virginia Department of Environmental Quality (VADEQ) under the Virginia Pollutant Discharge Elimination System (VPDES) General Permit for Discharge of Stormwater from Small MS4s. The permit requires that the permittee develop, implement, and enforce an MS4 Program designed to reduce the discharge of pollutants from the small MS4 to the maximum extent practicable (MEP) to protect water quality and to satisfy the appropriate water quality requirements of the State Water Control Law and its attendant regulations (9VAC25-890-40 and VPDES MS4 Permit #VAR040093, Part I.B.).

This plan details the framework for a comprehensive program to minimize stormwater pollution by identifying the Best Management Practices (BMPs), measurable goals, and responsible parties for achieving compliance in accordance with 9VAC25-890-40 Part I.C of the General VPDES Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (9VAC25-890-40 General Permit). Unless specifically noted, the minimum control measures described within this stormwater program plan will be implemented on a regional scale at the properties owned and operated by the U.S. Army Garrison, Fort Belvoir (USAG, FB) including the Fort Belvoir Main Post and Fort Belvoir North Area.

This Program Plan identifies:

a) The roles and responsibilities of each division and/or department in the implementation of permit requirements (Part I.C.1a);
b) The description and roles of outside entities or third parties, along with written agreements, responsible for implementation of portions of the MS4 Program (Part I.C.1.b);
c) For each Minimum Control Measure (MCM) listed in Part I E of the permit (Part I.C.1.c):
    1. Each specific requirement as listed in Part I E for each MCM;
    2. A description of the BMPs or strategies that will be implemented to demonstrate compliance with the permit conditions in Part I.E;
    3. All standard operating procedures or policies necessary to implement the BMPs;
    4. The measurable goal by which each BMP or strategy will be evaluated; and
    5. The persons, positions, or departments responsible for implementing each BMP or strategy; and
d) A list of documents incorporated by reference, including the version and date of the document being incorporated (Part I.C.1.d).

Revisions to this Program Plan are expected throughout the life of the permit as part of the iterative process to reduce pollutant loading and protect water quality to the maximum extent practicable (VPDES Permit #VAR040093, Part I.C.4.). As such, revisions made in accordance with the VPDES MS4 Permit resulting from the iterative process do not require modification of the permit. Fort Belvoir will annually evaluate the MS4 Program Plan for program compliance, the appropriateness of identified BMPs, and the progress towards achieving the identified measurable goals. Analysis of the information gathered for inclusion in the annual report will determine if BMPs remain effective or need to be modified. Revisions to this Program Plan are required to be summarized as part of the annual report, which is due annually on 1 October.

2. FACILITY BACKGROUND AND MS4 REGULATED SERVICE AREA

The USAG, FB is in southeastern Fairfax County, Virginia, approximately 16 miles southwest of Washington D.C. and 80 miles north of Richmond, Virginia. Fort Belvoir's military history dates to the early 1900s, when the facility was known as Camp Belvoir and used as an Army rifle range and training camp. The post was re-named Fort Humphreys in 1922 and became Fort Belvoir in 1935. Since 1935, Fort Belvoir has supported major U.S. military operations throughout the world.

In recent years, Fort Belvoir has functioned primarily as an administrative and logistics support center for the Army and as a host to 150 mission partner organizations. The current population at Fort Belvoir includes approximately 35,000 military, civilians and contractor personnel and provides support services for approximately 173,000 military personnel, dependents, and retirees in the region.

Fort Belvoir consists of approximately 8,500 acres and is divided into two separated land areas known as Main Post and the Fort Belvoir North Area. The Fort Belvoir North Area (FBNA), located just northwest of I-95, encompasses approximately 800 acres as shown in Figure 3. The Main Post, located between I-95 and the Potomac River, accounts for the remaining acreage, and is shown in Figure 2. U.S. Route 1 (Richmond Highway) further divides the Main Post into two distinct geographical areas, referred to as North Post and South Post.

In 1999, the EPA developed the Stormwater Phase II Final Rule which required operators of regulated small MS4s to obtain a National Pollutant Discharge Elimination System (NPDES) permit and develop a stormwater management program designed to prevent pollutants from discharging into the MS4 system during a storm event or from being discharged directly into the MS4 and then discharged from the MS4 into local waterways. Fort Belvoir falls under the Phase II regulations as a small MS4 operator and has held coverage under a VPDES Permit for Discharges of Stormwater from Small MS4s since 2003.

Additionally, if a small MS4 is in an urbanized area as determined by the latest decennial census by the Bureau of the Census, then the small MS4 is regulated (9VAC25-870-400, B.1.a.). If the small MS4 is not located entirely within an urbanized area, only the portion that is within the urbanized area is regulated. Under the current permit cycle (2023-2028) for the MS4 General Permit, the regulated service area is defined as either the 2020 census urban area with a population of at least 50,000 or the 2000 and 2010 decennial census urbanized area (9VAC25-890-1). As Fort Belvoir's population is under the 50,000 person threshold, best judgement was used to determine the regulated service area based off the 2000 and 2010 decennial census urbanized areas and additional areas considered to be urban and "served by the MS4," resulting in only a portion of USAG, FB being regulated as shown in Figure 1. It should additionally be noted that USAG, FB saw a decrease in census urban areas from the 2000 to 2010 decennial census.

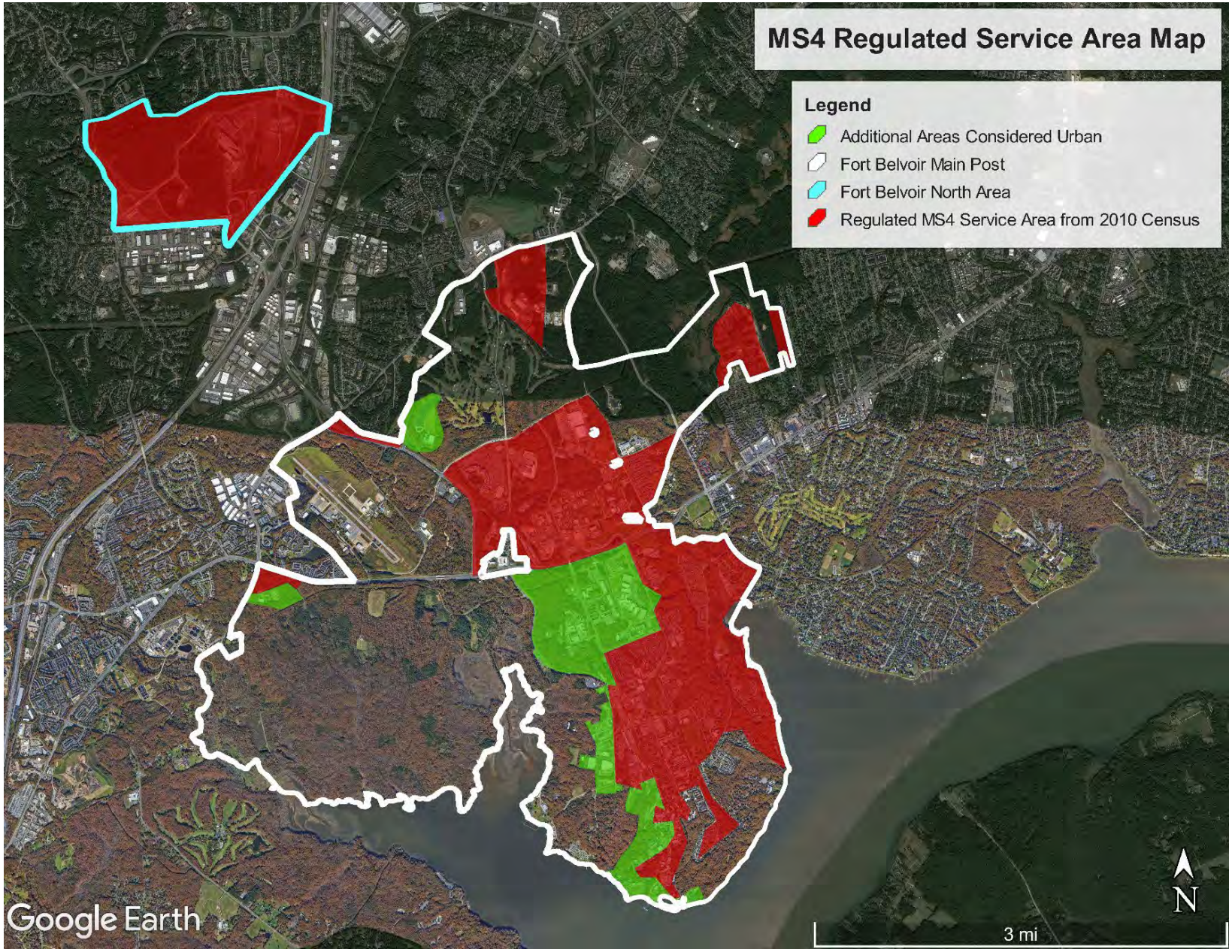


Figure 1: MS4 Regulated Service Area

3. PROPERTIES NOT COVERED UNDER THE FORT BELVOIR MS4 PERMIT

3.1. FORT BELVOIR UNREGULATED AREAS

As stated in *Facility Background* and MS4 Regulated Service Area, there are portions of Fort Belvoir that are not designated as urbanized area in the 2010 Census. Therefore, these areas of Fort Belvoir are considered unregulated (Figure 1). As the 2020 Census applies to urban areas with a population of at least 50,000, this does not apply to Fort Belvoir.

3.2. FORT BELVOIR VPDES MAJOR INDUSTRIAL STORMWATER PERMIT #VA0092771

Fort Belvoir currently holds a separate Individual Major Permit for Stormwater Discharges from Industrial (ISW) Activities (#VA0092771) that was issued on 1 January 2017. This permit has 31 representative outfalls and covers discharges from those industrial facilities which drain to these outfalls. This permit covers approximately 751 acres on the Main Post and 11.5 acres on Fort Belvoir North Area with about 235 acres being within the MS4 service area (Figures 2 and 3). Therefore, areas covered under the ISW Permit are not covered under the Fort Belvoir MS4 Permit #VAR040093.

It should be noted that a reapplication for the ISW Permit was completed in June 2021, which will ultimately result in removal of several of the representative outfalls with the associated drainage areas added back into the MS4 service area. It is likely that the accompanying facilities to these representative outfalls will be classified under the MS4 Permit as High Priority Facilities once approved. This plan will undergo a revision once this occurs.

3.3. RIVANNA STATION

Rivanna Station is located just north of Charlottesville, Virginia, and is owned by USAG, FB. As stated in 9VAC25-870-400, operators of MS4s are regulated if they operate a small MS4 located in an urbanized area as determined by the latest Decennial Census by the Bureau of Census. The 2010 Census Urbanized Area Reference Map for Charlottesville, Virginia shows that Rivanna Station is not located within an area designated as “Urbanized Area” or “Urban Cluster”. Additionally, this area also does not have a population greater than 50,000, so the 2020 Census Urbanized Area does not apply. Therefore, USAG, FB is not required to obtain MS4 permit coverage for Rivanna Station under the Fort Belvoir MS4 permit #VAR040093.

3.4. VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) VPDES INDIVIDUAL PERMIT FOR DISCHARGES OF STORMWATER FROM MS4 PERMIT #VA0092975

VDOT holds easements for multiple portions of roads located along the jurisdictional boundary. On the Main Post, the VDOT easement covers approximately 117 acres to include sections of Route 1, Fairfax County Parkway, and Jeff Todd Way. At Fort Belvoir North Area, the VDOT easement covers approximately 158 acres to include sections of Fairfax County Parkway and Rolling/Barta Roads. Areas within VDOT easements are covered under VDOT’s MS4 Permit #VA0092975 (1 July 2022 – 30 June 2027) (Figures 2 and 3).

3.5. FAIRFAX COUNTY VPDES PERMIT FOR DISCHARGES OF STORMWATER FROM MS4 PERMIT #VA0088587

The Fairfax County Public Schools has one school located within the Fort Belvoir property boundary. Fort Belvoir Elementary School is located at 5970-5980 Meeres Road and encompasses approximately 20 acres (Figure 2). Fort Belvoir Elementary School is covered under the Fairfax County's MS4 Permit #VA0088587.

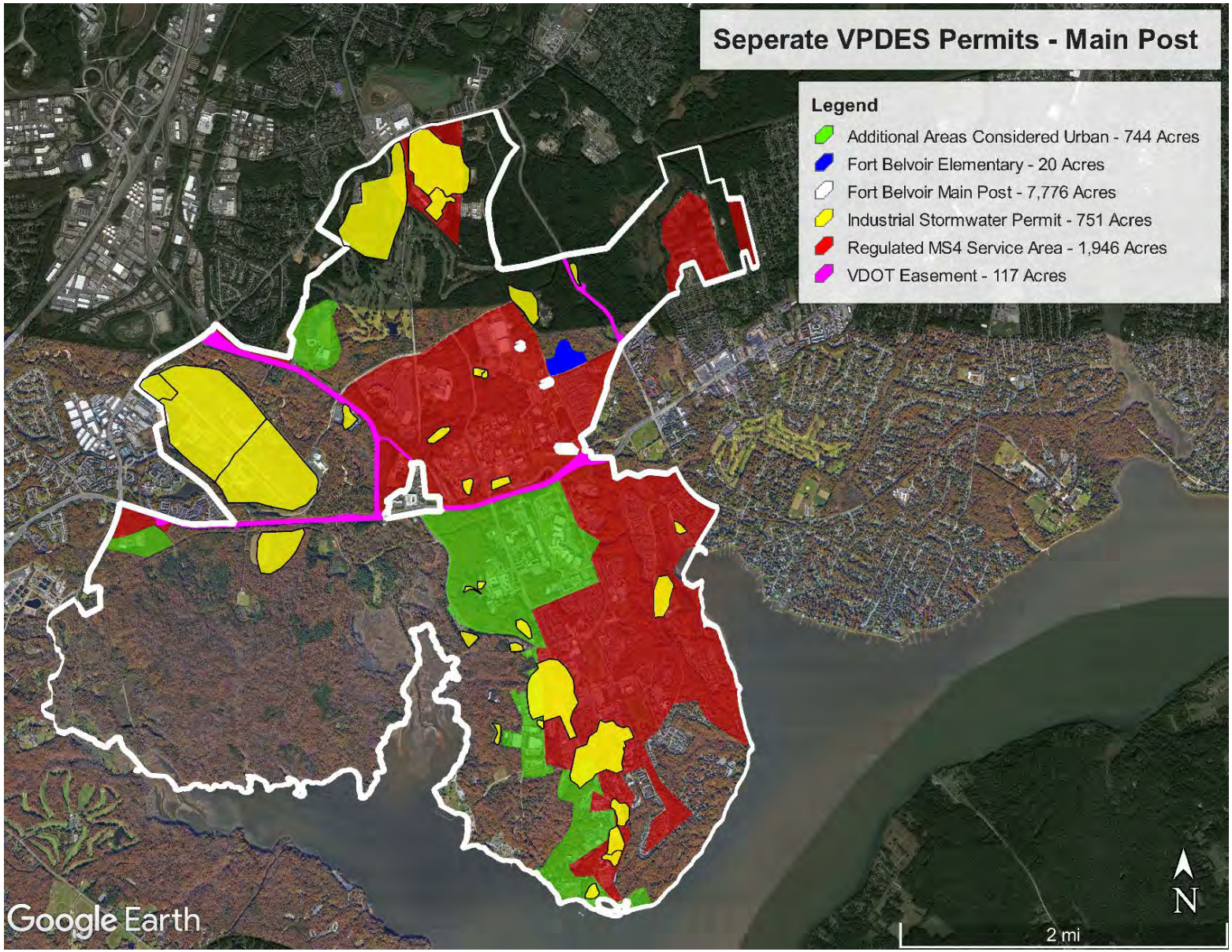


Figure 2: Areas Covered Under Separate VPDES Permits – Main Post

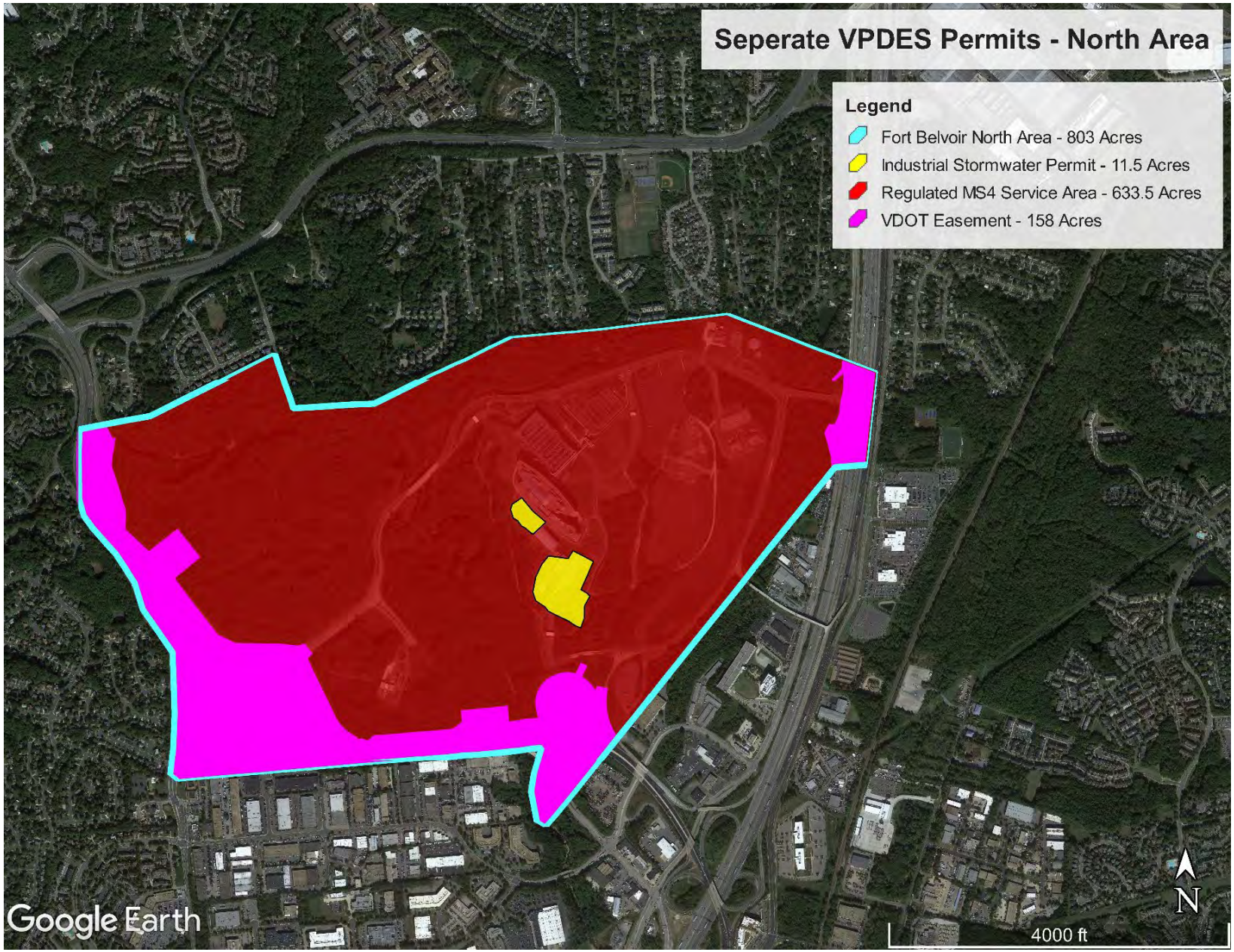


Figure 3: Areas Covered Under Separate VPDES Permits – North Area

4. LEGAL AUTHORITIES

Legal authorities that are applicable to the Fort Belvoir Erosion and Sediment Control/Stormwater Management Program include federal and state laws and regulations, permits, and policy memorandums. These specific authorities are listed below.

4.1. 33 U.S.C. §1251 ET SEQ (1972) CLEAN WATER ACT (CWA)

The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly amended in 1972 and became known as the Clean Water Act. Other significant amendments were made to the CWA in 1977 and 1987. The CWA established the basic structure for regulating discharges of pollutants into the waters of the United States. The basic objective was to restore and maintain the chemical, physical and biological integrity of the Nation's waters.

Two major goals of the CWA are to:

1. Eliminate the discharge of pollutants into navigable waters.
2. Achieve water quality that provides for recreation and protects fish, shellfish, and wildlife.

Section 402 of the CWA established the NPDES point source permits. This section outlined the requirements for the State Permit Programs.

4.2. 42 U.S.C. §17094 STORMWATER RUNOFF REQUIREMENTS FOR FEDERAL DEVELOPMENT PROJECTS (PUBLIC LAW 110-140 §438)

The basis for stormwater runoff requirements for federal development was enacted in December 2007 and became known as the Energy Independence and Security Act, Section 438 (EISA 438). Section 438 states in its entirety:

"The sponsor of any development or redevelopment project involving a Federal facility with a footprint that exceeds 5,000 square feet shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow."

4.3. 40 CFR 122 – U.S. ENVIRONMENTAL PROTECTION AGENCY (USEPA) ADMINISTERED PERMIT PROGRAMS: THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

This permitting program was established by USEPA to comply with Section 402 of the CWA. The NPDES program prohibits the discharge of pollutants through a point source into a water body of the U.S. unless a NPDES permit is obtained. The permit places limits on what can be discharged and includes monitoring and reporting requirements as well as other provisions to ensure that the discharge does not harm water quality or public health.

4.4. VIRGINIA STATE WATER CONTROL LAW, TITLE 62.1, CHAPTER 3.1 (§62.1-44.2 ET SEQ) OF THE CODE OF VIRGINIA

It is the policy of the Commonwealth of Virginia and the purpose of this law to:

1. Protect existing high quality state waters and restore all other state waters to such condition of quality that any such waters will permit all reasonable public uses and will support the propagation and growth of all aquatic life, including game fish, which might reasonably be expected to inhabit them,
2. Safeguard the clean waters of the Commonwealth from pollution,
3. Prevent any increase in pollution,
4. Reduce existing pollution,
5. Promote and encourage the reclamation and reuse of wastewater in a manner protective of the environment and public health, and
6. Promote water resource conservation, management, and distribution, and encourage water consumption reduction to provide for the health, safety, and welfare of the present and future citizens of the Commonwealth.

4.5. VIRGINIA STORMWATER MANAGEMENT ACT, TITLE 62.1, CHAPTER 3.1, ARTICLE 2.3 (§62.1-44.15:24 THROUGH §62.1-44.15:50) OF THE CODE OF VIRGINIA

The Virginia Stormwater Management Act seeks to protect properties and aquatic resources from damages caused by increased volume, frequency, and peak rate of stormwater runoff. Additionally, the law seeks to protect those resources from increased non-point source pollution attributed to stormwater runoff.

4.6. VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) PERMIT REGULATIONS (9VAC25-870)

VSMP permit regulations:

"Provide a framework for the administration, implementation and enforcement of the Virginia Stormwater Management Act and to delineate the procedures and requirements to be followed in connection with state permits issued by the board pursuant to the Clean Water Act and the Virginia Stormwater Management Act and permits issued by a VSMP authority, while at the same time providing flexibility for innovative solutions to stormwater management issues."

4.7. VIRGINIA EROSION AND SEDIMENT CONTROL LAW TITLE 62.1, CHAPTER 2.4 (§62.1-44.15:51 THROUGH §62.1-44.15:66) OF THE CODE OF VIRGINIA

The Erosion and Sediment Control Law requires that the State Water Control Board:

"…shall develop a program and promulgate regulations for the effective control of soil erosion, sediment deposition and nonagricultural runoff that must be met in any control program to prevent the unreasonable degradation of properties, stream channels, waters and other natural resources…"

4.8. VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS (9VAC25-840)

This regulation sets forth minimum standards for "*effective control of soil erosion, sediment deposition and nonagricultural runoff*" in erosion and sediment control plans and erosion and sediment control annual standards and specifications.

4.9. VIRGINIA EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT CERTIFICATION REGULATIONS (9VAC25-850)

This regulation specifies requirements for certificates of competence for program administrator, plan reviewer, project inspector and combined administrator for both Erosion and Sediment Control and Stormwater Management.

4.10. GENERAL VPDES PERMIT FOR DISCHARGES OF STORMWATER FROM SMALL MS4S (9VAC25-890), FORT BELVOIR PERMIT #VAR040093

This state permit authorizes operators of small MS4s to discharge to surface waters within the boundaries of the Commonwealth of Virginia in accordance with Parts I through IV of the permit. Operators are required to develop and implement an MS4 Program Plan and update in accordance with the schedule set forth in the permit conditions.

4.11. OFFICE OF THE UNDER SECRETARY OF DEFENSE, DEPARTMENT OF DEFENSE (DOD) IMPLEMENTATION OF STORMWATER REQUIREMENTS UNDER SECTION 438 OF THE ENERGY INDEPENDENCE AND SECURITY ACT (EISA) MEMORANDUM (19 JANUARY 2010)

This policy memorandum outlines requirements of the DoD issued Unified Facilities Criteria on Low Impact Development and EISA Section 438 stormwater design requirements. Additionally, this policy memorandum clarifies that EISA Section 438 requirements are independent of stormwater requirements under the CWA and should not be included in permits for stormwater unless a State (or EPA) has promulgated regulations for certain EISA Section 438 requirements (i.e. temperature/heat criteria) that are applicable to all regulated entities under its CWA authority.

4.12. DEPARTMENT OF THE ARMY, OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY, INSTALLATIONS, ENERGY AND ENVIRONMENT, SUSTAINABLE DESIGN AND DEVELOPMENT POLICY UPDATE MEMORANDUM (27 OCTOBER 2010)

This policy memorandum outlines requirements for the Army's commitment to sustainable design and development and directs EISA Section 438 compliance. Section 5.f. Stormwater Water Management states that:

"Facility construction projects will comply with EISA Section 438 (42 U.S.C.§17094), when applicable, using DoD Policy on Implementation of EISA Section 438 and consistent with the U.S. Environmental Protection Agency's Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under EISA Section 438 (December 2009)."

4.13. FORT BELVOIR POLICY MEMORANDUM #28, ENVIRONMENTAL POLICY

This policy memorandum is not currently in place but has been staffed with the current Garrison Commander for signature. Formerly, Policy Memorandum #28 was signed into effect in June 2014. Section 4.a. of this policy states:

"Fort Belvoir is committed to the protection of the environment, within mission and funding constraints, and will be accountable for its decisions. In support of this environmental policy, Fort Belvoir will: Comply with legal and other requirements applicable to the conduct of Fort Belvoir's mission while continually improving Fort Belvoir's environmental performance."

Directorate of Public Works (DPW) Environmental will continue to work with the current Garrison Commander on a method to get this and other policy memorandums in place. Once successful, the policy will be posted on the Fort Belvoir website and added to the Program Plan.

4.14. FORT BELVOIR POLICY MEMORANDUM #71, PROHIBITION OF ILLICIT/UNAUTHORIZED DISCHARGES INTO THE MS4 AND WATERWAYS

This policy memorandum is not currently in place but has been staffed with the current Garrison Commander for signature. Formerly, this memorandum was signed into effect in August 2018, and defines prohibited discharges into the storm sewer system, stormwater pollution prevention, and annual training requirements. Section 4.b. of this policy states:

"Fort Belvoir is committed to protecting water quality of waterways on and surrounding Fort Belvoir to ensure that human health, ecosystem health and the ability to conduct recreational opportunities are not impacted by stormwater pollution…Requires the establishment of an enforceable policy that prohibits illicit discharges and illegal dumping."

DPW Environmental will continue to work with the current Garrison Commander on a method to get this and other policy memorandums in place. Once successful, the policy will be posted on the Fort Belvoir website and added to the Program Plan.

4.15. FORT BELVOIR POLICY MEMORANDUM #73, STORMWATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS

This policy memorandum is not currently in place but has been staffed with the current Garrison Commander for signature. Formerly, this memorandum was signed into effect in August 2018 and defines stormwater pollution prevention plan (SWPPP) requirements for facilities and construction sites and establishes a Pollution Prevention Team that is responsible for completing facility inspections, maintaining operational compliance, and provided required documentation. Section 4.c of this policy states:

"Fort Belvoir is committed to protecting water quality of waterways on and surrounding Fort Belvoir to ensure that human health, ecosystem health and the ability to conduct recreational opportunities are not impacted by stormwater pollution...Require development, implementation, and maintenance of a Stormwater Pollution Prevention Plan (SWPPP)."

DPW Environmental will continue to work with the current Garrison Commander on a method to get this and other policy memorandums in place. Once successful, the policy will be posted on the Fort Belvoir website and added to the Program Plan.

5. PROGRAM ADMINISTRATION

5.1. ORGANIZATIONAL STRUCTURE (PERMIT #VAR040093, PART I.C.1.A.)

The primary responsibility for coordinating, educating, and reporting compliance with the MS4 General Permit is held by the MS4 Stormwater Program Administrator within the Directorate of Public Works, Environmental Division, Compliance/Restoration Branch (Figure 4: Directorate of Public Works Organization Structure).

Many activities that are identified in the procedural BMPs that are provided in *Minimum Control* Measures or *Total Maximum* Daily Loads (TMDLs) Waste Load Allocation (WLA) are implemented by other government employees located in other Divisions of the Directorate of Public Works (Figure 4) or within other Directorates and Support Offices at Fort Belvoir (Figure 5: U.S. Army Garrison, Fort Belvoir Organization Structure).

Each BMP described will identify the primary responsible party or parties implementing the practice and/or providing information for reporting purposes. Fort Belvoir does not rely on outside entities to implement any of the program MCMs. However, Fort Belvoir does rely on tenant commands and may, as program funding allows, rely on contracted personnel to assist with implementation of some MS4 Program elements. The two main contracting avenues used by DPW in supporting the program to meet requirements specified in the permit are discussed below.

BASE-OPS: Fort Belvoir – Operations and Maintenance utilizes a Mission & Installation Contracting Command (MICC) Services Contract with Aleut O&M Services LLC (Aleut), which provides Garrison-wide infrastructure maintenance and repair services. The contractor, Aleut, supports the MS4 Program through their Roads, Streets, and Grounds Division as well as their Environmental Compliance Division. Aleut is responsible for maintenance, inspection, and repairs to the storm sewer system to ensure continuous normal operation and prevent flooding. Aleut is also responsible for performing regular preventative maintenance of stormwater management facilities (SMFs) as well as annual inspections and major repairs as needed. All roads and parking areas across the Garrison are also maintained by Aleut and swept monthly with a regenerative air sweeper, as well as maintained in the winter to include the use of road salt or brine. Therefore, they play a key role in maintaining the MS4 system and contributing toward applicable Total Maximum Daily Load (TMDL) credits.

Environmental Support: Fort Belvoir - Environmental utilizes a U.S. Army Corps of Engineers Baltimore District Environmental Services Contract to contract personnel from private consulting firms to assist with implementation of some MS4 Program elements, as program funding is available. The number of contracted personnel vary from fiscal year to fiscal year. Contractors are required to maintain VADEQ certifications for Stormwater and Erosion and Sediment Control (SWM/ESC) Inspectors, SWM/ESC Plan Reviewers, and SWM/ESC Program Administrators. These support contractors assist in providing compliance assistance and inspections as well as record keeping and reporting support for the program.

Table 1 identifies MCM/Permit requirements, contract support role, and status of funding for the 2023-2024 permit cycle. If contract support is not funded, responsibilities for implementation and reporting fall back onto the MS4 Stormwater Program Administrator.

Table 1: MS4 Program Administration – Contract Support

Minimum Control Measure (MCM)	Contract Support Role	Funding Status
MCM #1 Public Education and Outreach	- Develops, prints, and distributes traditional written materials, media materials, and training materials as required by the Education and Outreach Plan - Creates displays for public outreach events - Review, revise, maintain, and update the MS4 Training Plan and Education and Outreach Plan	**Not funded** – All work completed by DPW MS4 Manager
MCM #2 Public Involvement and Participation	- Advertise, organize, and implement four (4) public involvement activities per year - Document activities and maintain the MS4 Stormwater Website	**Funded** – Environmental contract staff will be used for the 2023-2024 permit cycle
MCM #3 Illicit Discharge Detection and Elimination	- Conducts annual outfall inspections for 50 outfalls - Conducts source tracking and identification of identified or potential illicit discharges - Review, revise, maintain, and update the Fort Belvoir IDDE Plan and associated reporting - Conduct complaint investigations, incident tracking, and windshield inspections per the Fort Belvoir IDDE Plan - Provide mapping support for maintaining outfall and SMF inventory and associated data tables	**Funded** – Environmental contract staff will be used for the 2023-2024 permit cycle
MCM #4 Construction Site Stormwater Runoff Control	- Conduct SWM/ESC plan reviews and dig permit reviews - Conducts ESC/SWM inspections and construction site complaint investigations - Provides Pre-Construction training - Maintain internal project/plans/permit inventory for all land disturbance	**Funded** – Environmental contract staff will be used for the 2023-2024 permit cycle
MCM #5 Post Construction Stormwater Management	- GIS Mapping support for stormwater facility inventory and associated data table - BASE-OPS: Conduct Stormwater Management Facility Inspections and Maintenance per the BMP Management and Maintenance Plan	**Not funded** – All environmental compliance work completed by DPW MS4 Manager **Funded** – BASE-OPS contract staff will be used for the 2023-2024 permit cycle
MCM #6 Pollution Prevention/Good Housekeeping	- Conduct training sessions for target audiences and SWPPP facilities - Conducts annual high priority facility evaluation and develops SWPPPs as needed	**Not funded** – All work completed by DPW MS4 Manager

Minimum Control Measure (MCM)	Contract Support Role	Funding Status
	- Complete SWPPP Inspections, follow-up on deficiencies, and update SWPPPs as needed - Maintain records of VADEQ required certifications for all stormwater personnel, pesticide applicators, and nutrient management planners - Develops activity guides and/or BMP Fact Sheets	
Various TMDLs	- Environmental Support: Prepare new plans - Review, revise, and maintain existing plans as needed - Perform credit calculations and reporting for SMFs - BASE-OPS: Perform storm sewer system preventative maintenance and catch basin cleaning - Roads, streets, parking lot, grounds maintenance including street sweeping and deicing - Maintenance of SMFs for Chesapeake Bay and Sediment TMDL credits	**Funded** – Environmental contract staff will be used for the 2023-2024 permit cycle **Funded** – BASE-OPS contract staff will be used for the 2023-2024 permit cycle

5.2. DELEGATION OF SIGNATURE AUTHORITY (PERMIT #VAR040093, PART IV.K.2)

All reports required by state permits and other information requested by the board shall be signed by a duly authorized representative. The Garrison Commander, as the principal executive officer for the MS4 permit, may delegate signature authority to the Director of Public Works or Environmental Division Chief for routine correspondence which includes submittal of annual reports and correspondence related to requests for information received from the Commonwealth of Virginia, Department of Environmental Quality. The Delegation of Signature Authority remains valid until a new Garrison Commander is appointed. At such time, the Delegation of Signature Authority memorandum becomes invalid, and the new Garrison Commander must sign a new memorandum. Signature authority from the current Garrison Commander is typically delegated to the Director of Public Works via Memorandum. This memorandum is currently in staffing, and this plan will be updated with a copy included Appendix A once completed.

5.3. DOCUMENTS INCORPORATED BY REFERENCE (PERMIT #VAR040093, PART I.C.1.D.)

The following documents are incorporated into the MS4 Program Plan by reference and are available upon request by contacting the MS4 Stormwater Program Administrator at (703) 806-3406 OR Environmental Division, Directorate of Public Works, 9430 Jackson Loop, Building 1442, Fort Belvoir, Virginia 22060-5116:

- *Draft Chesapeake Bay Phase III Total Maximum Daily Load (TMDL) Action Plan for U.S. Army Garrison Fort Belvoir, Virginia* dated 5 September 2023
- *Final Chloride TMDL Action Plan, Lower Accotink Creek,* dated 22 August 2023
- *Final Sediment TMDL Action Plan, Lower Accotink Creek,* dated 6 September 2023
- *Fort Belvoir Polychlorinated Biphenyl (PCB) TMDL Action Plan* dated 22 August 2023
- *Final Bacteria TMDL Action Plan for the Lower Accotink Creek Watershed* dated 24 August 2023
- MS4 Outfall Map and Information Table, dated 25 August 2022

- The *U.S. Army Fort Belvoir Virginia Illicit Discharge Detection and Elimination Plan* dated 18 June 2024
- *General Plan for Stormwater Management Facility Inspection and Maintenance* dated 19 September 2019
- Stormwater Management Facilities EXCEL Spreadsheet
- BMP Fact Sheets
- *Fort Belvoir Combined ISW and MS4 SWPPP* dated January 2019
- *Fort Belvoir MS4 SWPPP for High-Priority Facilities* dated July 2019
- *Fort Belvoir Combined ISW and MS4 Stormwater Pollution Prevention Training Plan* dated 26 April 2023
- *Fort Belvoir Residential Communities Initiative – A (Cedar Grove, Colyer, Gerber, Herryford, Lewis, Vernondale) Nutrient Management Plan* dated 30 June 2022
- *Fort Belvoir Residential Communities Initiative – B (Belvoir, Jadwin, Fairfax, Park, Rossell) Nutrient Management Plan* dated 30 June 2022
- *Fort Belvoir Residential Communities Initiative – C (Dogue Creek, Washington, River, Woodlawn) Nutrient Management Plan* dated 21 July 2023
- *Fort Belvoir Golf Club Nutrient Management Plan* dated 2 February 2023
- *DLA/DCAA Headquarters Complex Nutrient Management Plan* dated 28 July 2023
- *Missile Defense Agency Headquarters Nutrient Management Plan* dated 21 July 2023
- *National Geospatial-Intelligence Agency Campus East Nutrient Management Plan* dated 18 March 2020

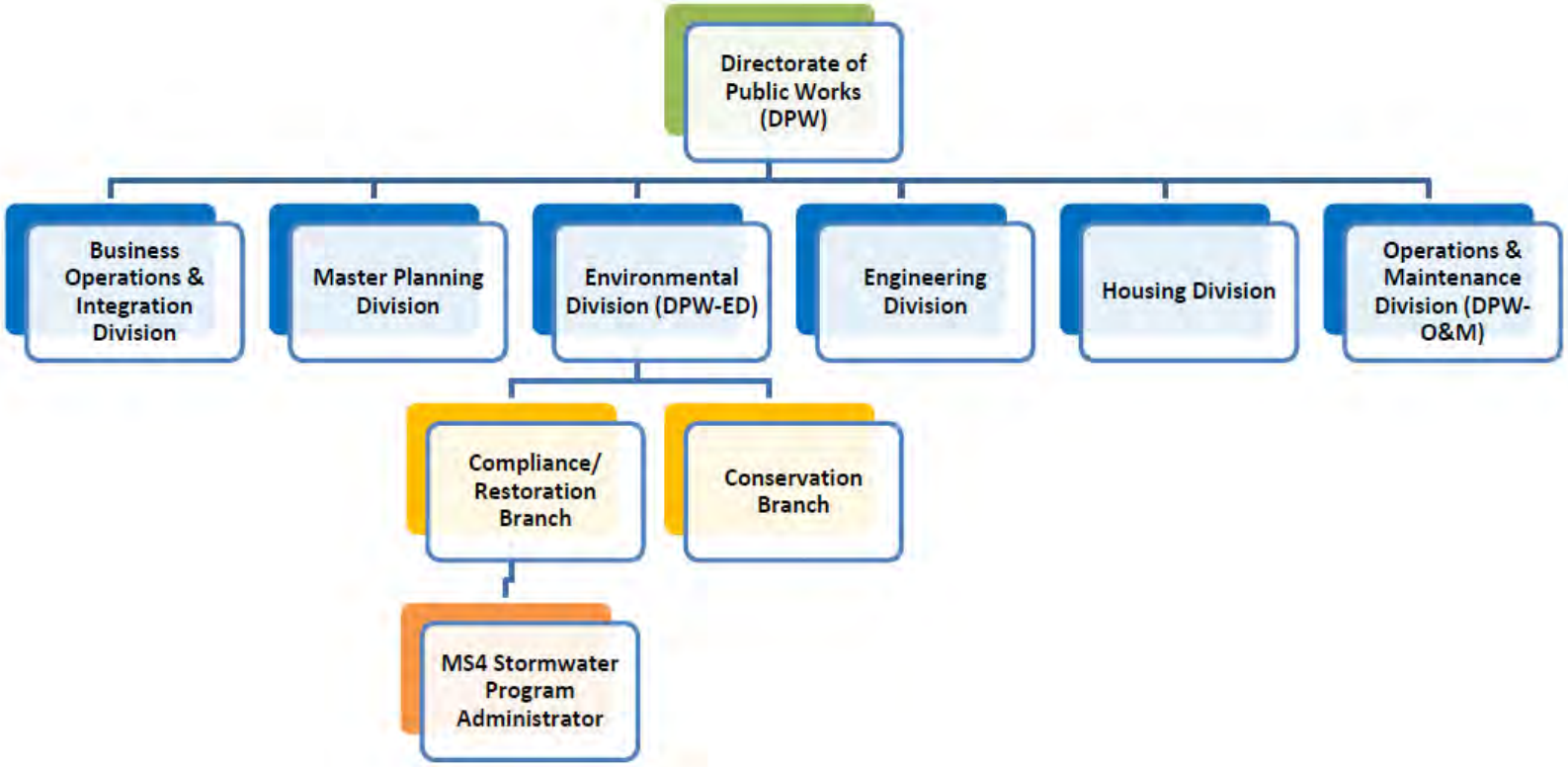


Figure 4: Directorate of Public Works Organization Structure

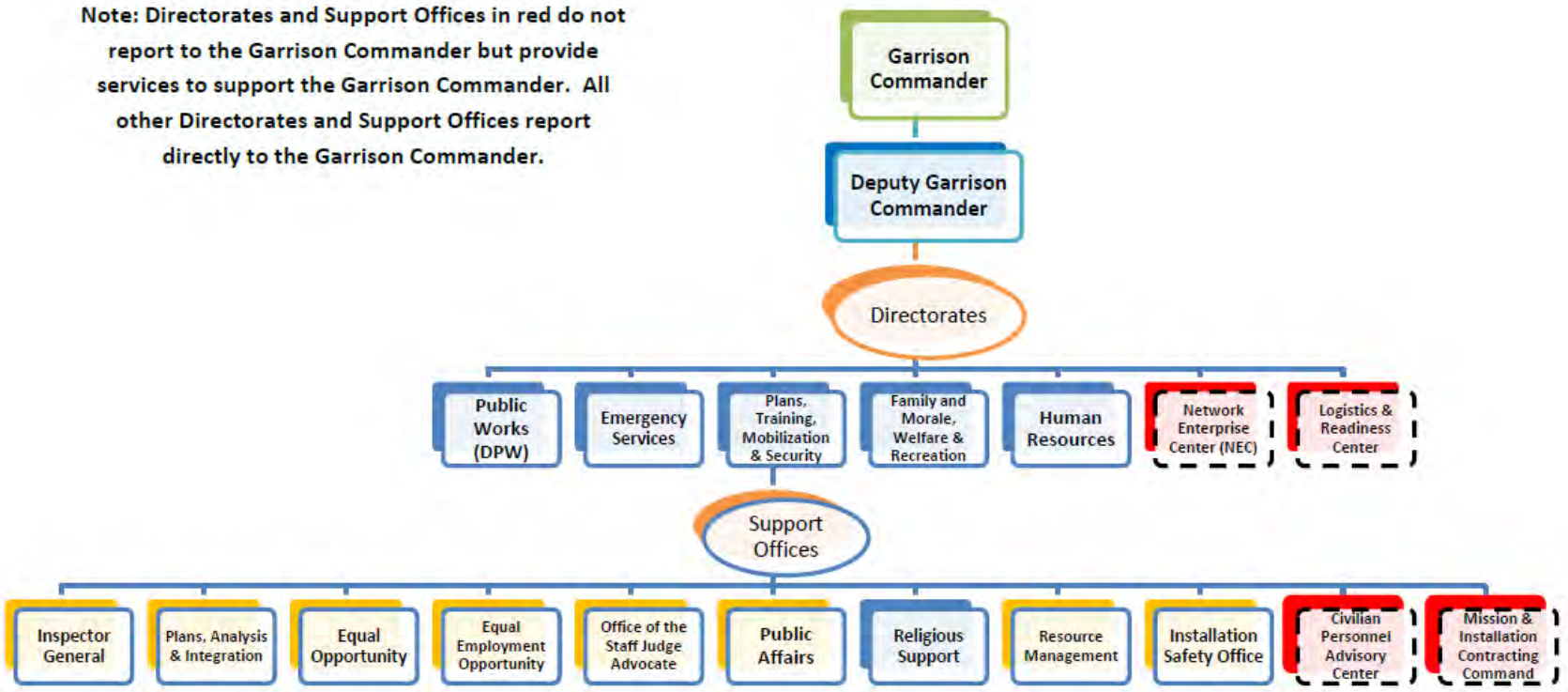


Figure 5: U.S. Army Garrison, Fort Belvoir Organization Structure

6. HYDROLOGIC UNIT CODES, WATERSHEDS, AND LAND USE

Fort Belvoir consists of approximately 8,500 acres and is divided into two broad land areas: Main Post and FBNA; with Main Post being located east of I-95 and FBNA being located west of I-95 (Figure 6: General Location Map).

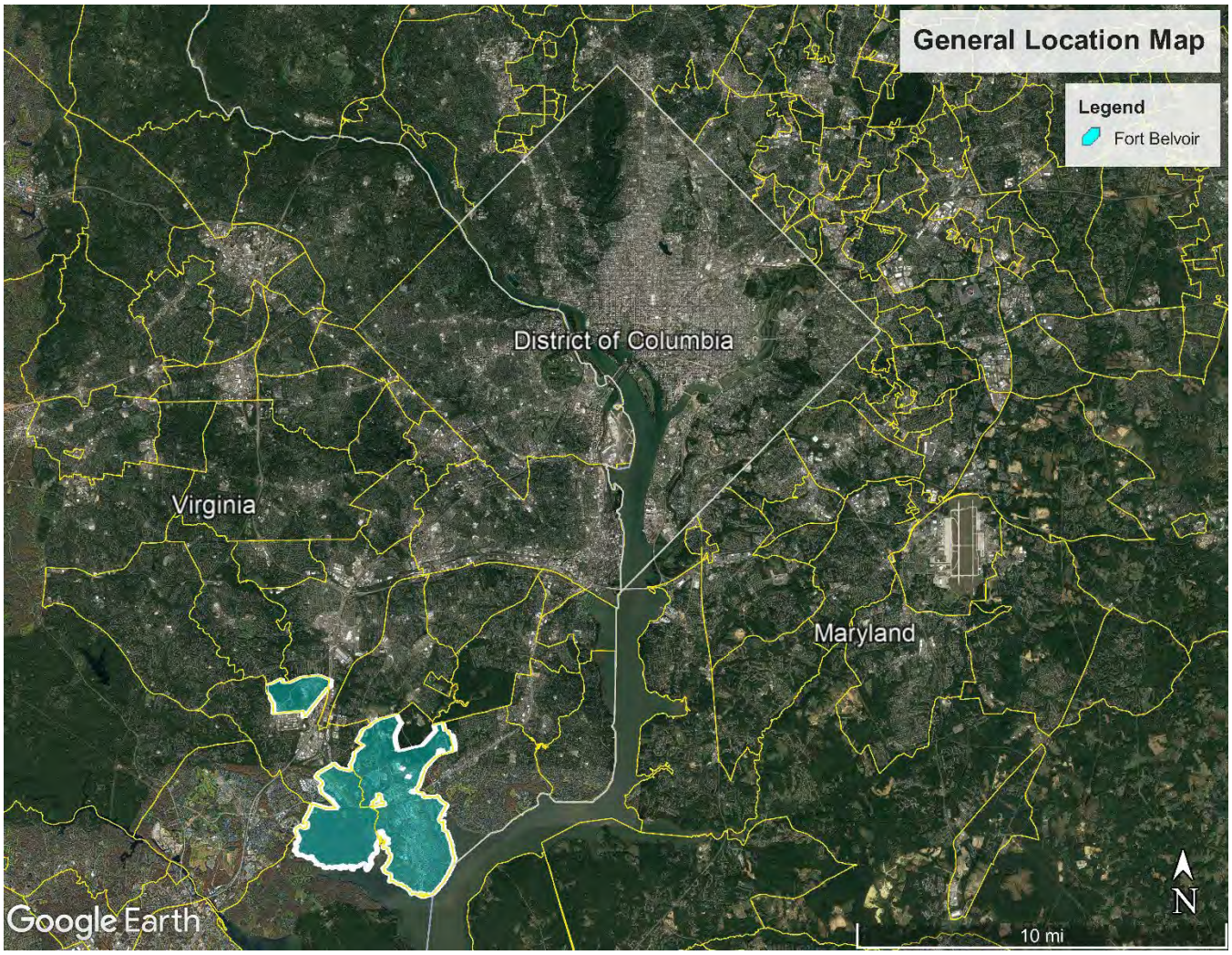


Figure 6: General Location Map

The Hydrologic Unit Codes (HUC) identified in the most recent version of Virginia's 6th Order National Watershed Boundary Dataset as receiving discharges or having the potential to receive discharges from the Fort Belvoir MS4 are as follows:

- PL27 (HUC12 = 020700100306) Dogue Creek
- PL28 (HUC12 = 020700100307) Potomac River-Little Hunting Creek
- PL29 (HUC12 = 020700100401) Pohick Creek
- PL30 (HUC12 = 020700100402) Accotink Creek
- PL50 (HUC12 = 020700100805) Potomac River-Occoquan Bay

These watersheds were determined by using the VADEQ Environmental Data Mapper of Virginia Hydrologic Units found at: https://apps.deq.virginia.gov/EDM/.

Figure 7 shows Fort Belvoir properties in reference to these watersheds. All stormwater discharges from Fort Belvoir eventually enter the Potomac River. The size of HUC watersheds within Fort Belvoir, the regulated portion, and associated land uses are described below. Data from the *2023 Draft Phase III Chesapeake Bay TMDL Action Plan* was used in this analysis.

6.1. DOGUE CREEK WATERSHED – PL27

The Dogue Creek Watershed encompasses approximately 1,777 acres of Fort Belvoir with approximately 970 acres regulated under the MS4 Permit. The other 807 acres are either regulated under a separate VPDES permit or are not considered urban in the 2010 census. Land uses in this watershed include:

- Outdoor Recreation areas: Jackson Miles Abbott Wetland Refuge and the T-17 Wildlife Refuge
- Residential areas: Woodlawn, George Washington, Cedar Grove, Dogue Creek, Park, River, Colyer, Lewis, Jadwin and Rossell Villages
- Professional/Institutional areas: Administration and education facilities including headquarters, Defense Acquisition University, and Missile Defense Agency
- Research and development area: Aerospace Data Facility-East (ADF-E)

6.2. POTOMAC RIVER-LITTLE HUNTING CREEK WATERSHED – PL28

The Potomac River-Little Hunting Creek Watershed encompasses approximately 220 acres. Land uses in this watershed include:

- Residential areas: Belvoir Village
- Community Space: Pool and Officer's Club

6.3. POHICK CREEK WATERSHED – PL29

The Pohick Creek Watershed encompasses approximately 1,191 acres and includes Fort Belvoir's Pohick Creek and Pohick Bay watersheds. Land uses in this watershed include:

- Ranges and Training area: Undeveloped wooded areas, stables, and operational ranges for engineer/troop training
- Outdoor Recreation area: A portion of the Accotink Bay Wildlife Refuge

6.4. ACCOTINK CREEK WATERSHED – PL30

The Accotink Creek Watershed encompasses approximately 4,694 acres and includes FBNA, approximately 803 acres. All FBNA falls within the regulated area designated in the 2010 census while only 801 acres of the main post are within the regulated area. Land uses in this watershed include:

- Outdoor Recreation areas: A portion of the Accotink Bay Wildlife Refuge on the main post and the Accotink Creek conservation Corridor at FBNA
- Residential areas: Herryford, Vernondale, and Gerber Villages

- Community areas: Post Exchange, National Museum of the United States Army, commissary, convenience store, gas station, bank and chapel, dining facilities, 36-hole golf course, elementary school
- Professional/Institutional areas: Administration and education facilities including Defense Logistics Agency (DLA), Hospital, Intelligence and Security Command (INSCOM)
- Research and development area: National Geospatial Agency (NGA), 300 Area
- Industrial Areas: Warehouses and storage facilities
- Troop areas: Davison Army Airfield (DAAF), motor pools, maintenance facilities

6.5. POTOMAC RIVER-OCCOQUAN BAY WATERSHED – PL50

The Potomac River-Occoquan Bay Watershed encompasses approximately 17 acres. Land uses in this watershed include:

- Research and development areas: 300 Area

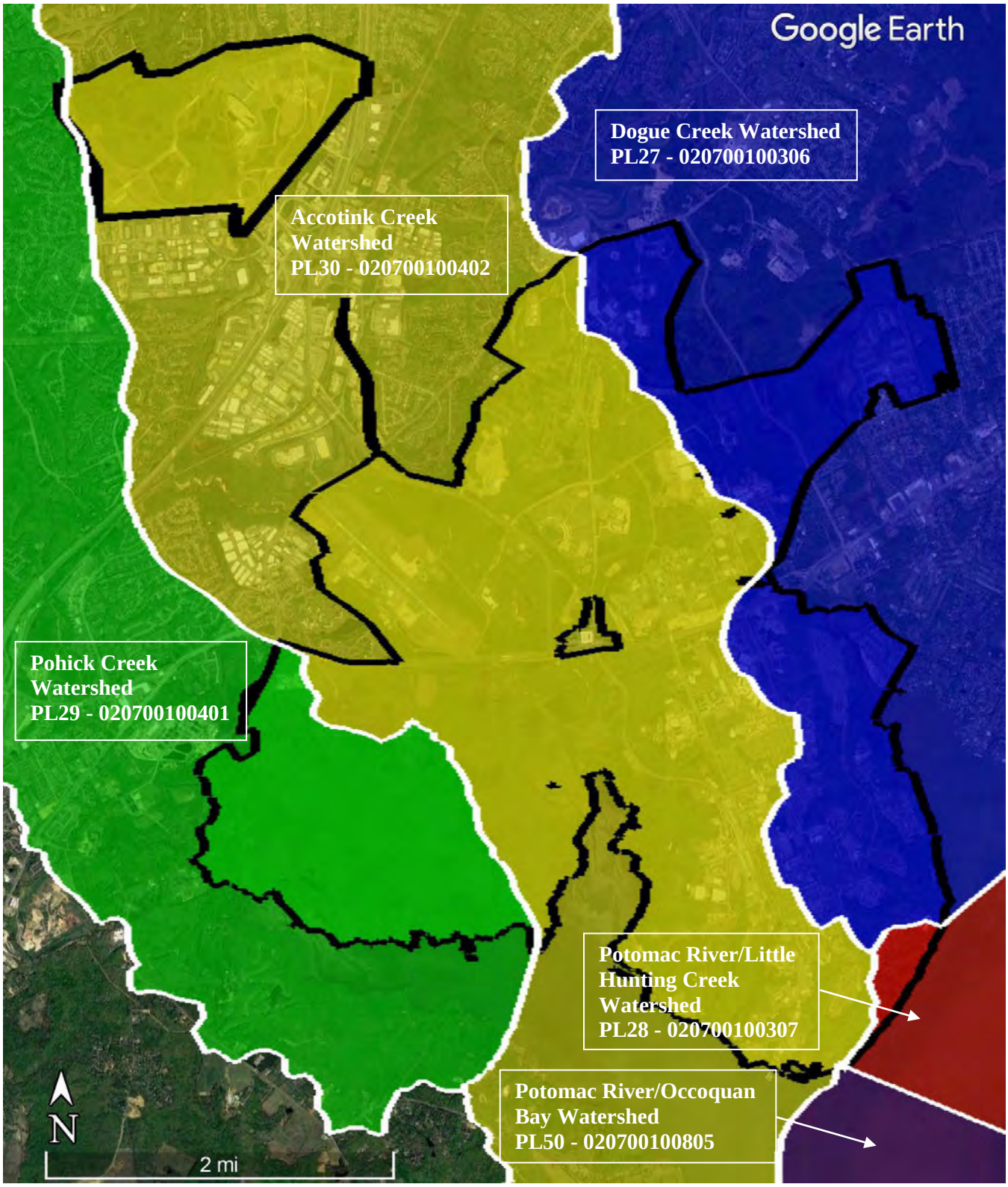


Figure 7: Hydrologic Units and Watersheds

7. IMPAIRED WATERS

Section 303(d) of the Clean Water Act and the U.S. EPA Water Quality Planning and Management Regulations (40 CFR Part 30) direct States to identify and list water bodies in which current required controls of a specified pollutant are inadequate to achieve water quality standards. For the Commonwealth of Virginia, impaired waters are outlined in the biennial Virginia Water Quality Assessment 305(b)/303(d) Integrated Report. The report defines water based on status of assessments as follows:

- 303 (d) – Category 5A – Waters needing a TMDL Study
- 303 (d) – Category 4A – Waters having an approved TMDL

Based on a review of the *Final 2022 305(b)/303(d) Water Quality Assessment Integrated Report* dated 23 September 2022 and approved by U.S. EPA on 21 October 2022, and Approved TMDL Reports located at https://www.deq.virginia.gov/our-programs/water/water-quality/tmdl-development/approved-tmdls, Fort Belvoir MS4 discharges into the following impaired receiving surface waters listed in Table 2.

Table 2: Impaired Surface Waters Receiving Discharge from USAG Fort Belvoir

Cause Group Code	Uses	Impaired Water Name	Assessment Unit	Cause	Category	Initial List Date	TMDL Name	SWCB/EPA Approval Dates
A12E-01-PCB	Fish Consumption	Potomac River Embayments Accotink Bay, Gunston Cove, Pohick Bay, Dogue Creek	VAN-A15E_ACO01A06 VAN-A15E_POH01A00 VAN-A15E_POH02A00 VAN-A16E_POH01A06 VAN-A14E_DOU01A00	PCBs in Fish Tissue	4A	2002	Tidal Potomac River PCB TMDL	4/11/2008 10/31/2007
A14R-02-BAC	Recreation	Dogue Creek	VAN-A14R_DOU01A04	E. coli	5A	2014	N/A	303(d) Low
A15E-01-PH	Aquatic Life	Pohick Bay	VAN-A15E_POH02A00	pH	5A	2012	N/A	303(d) Low
A15R-01-BAC	Recreation	Accotink Creek	VAN-A15R_ACO01A00	E. coli	4A	2004	Lower Accotink Creek Bacteria TMDL	4/28/2009 12/18/2008
A15R-01-BEN	Aquatic Life	Accotink Creek	VAN-A15R_ACO01A00	Benthos Assessment (Sediment and Chloride)	4A	1996	Lower Accotink Creek Chloride and Sediment TMDLs	4/12/2018 5/23/2018
A15R-01-PCB	Fish Consumption	Accotink Creek	VAN-A15R_ACO01A00	PCB in Fish Tissue	5A	2010	N/A	303(d) Low
A15R-02-CHLR	Aquatic Life; Wildlife	Accotink Creek	VAN-A15R_ACO01A00	Chloride	4A	2018	Lower Accotink Creek Chloride TMDL	4/12/2018 5/23/2018

Cause Group Code	Uses	Impaired Water Name	Assessment Unit	Cause	Category	Initial List Date	TMDL Name	SWCB/EPA Approval Dates
A16R-01-BAC	Recreation	Pohick Creek	VAN-A16R_POH01A00	E. coli	5A	2006	N/A	303(d) Low
POTTF-DO-BAY	Aquatic Life; Migratory Fish Spawning and Nursery; Open-Water Aquatic Life	Potomac River Embayments Accotink Bay, Gunston Cove, Pohick Bay, Dogue Creek	VAN-A15E_ACO01A06 VAN-A15E_POH01A00 VAN-A15E_POH02A00 VAN-A16E_POH01A06 VAN-A14E_DOU01A00	Dissolved Oxygen	4A	2014	Chesapeake Bay TMDL	N/A Ph. 1 12/29/2010 Ph. 2 3/30/2012

8. MINIMUM CONTROL MEASURES

The six minimum control measures (MCMs) described in 9VAC25-890-40 Part I.E are:

1. Public education and outreach
2. Public involvement and participation
3. Illicit discharge detection and elimination
4. Construction site stormwater runoff and erosion and sediment 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

For the MCMs discussed in *Minimum Control* Measures, the following information is provided for each as required (VPDES Permit #VAR040093, Part I.C.1.c):

1) Each specific requirement as listed in Part I E for each MCM;
2) A description of the BMPs or strategies that the permittee anticipates will be implemented to demonstrate compliance with the permit conditions in Part I E;
3) All standard operating procedures or policies necessary to implement the BMPs;
4) The measurable goal by which each BMP or strategy will be evaluated; and
5) The persons, positions, or departments responsible for implementing each BMP or strategy.

Key terms used throughout this section are defined as follows:

"Public": "Public" is not defined in the MS4 permit. However, VADEQ concurred with the following EPA statement, which was published in the Federal Register, Volume 64, No. 235, page 68,750 on 8 December 1999, regarding "public" and its applicability to MS4 Programs:

"EPA acknowledges that federal and state facilities are different from municipalities. EPA believes, however, that the minimum measures are flexible enough that they can be implemented by these facilities. As an example, DoD commentators asked about how to interpret the term "public" for military installations when implementing the public education measure. EPA agrees with the suggested interpretation of "public" for DoD facilities as "the resident and employee population within the fence line of the facility."

Therefore, Fort Belvoir adopts the EPA definition of "public" as the resident and employee population within the fence line of Fort Belvoir for compliance with the MS4 General Permit.

"Permit Cycle" as used under BMPs listed under each MCM is 1 November 2023 – 31 October 2028.

"Reporting Period" as used under BMPs listed under each MCM is 1 July – 30 June.

"Privately Owned" as used under BMPs listed in MCM#5 references SMFs or BMPs that are owned and operated by the privatized housing partner, Fort Belvoir Residential Communities Initiative (RCI), OR by tenant commands usually located within a controlled security area.

8.1. MINIMUM CONTROL MEASURE #1: PUBLIC EDUCATION AND OUTREACH ON STORMWATER IMPACTS

Per Part I.E.1.a, The Public Education and Outreach Program has been designed to:

1) Increase the public's knowledge of how to reduce stormwater pollution, placing priority on reducing impacts to impaired waters and other local water pollution concerns,
2) Increase the public's knowledge of hazards associated with illegal discharges and improper disposal of wastes, including pertinent legal implications, and
3) Implement a diverse program with strategies that are targeted toward individuals or groups most likely to have significant stormwater impacts.

Specific conditions outlined in the permit Part I.E.1.b, c, and d include the following:

1. Clearly identify no fewer than three high priority water quality issues,
2. Explain the importance of the high-priority stormwater issue,
3. Include measures or actions the public can take to minimize the impact of the high-priority stormwater issues,
4. Provide a contact and telephone number, website, or location where the public can find out more information, and
5. Utilize two or more of the strategies listed in Table 1 of the Permit to communicate to the public the high-priority stormwater issues identified and how to reduce stormwater pollution.

Two factors were evaluated to identify at least three high priority water quality issues pertinent to Fort Belvoir, the first being impaired waters and associated applicable TMDLs, and the second being land use categories and the associated human activities/potential pollutants.

USAG, FB MS4 discharges into the impaired receiving waters listed in Table 2. Based on the assessment, it was determined that TMDLs are already set for impaired water causal pollutants including bacteria (*E. coli*), nutrients (phosphorous and nitrogen), sediment, PCBs, and chloride. USAG, FB has developed and implements TMDL Action Plans associated with these pollutants detailing critical strategies for improvement as documented on the Action Plans built for the Chesapeake Bay TMDL, Accotink Creek Bacteria TMDL, Potomac River PCB TMDL, and Lower Accotink Creek TMDLs for chloride and sediment. Therefore, these are the main water quality issues as shown in Table 4.

In addition to the TMDLs, USAG, FB looked at Land Use Categories and associated operations to determine common pollutants based on activities occurring. Land Use Categories are identified in the *Real Property Master Plan – Installation Vision and Development Plan* dated May 2015. The Master Plan identifies seven (7) categories including:

1. Professional/Institutional: Includes administration and education facilities and research and development areas
2. Community: Includes retail-based activities (shopping, dining, and services) and outdoor recreation
3. Residential: Includes privatized housing villages
4. Troop: Includes troop-related barracks, fitness center, theater, maintenance facilities, motor pools
5. Industrial: two primary industrial areas that include storage facilities and warehouses
6. Ranges and Training: Includes one large range and training area
7. Airfield

Of these categories, five (5) out of seven (7) types of activities are found within the MS4 Regulated Service Area shown in Figure 1: Professional/Institutional, Community, Residential, Industrial, and Troop. The other two (2) categories are either in the conserved wildlife refuge area (Ranges and Training) or are covered under a separate VPDES permit (Airfield). Table 3 below summarizes the potential stormwater pollutants identified for each of these land use categories.

Table 3: Land Use Categories and Potential Stormwater Pollutants

Land Use Category	Potential Stormwater Pollutants
Professional/Institutional	Nutrients, sediment, litter, chlorides
Community	Nutrients, sediment, litter, pet waste, detergents, FOG (fats, oils, and grease), chlorides
Residential	Nutrients, sediment, litter, pet waste, detergents, FOG, solvents/degreasers, chlorides
Troop	Sediment, litter, detergents, solvents/degreasers, motor oil, hydraulic fluid, fuel, chlorides
Industrial	Nutrients, sediment, litter, detergents, solvents/degreasers, motor oil, hydraulic fluid, fuel, chlorides

Based on evaluation of the two factors discussed above, five high-priority stormwater issues were identified where Fort Belvoir could increase public knowledge and provide the public with measures/actions that can be taken to minimize their impact on water quality.

These issues included: sediment, nutrients, bacteria, chloride, and FOG. Rationale for identification of these issues is shown in Table 4 below.

In addition to these main five (5) high-priority issues, USAG, FB also tends to publish information on other lower priority pollutants/topics such as PCBs, littering, and detergent use regularly.

Table 4: High Priority Stormwater Issues Rationale

High Priority Stormwater Issue	Rationale
Bacteria	Bacteria has been identified as a significant water quality concern that is contributing to water quality impairments identified for Accotink Creek, Dogue Creek and Pohick Creek. The public have the potential to contribute to bacteria water quality impacts due to pet waste and improper disposal of FOG which can cause sanitary sewer overflows.
Nutrients	Nutrients have been identified as a significant water quality concern that is contributing to water quality impairments identified for the Chesapeake Bay and Accotink Creek. Excess phosphorous and nitrogen entering the storm sewer enhance the growth of harmful algae blooms which block sunlight from reaching underwater vegetation and create low oxygen zones which can suffocate aquatic life. The public have the potential to produce water quality impacts due to nutrients from grounds and lawn maintenance. This can be using fertilizers in the spring/summer as well as improperly managing leaf litter in the fall.
Sediment	Sediment has been identified as a significant water quality concern that is contributing to water quality impairments identified for the Chesapeake Bay and Accotink Creek.

High Priority Stormwater Issue	Rationale
	Sediment was chosen as a high priority stormwater issue because it degrades suitability of water for drinking, stresses aquatic life and vegetation, acts as a transport mechanism for nutrients and chemicals and fills up storm drains and inlets increasing the likelihood of localized flooding.
Chloride	Chloride has been identified as a significant water quality concern that is contributing to water quality impairments identified for Accotink Creek. Chloride is chosen as a high priority stormwater issue as Fort Belvoir works like a small city and needs to maintain roads and sidewalks to facilitate the troop movement. Large facilities used to store and manage salt may be a source of chloride damaging the Accotink Creek. Educating the public on the proper storage and application of salts during the winter months will assist Belvoir in managing chloride loads.
FOG (Fat, oil, and grease)	FOG has been identified as a significant water quality concern that has the potential to contribute to water quality impairments. FOG can have negative impacts on wastewater collection, treatment facilities and natural waterways. These types of pollutants can degrade water quality and impair the health of fish and wildlife habitats. Additionally, FOG is known to impair or clog the sanitary sewer system which can lead to sanitary sewer overflows, a source high in bacteria. Grease was chosen as a high priority stormwater issue as it is the most common pollutant found at high priority facilities. Proper grease management should be enforced for facility personnel and outside contractors. Motor Oils also fall into this category and are widely used by both the residential public as well as military personnel on duty. Proper management and disposal of oils (and other automotive fluids) can play a key role in minimizing stormwater pollution.
Other (PCBs, littering, and detergent)	PCBs have been identified as a water quality concern leading to impairments in the Potomac River. Based on the PCB TMDL Action Plan there are no longer any clear sources of PCBs on USAG, FB as all older PCB transformers have been replaced and sites with historical contamination have been remediated and capped. Detergents were identified as a potential concern due to vehicle or equipment washing operations, but USAG, FB has multiple washracks/car wash areas available which capture all runoff and route to the sanitary sewer. Littering is a concern whether it occurs intentionally or not. In general, littering can cause blockages in the system leading to flooding which in turn can carry more pollutants to waterways. Although these issues were found to be of lower priority, there are still efforts made to cover them periodically in educational materials released throughout the year. - PCB information is provided to hunters and fisherman via the iSportsman website. - Vehicle washing areas are advertised during training and in newspaper articles to encourage use of proper facilities and discourage the use of detergents with no controls. - Littering and proper dumpster management is covered in most educational material released to the public, discouraging illegal dumping.

Based on the types of pollutants identified as high priority stormwater issues, targeted audiences along with the strategies that will be used to reach them are identified below. Public education and outreach activities were chosen from Part I.E.1.d. Table 1 of the MS4 permit. All audiences identified below have the potential to contribute to or prevent stormwater pollution thereby directly impacting water quality.

- ***Housing Residents [1]:*** There are approximately 2,154 housing units located at Fort Belvoir with a total residential population of approximately 8,200. Occupancy rate stays at 96-97% all year long with a waitlist of approximately 400+ families. The average annual turnover rate is 45% - 50%.

  Outreach Strategies: Traditional Written Materials (Fact Sheets, Brochures, and Newsletters), Signage (Storm Drain Stenciling), and Media Materials (electronic media to include mass emails and Facebook; newspaper articles).

- ***Contractor Personnel [2]:*** A significant amount of activity occurring on Fort Belvoir is carried out by contractors for the types of services such as custodial, operations and maintenance, residential housing, and repair and construction. Approximately 2,800 contractors work on Fort Belvoir full time and additional contractors frequent the installation regularly for temporary projects.

  Outreach Strategies: Traditional Written Materials (Fact Sheets, Brochures), Signage (Storm Drain Stenciling) and Training Materials (Pre-Construction and SWPPP Training).

- ***Military Personnel [2]:*** Fort Belvoir has a military component of approximately 9,000 personnel that are active duty or reserves.

  Outreach Strategies: Traditional Written Materials (Fact Sheets, Brochures, and Newsletters), Signage (Storm Drain Stenciling), and Media Materials (electronic media to include mass emails and Facebook; newspaper articles) and Training Materials (SWPPP Training).

- ***Civilian Personnel [2]:*** Approximately, 23,300 civilian personnel are employed at Fort Belvoir.

  Outreach Strategies: Traditional Written Materials (Fact Sheets, Brochures) and Media Materials (electronic media to include mass emails and Facebook; newspaper articles).

  [1]Housing Residents Data: Data obtained from Chief, Housing Division
  [2]Contractor, Military and Civilian Population Data: Fort Belvoir Army Stationing and Installation Plan (ASIP) Fiscal Year (FY20) Summary

Planned education and outreach activities and tentative schedule are listed below in Table 5.

Table 5: Public Education and Outreach Program Tentative Schedule

SEASON	HIGH PRIORITY STORMWATER ISSUE	STRATEGY/OPPORTUNITIES
Fall	Sediment, Nutrients, FOG	**Media Materials:** Resident Newsletter, Belvoir Eagle, Facebook Page Article on ChesBay, Effect of Nutrients, or Problems with Leaf Litter

SEASON	HIGH PRIORITY STORMWATER ISSUE	STRATEGY/OPPORTUNITIES
	Bacteria	**Traditional Written Materials:** Pet Waste Brochure at Pooch Plunge Where: Pools and Community Centers
	Sediments, Nutrients, FOG	**Speaking Engagements:** STEAM Family Day Display
	Nutrients, Sediment, FOG, Chlorides	**Traditional Written Materials:** Fall Stormwater Newsletter Fall landscaping, Proper Grease Management, Reporting Construction Site Runoff, Dewatering Pools
Winter	Chloride	**Media Materials:** Resident Newsletter, Belvoir Eagle, Facebook Page Article on Chloride TMDL and Salt Application
	FOG, Chlorides	**Traditional Written Materials:** Winter Stormwater Newsletter Topics - Winterizing Equipment, Deicing/shoveling, Proper Salt Storage and Application
Spring	Nutrients, Sediment, Bacteria, FOG, Litter, Detergents	**Media Materials:** Resident Newsletter, Belvoir Eagle, Facebook Page Article on Fertilizer use, Stormwater Management Facilities, Litter and Flooding, Washing and Painting Activities, Outdoor Storage
	Nutrients, Sediment, Bacteria, FOG, Chlorides, Litter, Detergents	**Traditional Written Materials:** Spring Stormwater Newsletter Topics - Spring Cleaning and proper disposal, Fertilizer storage and Application, Spring Landscaping, Pet Waste, Construction Site Runoff
	Sediments, Nutrients, FOG	**Speaking Engagements:** Earth Day Display Missile Defense Agency (MDA) Take your Child to Work Day
	Bacteria, Nutrients, Sediment, FOG, Chlorides	**Traditional Written Materials:** Pollution Prevention Brochure Where: Community Centers, Outdoor Recreation Center, Hiking Trail Heads
Summer	Nutrients, Sediment, Bacteria, FOG, Litter	**Media Materials:** Resident Newsletter, Belvoir Eagle, Facebook Page Article on Summer Pollution Prevention, Stormwater Management Facilities, Volunteer Opportunities, or Sediment TMDL and Construction Site runoff
	Sediments, Nutrients, FOG, Litter, Detergents	**Speaking Engagements:** Safety Day Interactive Stormwater Display Resource Conservation and Recovery Act (RCRA) and/or Spill Response Training
	Nutrients, Sediment, Bacteria, FOG, Litter, Detergents	**Traditional Written Materials:** Summer Stormwater Newsletter Topics – Lawn Care, Pet Waste, Car Washing and Maintenance, Littering While Hiking, Construction Site Runoff

The Public Education and Outreach Program will inform civilian and military personnel, residents and contractors about the steps that can be taken to reduce stormwater pollution to the MEP. BMP 1.1 will be executed to satisfy the public education and outreach requirements set forth by VPDES Permit #VAR040093, Part I.E.1 (9VAC25-890-40).

BMP 1.1 IMPLEMENT A PUBLIC EDUCATION AND OUTREACH PROGRAM

- ***Measurable Goals:***
    - In permit year 1, review and revise the Public Education and Outreach Program to reflect the conditions set forth in the new MS4 permit (VPDES Permit #VAR040093, Part I.E.1.).
        - Ensure all contact information provided to the public is up to date and all communication avenues with the public are functional.
    - In permit years 1-5, in accordance with the Public Education and Outreach Program, outlined above, annually utilize two (2) or more of the public education and outreach strategies to communicate to the public the high priority stormwater issues. Utilize at least one (1) strategy each season (quarterly) to provide the public topical information on the impacts their activities can have on stormwater runoff and measures or actions they can take to minimize that impact.
    - In permit years 2-5, annually review the Public Education and Outreach Program and revise, as needed.
- ***Annual Reporting and Record Keeping:***
    - Include a list of the education and outreach activities conducted during the reporting period for each high priority water quality issue, the estimated number of people reached, a list of strategies used to communicate each high-priority stormwater issue, and a description of the activities conducted that included education regarding climate change.
    - Provide a summary of any revisions that were made to the Public Education and Outreach Program.
- ***Responsible Party:***
    - Directorate of Public Works Environmental Division (DPW ED) will develop and distribute materials as needed. DPW ED will coordinate with appropriate organizations (Morale, Welfare, and Recreation (MWR), Public Affairs Office (PAO), Schools, Safety Office, MDA, Housing, etc.) to ensure the widest distribution of materials and involvement in events possible.

8.2. MINIMUM CONTROL MEASURE #2: PUBLIC INVOLVEMENT/PARTICIPATION

Per Part I.E.2.a, The Public Involvement and Participation Program has been designed such that:

1) The public can report potential illicit discharges, improper disposal, spills to the MS4, complaints regarding land disturbing activities, or other potential stormwater pollution concerns;
2) The public can provide comments on the MS4 program plan;
3) The MS4 program can respond to public comments received on the MS4 Program plan; and
4) Documentation of public comments received on the MS4 program and associated MS4 program plan along with the permittee's response shall be maintained.

Specific conditions outlined in the permit Part I.E.2.b, c, and h include the following:

1) Existing permittee must update and maintain a webpage dedicated to the MS4 Program and stormwater pollution prevention;
2) Provide the webpage address which contains the methods for how the public can provide input on the permittee's MS4 Program and mechanisms for the public to report concerns;
3) Implement no fewer than four activities per year from two or more of the categories listed in Table 2 of the Permit to provide an opportunity for public involvement to improve water quality and support local restoration and clean-up projects; and
4) A description of the public involvement activities to be implemented by the permittee, the anticipated time period activities will occur, and a metric for each activity to determine if the activity is beneficial to water quality.

In May 2019, Headquarters, Department of the Army (HQDA) required standardization of all Department of the Army Facilities' webpages. HQDA provided a standardized webpage template that is approved for use by all Department of Army facilities. Information for the MS4 Program is required to follow the template that has been provided. Therefore, the MS4 Stormwater page is required to be housed within the contents of the Fort Belvoir Home Page. This fulfills the requirement for Fort Belvoir to maintain a webpage dedicated to the MS4 Program and stormwater pollution prevention.

The current webpage provides public access to all MS4 Program documents required under Part I.E.2.b of the Permit: all developed TMDL Action Plans, Technical Guidance Bulletins for Construction Projects, and Fact Sheets covering over 20 operational Best Management Practices (Fact Sheets and Master SWPPP are located under the Industrial Stormwater or ISW tab on the webpage). The MS4 Stormwater Program Administrator is responsible for ensuring that all permit-required MS4 Stormwater Program documents are posted on the Fort Belvoir Environmental Website under 'Programs and Documents' and then 'MS4 Stormwater Program'.

Procedures and methods that are being implemented for the public to provide input on the MS4 Program AND/OR report potential illicit discharges, improper disposal, spills to the MS4, complaints regarding land disturbing activities, or other potential stormwater pollution concerns are outlined on the Fort Belvoir Environmental Website and detailed as follows:

- **Input on the MS4 Program Plan** remains posted to the website continuously and comments may be submitted on this plan at any time by contacting the MS4 Stormwater Program Administrator. The MS4 Stormwater Program Administrator's contact number and email for reporting, issuing complaints, or providing input to documents can be found on the Fort Belvoir webpage and is as follows:

  MS4 Stormwater Program Administrator
  Telephone: 703-806-0627 or 0020
  Email: usarmy.belvoir.id-sustainment.mbx.dpw-enrd-stormwater1@mail.mil
  Facebook: @FortBelvoir Environmental

  Comments with responses that are received on the MS4 Program are provided in a summary of any public input for the permit reporting period in the annual report as required by Permit Part I.E.2.i.(1).

- **Input on TMDL Action Plans** is posted to the webpage for review and comment for a minimum of 15 days for public review/comment as specified in the Permit under Part II.A.13 and Part II.B.9. Comments may be provided to the MS4 Program Administrator via phone, email, or Facebook using

the contact information listed above. Facebook announcements are made, as needed, when a TMDL Action Plan is available for review and comment concurrent with a newspaper notification.

All comments are addressed prior to finalizing each TMDL Action Plan and actions taken to address any comments received are contained and detailed in the Public Comment Section of each individual Plan.

- **Reporting of Illicit Discharges or Other Stormwater Pollution Concerns** can also be done via phone, email, or Facebook using the contact information provided above. Additionally, the public may also report potential discharges, improper disposal, spills to the MS4, complaints regarding land disturbing activities, or other potential stormwater pollution concerns via an exclusive, easy to use, automatic report form provided at the top right corner of the Fort Belvoir Environmental Website. This reporting button, titled "Report Stormwater Pollution" is strategically highlighted in red to make it easily visible once someone accesses the website. Anonymous reporting is also supported with this report form, and acknowledgement of receipt of any online reporting is provided within one (1) business day unless the form is submitted anonymously.

  Facebook announcements are made periodically to notify and remind the public that they can use this avenue to report potential illicit discharges, improper disposal, spills to the MS4, complaints regarding land disturbing activities, or other potential stormwater pollution concerns.

The MS4 Stormwater Program Administrator monitors email and telephone messages daily, Monday – Friday. If the MS4 Stormwater Program Administrator is out of the office, an email message is activated to notify people on who they may contact for immediate response. The DPW Facebook Administrator also monitors Facebook daily, Monday – Friday.

When public input is received from the various electronic avenues discussed above, the MS4 Stormwater Program Administrator provides a response via the avenue that the input was received using the following protocols:

- Within one (1) business day of receipt, an acknowledgement that the comment or complaint has been received is sent via the avenue that the input was received.
- A response to comments on all documents for public review and comment is provided within ten (10) business days of receipt.
- If a complaint is received that warrants an investigation as it has the potential to be an illicit discharge, the complaint is investigated and documented in accordance with the procedures outlined in the *Illicit Discharge Detection and Elimination Plan*. A response report will be provided via the avenue that the complaint was received once the incident has been closed. Note that no deadline for response is provided for complaint investigations as resolutions are incident dependent.

Part I.E.2.d. of the permit states that the nontraditional permittees shall implement no fewer than four (4) activities per year from two (2) or more of the categories listed in Table 2 of the Permit to provide an opportunity for public involvement to improve water quality and support local restoration and clean-up projects. Table 6 identifies anticipated date, category, type of activity and metric for four (4) activities per year.

Table 6: Potential Public Involvement Opportunities

Time Period	Category	Type of Activity	Metric
Spring	Restoration	Potomac River Watershed Cleanup and Tree Planting	Number of Volunteers Number of bags of trash collected Number of trees planted
	Educational Event	Booth at Earth Day	Number of attendees
	Pollution Prevention	Promote the use of residential Stormwater BMP: Pet waste removal	Number of pet waste stations/number of educational signs
Summer	Educational Event	Booth at Safety Day	Number of attendees
	Disposal or Collection Events	Household hazardous chemicals collection	Number of items collected
Fall	Restoration	International Coastal Cleanup	Number of Volunteers Number of bags of trash collected
	Restoration	Public Lands Day Tree Planting	Number of Volunteers Number of trees planted
Winter	Educational Event	Stormwater Educational Events at the Fort Belvoir Library	Number of attendees
Fall & Spring	Restoration	Jeff Todd Way Clean-up	Number of Volunteers Number of bags of trash collected

The BMPs identified in this plan as BMP 2.1 through BMP 2.2 will be executed to satisfy the public involvement/participation outreach requirements set forth set forth by VPDES Permit #VAR040093, Part I.E.2 (9VAC25-890-40).

BMP 2.1 MAINTAIN A WEBPAGE DEDICATED TO THE MS4 PROGRAM AND STORMWATER POLLUTION PREVENTION

- ***Measurable Goals:***
  - Maintain the webpage with the following information as required by Part I.E.2.b.:
    - Effective MS4 Permit and coverage letter,
    - Current MS4 Program Plan,
    - Annual reports for each year of the term covered by the current permit,
      - Post copies within 30 days of submittal to VADEQ
    - Current Chesapeake Bay TMDL Action Plan
    - Implementation Annual Status Report for the Chesapeake Bay TMDL Action Plan for each year of the term covered by the current permit,
      - Post copies within 30 days of submittal to VADEQ
    - Quarterly checks of the information and reporting mechanism links to ensure functionality or early identification of issues.
  - Review and update the MS4 Program Plan at a minimum once per reporting period.
    - Post copies on the Fort Belvoir webpage within 30 days of updates.

    - Provide contact information where the public can submit comments on Stormwater Program documents and plans and report illicit discharges, improper disposal, spills to the MS4, complaints regarding land disturbing activities, or other potential stormwater concerns.
        - Maintain the Reporting/Complaint form established for reporting in November 2020 on the webpage that allows for direct submittal of a complaint to the MS4 Stormwater Program Administrator and provide responses to comments and concerns directly on the webpage to increase visibility and transparency.
- ***Annual Reporting and Record Keeping:***
    - In the annual report, provide a summary of any public input on the MS4 Program received (including stormwater complaints) during the reporting period and how the permittee responded.
    - Provide the webpage address to the MS4 Program and stormwater website.
- ***Responsible Party:***
    - DPW ED will coordinate with the Public Affairs Office (PAO) and the Network Enterprise Center (NEC) to revise the website as needed. DPW ED will maintain records on public input received and actions taken to address concerns.

BMP 2.2 IMPLEMENT PUBLIC INVOLVEMENT ACTIVITIES

- ***Measurable Goal:***
    - In permit years 1-5, implement no less than four (4) activities per year from two (2) or more of the categories listed in Permit Part I.E.2., Table 2 to provide an opportunity for public involvement to improve water quality and support local restoration and clean-up projects. Involve tenant agencies, schools, community partners and other members of the public with the goal of increasing public participation to reduce stormwater pollutant loads, improve water quality, and support local restoration and clean-up projects, programs, groups, meetings, or other opportunities for public involvement.
- ***Annual Reporting and Record Keeping:***
    - In the annual report, provide:
        - A description of the public involvement activities that were implemented during the reporting period,
        - Report of the metric as defined by each activity, and
        - An evaluation as to whether the activity is beneficial to improving water quality.
- ***Responsible Party****:*
    - DPW ED will be responsible for coordination of participation and development of presentations for educational events. DPW ED will coordinate Stream and Watershed Clean-ups, advertise for volunteers, and provide for clean-up materials and disposal of collected wastes as needed. DPW ED will maintain records of any events for a minimum of five (5) years.

8.3. MINIMUM CONTROL MEASURE #3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

Illicit discharges enter the municipal storm sewer system through either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., infiltration into the MS4 from cracked sanitary systems, spills collected by drain outlets, or paint or used oil dumped directly into a drain). The result is untreated discharges that contribute high levels of pollutants,

including heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria, to receiving waterbodies.

Per Part I.E.3.a, b, and c, The MS4 Illicit Discharge and Elimination Program shall include the following:

a) The development and maintenance of an accurate MS4 map and information table,
b) Prohibition, through ordinance, policy, standard operating procedures, or other legal mechanism, to the extent allowable under federal, state, or local law, regulations, or ordinances, unauthorized non-stormwater discharges into the MS4, and
c) Maintenance, implementation, and enforcement of IDDE written procedures designed to detect, identify, and address unauthorized non-stormwater discharges, including illegal dumping, to the MS4 to effectively eliminate the unauthorized discharge.

Most of these requirements are met through the development and implementation of *The U.S. Army Fort Belvoir Virginia Illicit Discharge Detection and Elimination Plan*, dated June 2024 (Fort Belvoir IDDE Plan). This Plan is incorporated by reference into this Program Plan and is available within 14 days upon request as required under Part I.E.3.d.(1).

The BMPs identified in this Program Plan as BMP 3.1 through BMP 3.3 summarize portions of the Fort Belvoir IDDE Plan and will be executed to satisfy the IDDE requirements set forth by Permit #VAR040093, Part I.E.3 (9VAC25-890-40) to protect receiving water quality.

BMP 3.1 MAINTAIN AN ACCURATE MS4 MAP AND INFORMATION TABLE

Fort Belvoir developed mapping data for all MS4 outfalls and SMFs during the 2018-2019 reporting year and now maintains the data as necessary. This mapping data assists Fort Belvoir in determining the spatial location of stormwater system components and enhances Fort Belvoir's ability to locate the receiving waters of a particular stormwater system if a spill or an illicit discharge is identified. The 2023-2028 MS4 General Permit uses data from the 2020 census which defines urban areas as having a minimum population of 50,000, and since Fort Belvoir does not meet that criterion, the regulated service area is still defined under the 2010 decennial census in addition to other areas Fort Belvoir identifies as within the regulated service area; see *Facility Background* and MS4 Regulated Service Area for additional information. Due to this, the MS4 map will continue to cover the storm sewer system owned or operated by the permittee within the census urbanized area identified by the 2010 decennial census.

As required by Part I.E.3.a.(1)(a)-(e), the map includes/shows:

a) MS4 outfalls discharging to surface waters,
b) A unique identifier for each mapped item,
c) The name and location of receiving waters to which the MS4 outfall or point of discharge discharges,
d) MS4 regulated service area, and
e) Stormwater management facilities owned or operated by Fort Belvoir.

Per Part I.E.3.a.(2)(a)-(g), Fort Belvoir maintains an outfall information table associated with the MS4 map that includes the following information for each outfall or point of discharge:

a) A unique identifier as specified on the MS4 map,
b) Latitude and longitude of the outfall or point of discharge,
c) Estimated regulated acreage draining to the outfall or point of discharge,

d) Name of the receiving water,
e) The 6th order Hydrologic Unit Code of the receiving water,
f) Receiving water impairment status as listed in the Virginia 2022 305(b)/303(d) Water Quality Assessment Integrated Report, if applicable, and
g) The name of the EPA approved TMDL that assigns a wasteload allocation to Fort Belvoir to which the outfall discharges to, if applicable.

Fort Belvoir led a large effort that was completed on 30 December 2018 to evaluate available GIS data, review of project site plans to be incorporated into the database, and field verification of structure locations. A GIS-compatible shapefile and information table was developed to meet all requirements of the previous permit cycle and was formerly submitted on 24 June 2019. A new effort must be completed no later than 24 months after permit issuance (permit deadline of 31 October 2025) to submit a new format file geodatabase or two shapefiles to meet new permit cycle requirements. This effort has, to date, not yet been completed, and this section will be updated once this occurs.

The current MS4 map and outfall information table is incorporated into this Program Plan by reference and is available upon request.

- ***Measurable Goal***:
  - Per Part I.E.3.a.(3), No later than 24 months after permit issuance, the permittee shall submit to Department of Environmental Quality (DEQ) a format file geodatabase or two shapefiles.
  - Per Part I.E.3.a.(5), No later than 1 October of each year, update the MS4 map and outfall information table to include any new outfalls constructed, TMDLs approved, or both during the immediate preceding reporting period.
- ***Annual Reporting and Record Keeping:***
  - In the annual report, a confirmation statement will be provided that a new format file geodatabase or two shapefiles has been submitted to DEQ as required, and the date this occurred or an estimated timeline if not yet completed.
  - In the annual report, a confirmation statement will be provided that the MS4 map and information table have been updated to reflect any changes to the MS4 occurring on or before 30 June of the reporting period.
  - The portion of the information table for new outfalls will be included as an appendix.
- ***Responsible Party:***
  - DPW ED will be responsible for gathering and maintaining records, as well as submission of the new geodatabase. The Fort Belvoir GIS Office is run through DPW Master Planning Division; therefore, Master Planning will be responsible for updating the GIS layers associated with the MS4 Program structures for any new projects.

BMP 3.2 PROHIBIT UNAUTHORIZED NON-STORMWATER DISCHARGES INTO THE MS4

Fort Belvoir Policy Memorandum #71, Prohibition of Illicit/Unauthorized Discharges into the MS4 and Waterways was an existing policy that prohibited unauthorized discharges into the MS4 as per Part I.E.3.b of the permit. A new Garrison Commander is currently in place at Fort Belvoir, and the policy memorandum is currently in staffing for signature into effect.

DPW Environmental will continue to work with the current Garrison Commander on a method to put the policy in place. Once successful, the policy will be posted on the Fort Belvoir website.

- ***Measurable Goal*:**
    - Review and revise Fort Belvoir Policy Memorandums, as needed, to meet new Command goals and obtain Garrison Commander approval and signature to put the required policy in place.
    - Once policy is in place: review, revise, and update as needed to obtain approval to maintain the policy when a new Garrison Commander takes command. The policy will then be posted to the Fort Belvoir website.
- ***Annual Reporting and Record Keeping*:**
    - In the annual report, provide narrative on any changes to the memorandum and a status of whether it is active or not due to a change in Command.
- ***Responsible Party:***
    - DPW ED will be responsible for maintaining, revising, and staffing of the policy memorandum for Command Approval. Garrison Command Staff will be responsible for enacting an enforceable policy prohibiting unauthorized discharges to the MS4 and local waterways.

BMP 3.3 MAINTAIN AND IMPLEMENT U.S. ARMY, FORT BELVOIR, VIRGINIA ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) PLAN

The Fort Belvoir IDDE Plan documents IDDE written procedures designed to detect, identify, and address unauthorized non-stormwater discharges, including illegal dumping, to the small MS4 to effectively eliminate the unauthorized discharge (Permit VAR040093, Part I.E.3.c.). These written procedures include:

1) A description of the legal authorities, policies, standard operating procedures, or other legal mechanisms available to eliminate identified sources of ongoing illicit discharges, including procedures for using legal enforcement authorities,
2) Dry weather field screening protocols to detect, identify, and eliminate illicit discharges to the MS4 including a prioritized schedule and recordkeeping,
3) A timeframe upon which to investigate to identify and locate the source of any observed unauthorized non-stormwater discharge,
4) Methodologies to determine the source of all illicit discharges,
5) Methodologies for conducting a follow-up investigation for illicit discharges that are continuous or are expected to occur more frequently than a one-time discharge to verify that the discharge has been eliminated, and
6) A mechanism to track and document all illicit discharge investigations.

The Fort Belvoir IDDE Plan is a large document and therefore, is incorporated into this MS4 Program Plan by reference and available upon request.

- ***Measurable Goals:***
    - Annually review and revise the Fort Belvoir IDDE Plan, as needed, including adding new outfalls to the screening prioritization list.
    - In permit years 1-5, implement the five-year plan.
    - Perform quarterly tests of the Stormwater Pollution Reporting button to test for functionality.
- ***Annual Reporting and Record Keeping:***
    - Document activities conducted and in the annual report.

  - Provide a summary of the total number of outfalls and observation points screened during the reporting period as part of the dry weather screening program (Outfall Reconnaissance Inventory).
  - Provide a summary of findings from performing windshield inspections across the eight (8) defined routes.
  - Provide a list of illicit discharges to the MS4 including spills reaching the MS4, per Part I.E.3.e.(3), detailing the following for each:
    - location and source of illicit discharge,
    - dates the discharge was observed, reported, or both,
    - how the discharge was discovered (dry weather screening, reported by the public, or other method),
    - how the investigation was resolved,
    - description of any follow-up activities, and
    - date the investigation was closed.
- ***Responsible Party:***
  - DPW ED is responsible for conducting dry weather outfall inspections, conducting windshield inspections, and responding to any public complaints on potential stormwater concerns. DPW ED also maintains all records and the tracker for IDDE Incidents.
    - Some IDDE incidents require structural work to be completed (i.e., rerouting of identified illicit connections or erosion issues). In these cases, whomever (tenant, unit, or DPW) is operating that facility will be responsible for submitting and tracking work requests. DPW Operations and Maintenance (O&M) Division is responsible for approving and coordinating such work requests. DPW O&M will coordinate with the appropriate entity to accomplish work requested by DPW ED. The Project Work Order (PWO) Review Board is responsible for reviewing and approving funding for such requests.

8.4. MINIMUM CONTROL MEASURE #4: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

Fort Belvoir is not required to operate an approved Virginia Erosion and Sediment Control Program (VESCP) and in accordance with Department of Army guidance has not developed standards and specifications for VADEQ review and approval. Therefore, VADEQ is the VESCP authority for Fort Belvoir. Fort Belvoir implements a program as per Permit Part I.E.4.a.(4) where DPW requires all project proponents to submit ESC Plans to VADEQ for review and approval and inspects all land disturbing activities of 10,000 square feet or greater. The following outlines how Fort Belvoir runs its MS4 Construction Site Stormwater Runoff Control Program.

All applicable guidance documents are made available to all designers, project proponents, contract specialists, and construction contractors during the Environmental Division project review process and are also posted on the Fort Belvoir Environmental Website under Programs and Documents, MS4 Stormwater Program. Fort Belvoir DPW guidance/policy documents include:

1. **MS4 Program Bulletin #1:** *Stormwater Management and Erosion and Sediment Control Compliance Requirements and Procedures for Land Disturbance* (revised 26 July 2023)
2. **ESC Technical Bulletin #1**: *Dewatering Operations* (revised 26 July 2023)
3. **ESC Technical Bulletin #2:** *Stormwater Pollution Prevention Plan Requirements* (revised 26 July 2023)

4. **ESC Technical Bulletin #3:** *Erosion and Sediment Control Requirements for Utility Installation* (revised 26 July 2023)
5. **ESC Technical Bulletin #4**: *Stormwater Pollution Prevention Requirements for Small Projects and Renovation Projects* (revised 26 July 2023)

The Fort Belvoir DPW MS4 Program Bulletin #1 outlines specific requirements of the MS4 Construction Site Stormwater Runoff Control Program for projects dependent on their size. A DPW ED plan reviewer conducts project review for projects that result in land disturbance equal to or greater than 2,500 square feet to assess any immediate impacts to MS4 and Industrial Stormwater outfalls to maintain compliance with Chesapeake Bay TMDLs. In general:

- Construction/maintenance/utility projects resulting in land disturbance between **2,500 square feet and less than 10,000 square feet** are required to submit ESC and SWM plans for DPW approval.
    - DPW issues a Land Disturbance Letter (signed by the Environmental Division Chief) to the construction contractor to authorize start of construction upon receipt of copies of the following documents:
        - DPW approved ESC and/or SWM Plan;
        - Responsible Land Disturber certification; and
        - DPW Excavation Permit.
    - These sites are monitored for compliance using the windshield inspections program detailed in the Fort Belvoir IDDE Plan.

- Construction/maintenance/utility projects resulting in land disturbance **equal to or greater than 10,000 square feet** are required to develop an ESC and SWM plan to comply with the 19 Virginia Minimum Standards (9VAC25-840-40) and be submitted to VADEQ for review and approval.
    - DPW issues a Land Disturbance Letter (signed by the Environmental Division Chief) to the construction contractor to authorize start of construction upon receipt of copies of the following documents:
        - VADEQ approved ESC and/or SWM Plan;
        - Responsible Land Disturber certification; and
        - DPW Excavation Permit.
    - Prior to start of construction, construction contractors are required to attend a pre-construction training that is conducted by DPW ED that reviews ESC expectations, inspections, common violations, and the progressive compliance enforcement strategy. During COVID or other restrictive circumstances, distance learning will be used, and the project team will need to provide a participation sheet where the personnel certify that they received, read, and understand the training material.

- Construction/maintenance projects resulting in land disturbance **equal to or greater than one (1) acre,** in addition to developing an ESC and SWM plan and submitting to VADEQ for review and approval, are also required to obtain a project specific Construction General Permit (CGP) from VADEQ prior to start of construction. Linear projects that are not covered under VADEQ approved Standards and Specifications resulting in land disturbance equal to or greater than one (1) acre are also required to obtain a project specific CGP from VADEQ prior to start of construction.
    - Construction contractors are required to attend a pre-construction training as discussed above, and

- DPW issues a Land Disturbance Letter (signed by the Environmental Division Chief) to the construction contractor to authorize start of construction upon receipt of copies of the following documents:
  - VADEQ approved ESC and SWM Plan;
  - CGP and approval letters;
  - Project-specific stormwater pollution prevention plan (if required);
  - Responsible Land Disturber certification; and
  - DPW Excavation Permit.
- Routine maintenance projects are exempt from obtaining a CGP if the project meets the exemption guidelines published in the Virginia Stormwater Management Act §62.1-44.15:34, i.e., "routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original construction of the project."

A plan review status spreadsheet is maintained internally to track internal comment review period deadlines, ensure plan review comments are adequately addressed, and to track acreages of disturbance.

Once construction begins, DPW ED utilizes Virginia State Certified ESC/SWM Inspectors to complete inspections of ongoing projects as per Part I.E.4.a.(4).(a)-(d) unless an alternate schedule is warranted. DPW ED Inspectors use standardized forms such as ESC/SWM Inspection Checklists to identify deficiencies and track repeat violations for construction activities that may require enforcement actions.

The BMPs identified in this plan as BMP 4.1 through BMP 4.3 will be executed to satisfy the construction site runoff control requirements set forth in Part I.E.4.d for entities that fall under the category listed in Part I.E.4.a.(4) (i.e. federal entity with no standards and specifications).

BMP 4.1 COMMUNICATE THE REQUIREMENTS OF THE MS4 PROGRAM

DPW ED uses several Bulletins, as listed above and shown in Appendix B, to communicate requirements of the MS4 Construction Site Stormwater Runoff Control Program to government staff, project proponents, designers, and construction contractors. These documents show the policies that are in place as applicable to each project based on size, permitting requirements, and who the authority for review, approval, and enforcement is. All Bulletins are available on the Fort Belvoir Environmental Website and are distributed as needed to all project proponents at the concept design phase of the project.

DPW ED distributes MS4 Bulletin #1 to designers for all projects with greater than 2,500 square feet of land disturbance. Bulletin #1 references the Fort Belvoir Home Page website address for copies of the MS4 General Permit and Fort Belvoir's Registration Statement as well as the URL address for Virginia Code for direct access to the MS4 General Permit, the Virginia Stormwater and Erosion & Sediment Control Regulations, and other documents that are frequently requested. The Bulletin is distributed during the project design phase and during excavation permit review meetings. ESC Bulletins #1-4 are distributed, as needed and applicable, based on the type or size of a project and what operations are involved.

- ***Measurable Goals*:**
  - Review, revise, and update MS4 guidance documents for distribution as needed but at least once annually.
    - Ensure all bulletins are properly updated to reflect current personnel.
  - Update the Fort Belvoir website with revised documents within 30 days of revision.
  - Conduct pre-construction training for projects over 10,000 square feet.

- ***Reporting and Record Keeping*:**
  - In the annual report, provide a summary of any reviews and updates of documents that were completed.
  - Provide the number of pre-construction meetings conducted and the amount of people trained.
- ***Responsible Party*:**
  - DPW ED is responsible for reviewing planned projects that may affect the MS4 during the internal National Environmental Policy Act (NEPA) or excavation permit review processes. The Bulletins are distributed by DPW ED as applicable dependent on the project.
  - DPW ED maintains the plan review status and excavation permit tracking spreadsheet which details information requested and provided for each project reviewed.
  - For larger projects, the project proponent is responsible for all submittals to VADEQ for approval and then subsequent submittals to DPW for coordination of Pre-Construction Training and/or Land Disturbance Letter.
  - DPW ED is responsible for maintaining the Bulletins which detail the processes and points of contact.

BMP 4.2 EROSION AND SEDIMENT CONTROL (ESC) SITE INSPECTIONS

Part I.E.4.d.(6) requires compliance with approved ESC plans shall be ensured by Fort Belvoir with written inspection procedures to include the following: a) an inspection checklist for documenting onsite ESC structures and systems are properly maintained and repaired when necessary, and b) a list of all associated documents utilized for inspections including checklists, approved ESC plans, and any other documents utilized including the inspection schedule. As per Part I.E.4.a.(4), active construction sites on Fort Belvoir that involve land disturbance of 10,000 square feet or greater are inspected:

- During or immediately following initial installation of erosion and sediment controls,
- At least once per every two-week period,
- Within 48 hours following any runoff producing storm event, and
- At the completion of the project prior to the release of any performance bond.

Fort Belvoir defines a "**storm event"** as a continuous time frame for which precipitation does not stop accumulating and has the potential to produce runoff. A storm event may last from several hours to several days and come at different intensities. An event is considered to have the potential for runoff when producing a 0.50 inches of rain or greater within a 24-hour period. Rainfall data is obtained from National Oceanic and Atmospheric Administration (NOAA) Weather Station at DAAF to determine when inspections are required after a storm event. In general, inspections will commence at the end of a storm event. A backup weather station located near Fort Belvoir named KVAALEXA402 or "Yacht Haven" can be accessed on the Weather Underground website.

ESC inspections may be suspended or conducted less frequently under the following conditions:

- If a storm event ends after hours on a Friday or during the weekend, then the post-storm inspection will be completed on the next business day (Monday). Construction site personnel, DPW government personnel, and contracted inspectors are unavailable as the government is closed for business on Saturday or Sunday and the construction site remains inactive.
- ESC inspections may be suspended in winter months during times when the ground is frozen until such time as the ground thaws and runoff would be expected to occur.

- A less frequent inspection schedule (minimum of one inspection/month, to include post-rain inspections) may be implemented if a construction project has suspended all activities and the site is stabilized until such time that the project resumes land disturbance activity.
- A less frequent inspection schedule (minimum of one inspection/month, to include post-rain inspections) may be implemented if a construction project has completed all land disturbing activity, has permanently seeded, and is just awaiting final stabilization.

All ESC Inspectors, whether Government or Contracted staff, maintain VADEQ Certificates of Competence for Inspector for Erosion and Sediment Control. All inspections are documented using the Fort Belvoir Erosion and Sediment Control Inspection Report (Appendix C). ESC inspection reports are distributed electronically to all appropriate project personnel within two (2) business days of the inspection via email.

- ***Measurable Goal*:**
  - Perform site inspections of 100% of active construction sites that involve land disturbance of 10,000 square feet or greater.
- ***Annual Reporting and Record Keeping*:**
  - In the annual report, provide a summary of the total number of ESC inspections conducted in the MS4 regulated service area for construction sites that involve land disturbance of 10,000 square feet or greater (Part I.E.4.e.(1)).
- ***Responsible Party*:**
  - DPW ED is responsible for maintaining certified personnel on staff to conduct required inspections, documenting each inspection using the appropriate forms, and maintaining a tracking sheet of projects, their total area of disturbance, and the number of inspections completed.

BMP 4.3 PROGRESSIVE COMPLIANCE AND ENFORCEMENT STRATEGY

Part I.E.4.d.(8) requires written procedures for requiring compliance through corrective action or enforcement action to the extent allowable under federal, state, or local law, regulation, ordinance, or other legal mechanisms.

Fort Belvoir implements the following compliance and enforcement strategy, as shown in Table 7 on the following page, to ensure that contractors are conducting land disturbance responsibly and in accordance with VADEQ ESC/SWM regulations. This strategy is also published in the MS4 Bulletin #1, discussed above, and covered in pre-construction trainings to provide construction contractors with compliance expectations.

- ***Measurable Goal:***
  - Implement the compliance and enforcement strategy when construction contractors fail to obtain proper permitting or have repeat non-compliance findings during regular ESC/SWM Inspections.
- ***Annual Reporting and Record Keeping*:**
  - In the annual report, provide a summary of enforcement actions taken to include the total number and type of enforcement actions taken (Part I.E.4.e.(2)).
- ***Responsible Party:***
  - DPW ED, Contracting Officer Representatives, Garrison Commander (as needed), VADEQ (as needed, for compliance assistance).

Table 7: Fort Belvoir's Compliance and Enforcement Strategy

Non-Compliance Item	DPW-ENV Action
Failure to obtain a Land Disturbance Letter prior to start of construction projects involving land disturbance of 2,500 square feet or greater.	1. Email notice of Non-Compliance sent to the Contracting Officer (KO) 2. Document in ESC inspection report
Failure to obtain a CGP and/or an approved SWM and/or ESC plan from VADEQ prior to start of construction projects involving land disturbance of 10,000 square feet or greater.	1. Email notice of Non-Compliance sent to the Contracting Officer (KO) 2. VADEQ Northern Regional Office notified via telephone within 24 hours of discovery 3. Stop Work Order is issued as necessary until all requirements are met
Failure to provide copies of approved SWM and/or ESC plans, CGP authorization letter, SWPPP and/or Responsible Land Disturber certification to DPW ED.	1. Email notice of Non-Compliance sent to the Contracting Officer's Representative (COR) 2. Land Disturbance letter not issued by DPW until approved plans, permits, SWPPP and Responsible Land Disturber certification are received by DPW ED
Non-compliance with ESC minimum standards (9VAC25-840-40), failure to update SWPPP, failure to install ESC measures as a first step before any land disturbance; failure to store construction materials correctly.	**1st Violation:** DPW ED Inspector notes on ESC inspection report with corrective action due date, and contractor is expected to complete the corrective action by the due date **2nd Violation:** Email warning notice sent to the Contract Representative from the MS4 Stormwater Program Administrator **3rd Violation:** Warning Letter sent to the Contract Representative signed by the Environmental Division Chief; a courtesy copy of the report will be provided to VADEQ staff administering the CGP (or ESC) program oversight **4th Violation:** Notice of Non-Compliance sent to the Contract Representative signed by the Garrison Commander **5th Violation:** Referred to VADEQ for compliance assistance
Release of any substance causing a reportable spill (including concrete wash out, paint runoff, or excess sediment).	DPW Director notified, and email warning notice sent to the Contracting Officer Representative (COR)

8.5. MINIMUM CONTROL MEASURE #5: POST-CONSTRUCTION RUNOFF CONTROL

Fort Belvoir is not required to operate an approved VSMP, and in accordance with Department of Army guidance has not developed standards and specifications for VADEQ review and approval. Therefore, VADEQ is the VSMP authority for Fort Belvoir. Fort Belvoir implements a program as per Permit Part I.E.5.a.(4) where DPW requires all project proponents to submit SWM Plans to VADEQ for review and approval, inspects all land disturbing activities of one (1) acre or greater, and implements a maintenance and inspection program for all installed SMFs. The following outlines how Fort Belvoir runs its MS4 Post-Construction Runoff Control Program:

All applicable guidance documents are made available to all designers, project proponents, contract specialist, and construction contractors during the Environmental Division project review process and are also posted on the Fort Belvoir Environmental Website under Programs and Documents then MS4

Stormwater Program as described in *Minimum Control* Measure #4: Construction Site Stormwater Runoff Control.

The MS4 Program Bulletin #1 outlines specific requirements for plan review and approval as applicable to the MS4 Post-Construction Runoff Control Program for projects dependent on their size. The Bulletin also outlines specific requirements of the Stormwater Management Plan requirements.

A DPW ED Stormwater program administrator/plan reviewer conducts project review for projects that result in land disturbance equal to or greater than 2,500 square feet to assess any cumulative impacts, impacts to MS4, stormwater management facilities, and Energy Independence and Security Act Section 438 (EISA 438) applicability. In general:

- Construction/maintenance/utility projects resulting in land disturbance **equal to or greater than one acre** are required to develop a SWM Plan for submittal to VADEQ for review and approval.
- Land disturbing projects that involve the construction of a federal **facility with a footprint that exceeds 5,000 square feet** are required to develop a SWM plan which demonstrates that the development or redevelopment project maintains or restores the predevelopment hydrology of the property regarding temperature, rate, volume, and duration of flow to the maximum extent technically feasible.
    - For determining whether EISA 438 has been adequately addressed, DPW ED Stormwater program administrator/plan reviewer uses the U.S. Environmental Protection Agency's *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act*.

A plan review status spreadsheet is maintained internally to track internal comment review period deadlines, ensure plan review comments are adequately addressed, and track acreages of disturbance and applicability of EISA 438.

Once construction begins, DPW ED utilizes Virginia State Certified ESC and SWM Inspectors to complete inspections of ongoing projects as described in *Minimum Control* Measure #4: Construction Site Stormwater Runoff Control. DPW ED Inspectors use standardized forms such as an ESC/SWM Inspection Checklist provided in Appendix C. These inspection reports are distributed to all appropriate project personnel within two (2) business days of the inspection. SMFs on active construction sites that involve land disturbance of one (1) acre or greater are inspected:

- Periodically during installation and construction of the permanent facility concurrently with the ESC inspections, and
- At the final closeout inspection.

For post-construction management of SMFs, Fort Belvoir implements an inspection and maintenance program as per Part I.E.5.b. All procedures developed to ensure adequate long-term operation and maintenance of SMFs are documented in *General Plan for Stormwater Management Facility Inspection and Maintenance*, dated September 2019, incorporated by reference into this Program Plan, and available upon request.

All Fort Belvoir SMFs owned or operated by DPW are considered "**publicly owned**" and are covered under the DPW O&M contract that is valid for five years (2023-2028). These public SMFs are inspected annually as per Part.I.E.5.b.(3) and are maintained by the O&M contractor. Inspection results and maintenance

requirements are reported back to DPW for recordkeeping and reporting purposes. Based on the contract requirements, once an inspection is completed, the O&M contractor is responsible for submitting work orders immediately if preventative or non-routine maintenance is required.

Some Fort Belvoir tenant commands and the privatized housing partner, RCI, have SMFs that are not owned or operated by DPW. These SMFs are considered "**privately owned**" and are not fully covered under the DPW O&M contract. These private facilities are inspected by DPW under the O&M contract at least once every 5 years per Part.I.E.5.c.(1).(a). These tenant commands and RCI are required to perform their own maintenance of SMFs within their secure facilities/ground lease areas. Maintenance responsibilities of SMFs in accordance with the MS4 permit requirements for:

- Tenant commands are specified in Interagency Agreements (IAA) that are maintained by the Directorate of Resources Management.
- RCI are outlined in a Ground Lease Agreement which is maintained by the Master Planning Division within DPW.

When the DPW ED inspections of privately owned SMFs note a deficiency, the inspection report and deficiency is forwarded to the appropriate tenant command or RCI for action. The tenant command/RCI is given 30 days to respond with a schedule of when the maintenance will be completed. If the private entities fail to respond to initial notification, DPW ED then prepares an official warning letter for the Garrison Commander's signature to be sent to the tenant command. If no action is taken after the issuance of the warning letter, as required by Part I.E.5.c.(2), Fort Belvoir utilizes its legal authority for enforcement of the maintenance responsibilities as specified in the Inter Service Support Agreement (ISSA) or Ground Lease.

Part III.C of the permit requires USAG, FB to maintain an electronic database or spreadsheet of all known SMFs (both public and private) that discharge into the MS4. The database shall also include all BMPs implemented to meet the Chesapeake Bay TMDL load reductions. Fort Belvoir developed mapping data for all MS4 outfalls and SMFs during the 2018-2019 reporting cycle and now maintains the data as necessary.

Per Part III.C.(1)-(10), Fort Belvoir maintains an information table that includes the following information for each SMF:

1. the BMP type,
2. the BMP location as decimal degree latitude and longitude,
3. the total number of acres treated by the facility/BMP to include a breakdown of pervious and impervious acres,
4. the date the facility was brought online,
5. the sixth order HUC and the name of any impaired water segments within each HUC listed,
6. whether the SMF or BMP is owned or operated by Fort Belvoir or another entity such as privatized housing or a tenant command,
7. whether or not the stormwater management facility or BMP is part of the Chesapeake Bay TMDL Action Plan, Local TMDL Action Plan, or both,
8. whether a maintenance agreement exists for privately owned SMFs or BMPs,
9. date of most recent inspection, and
10. Any other information specific to the BMP type required by the DEQ BMP Warehouse.

BMP 5.1 through BMP 5.2 will be executed to satisfy the post-construction runoff control requirements set forth by VPDES Permit #VAR040093, Part I.E.5. (9VAC25-890-40).

BMP 5.1 CONDUCT ANNUAL INSPECTIONS AND MAINTENANCE OF STORMWATER MANAGEMENT FACILITIES

- ***Measurable Goals*:**
  - Conduct inspections and maintenance of SMFs in accordance with the *General Plan for Stormwater Management Facility Inspection and Maintenance*, dated September 2019.
    - During permit year 1, ensure all outstanding work orders for maintenance needs are submitted.
  - Report inspection and maintenance to BMP Warehouse by 1 October annually.
  - Coordinate with tenant commands/RCI to ensure maintenance is completed for privately owned SMFs noted as deficient.
- ***Annual Reporting and Record Keeping*:**
  - Provide a narrative of total number of inspections conducted, the results of the inspections, and actions taken to address any identified deficiencies during the reporting period (Part I.E.5.e.(1).(a) and Part I.E.5.e.(2)).
    - Include a breakdown of number of SMFs that are privately owned.
  - Provide the number of enforcement actions initiated to ensure long-term maintenance of privately owned SMFs including the type of enforcement action during the reporting period (Part I.E.5.e.(1).(b)).
  - Provide a description of the significant maintenance, repair, or retrofit activities performed on all SMFs (does not include routine activities such as grass mowing or trash collection) during the reporting period (Part I.E.5.e.(3)).
- ***Responsible Party***:
  - DPW ED is responsible for reviewing, tracking, and reporting of inspections and maintenance both internally and to the DEQ BMP Warehouse. DPW ED also coordinates with tenant commands/RCI for privately owned SMF Maintenance and initiates any enforcement actions.
  - DPW O&M Division is responsible for the overall management of the O&M Contract including ensuring all required inspections and maintenance of publicly owned SMFs are being completed per contract specifications.
  - Specific tenant commands/RCI are responsible for maintenance of any privately owned SMFs located within their defined jurisdiction as dictated in their ISSA or Ground Lease.

BMP 5.2 MAINTAIN AN ELECTRONIC DATABASE OR SPREADSHEET OF SMFS THAT DISCHARGE INTO THE MS4

Fort Belvoir led a large effort that was completed on 30 December 2018 to evaluate available GIS data, review project site plans to be incorporated into the database, and field verify structure locations. A GIS-compatible shapefile and information table was developed to meet all requirements listed above. The SMF information table is incorporated into this Program Plan by reference and is available upon request.

- ***Measurable Goals*:**
  - The permittee shall use the DEQ BMP Warehouse to report BMPs that were not reported in accordance with Part III.B.1 or B.5 and were implemented as part of a TMDL action plan to achieve nitrogen, phosphorus, and total suspended solids reductions in accordance with Part II.A or B. The permittee shall use the DEQ BMP Warehouse to report any BMPs that were not reported in accordance with Part III.B.1, B.2, or B.5.

    - No later than 1 October of each year, USAG, FB shall electronically report new SMFs implemented and inspected during the reporting period using the DEQ BMP Warehouse. (Part III.B). Part III.B.1 includes SMFs from land disturbance of less than an acre and for which a CGP was not required.
        - During permit year 1, ensure all necessary updates to the BMP Warehouse are completed.
- ***Annual Reporting and Record Keeping*:**
    - Provide the number of SMFs and or BMPs that were brought online during the reporting period.
        - The portion of the information table for new SMFs will be included as an appendix.
    - Provide a confirmation statement that the SMF information was submitted through the Virginia CGP database for land disturbing activities for which a VPDES permit for Stormwater Discharges was obtained (Part I.E.5.e.(4)).
    - Provide confirmation statements that SMFs were electronically reported and that inspections were electronically reported along with a reporting date (Part I.E.5.e.(5) and (6)).
- ***Responsible Party*:**
    - DPW ED is responsible for final inspections of SMFs being brought online and reporting SMFs and/or BMPs into the DEQ BMP Warehouse.
    - Construction contractors are responsible for submitting as-builts, Notice of Termination to VADEQ, and reporting all SMFs into the CGP database.
    - DPW Master Planning is responsible for any GIS mapping updates for new facilities being brought online.

8.6. MINIMUM CONTROL MEASURE #6: POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

Pollution Prevention and Good Housekeeping is the assessment and subsequent alteration of municipal operations to reduce the amount of pollution entering the storm drain system and, eventually, receiving waters. A wide variety of land uses and activities such as roadways, parking lots, transportation and equipment garages, fueling areas, stockpiles of salt and other raw materials, waste handling and disposal, and parks maintenance, can be sources of stormwater pollutants which occur throughout USAG, FB. If practices are not in place to contain spills, manage trash, or handle non-stormwater discharges, these facilities/activities can be sources of stormwater pollutants.

Per Part I.E.6, The MS4 Pollution Prevention/Good Housekeeping Program shall:

1. Require through contract language, training, standard operating procedures, or other measures within the permittee's legal authority that contractors employed by the permittee and engaging in activities with the potential to discharge pollutants use appropriate control measures to minimize the discharge of pollutants to the MS4.
2. Maintain and implement written good housekeeping procedures for activities at facilities owned or operated by the permittee established in Part I.E.6.a for the following activities:
    a. Road, street, sidewalk, and parking lot maintenance and cleaning.
    b. Renovation and significant exterior maintenance activities not covered under a separate VSMP construction general permit.
    c. Discharging water from construction and maintenance activities not covered by another permit.
    d. Temporary storage of landscaping materials.

   e. Maintenance of permittee owned or operated vehicles and equipment.
   f. Application of materials, including pesticides and herbicides.
   g. Application of fertilizer as described in the nutrient management plans.
3. Identify which of the high priority facilities (HPF) in the MS4 service area identified by the 2010 census urban areas have a high potential of discharging pollutants.
   a. A site-specific SWPPP shall be developed, implemented, and maintained for each HPF identified as having a high potential to discharge pollutants.
   b. Annually review any HPF owned or operated by the permittee for which a SWPPP has not been developed no later than 30 June of each year to determine if the facility has a high potential to discharge pollutants. Develop a SWPPP if necessary.
4. Maintain and implement turf and landscape nutrient management plans that have been developed by a certified turf and landscape nutrient management planner in accordance with § 10.1-104.2 of the Code of Virginia on all lands owned or operated by the permittee where nutrients are applied to a contiguous area greater than one acre.
5. Develop a Training Plan in writing for targeted audiences identified in Part I.E.6.d and maintain documentation of each training event conducted identified in Part I.E.6.e.

The following contract specification, enforcement process, and BMPs identified in this plan as BMP 6.1 through BMP 6.4 will be executed to satisfy the pollution prevention/good housekeeping for municipal operations requirements set forth in Part I.E.6.

The O&M activities for USAG, FB are contracted through the MICC. The MICC maintains a contract incorporating any needed work for O&M of the installation, colloquially referred to as the Base Ops Contract. The Base Ops Contract specifies all requirements and standards, work management, and personnel qualifications.

The Defense Acquisition Regulations prescribes Clauses that are incorporated in the Base Ops Contract, which specify compliance measures. The Performance Work Statement (PWS) specifies the overarching contract requirements that apply for all Attachments and Technical Exhibits (TEs). The PWS requires on Contract Line Item 2.21.2 Environmental Compliance:

"The Contractor shall comply with all Federal, State, local and installation environmental laws, rules, and plans."

Requirements for MCM #6 are addressed in Attachment #4 – 408, Pavement Clearance, Attachment #5 – Facility Maintenance Vertical, and Attachment #6 – 420, Facility Maintenance Horizontal. Associated with these contract attachments are TEs that specify the details of each aspect of the work; including, but not limited to applicable BMPs, inspection forms and plans, maps, requirements, and deliverables. These attachments and TEs cover activities such as:

- Inspection and maintenance of structural stormwater controls such as hydrodynamic separation units (swirl concentrators), catch basins, SMFs, and oil/water separators.
- Storm sewer cleaning to remove build-up of sediment and debris that can block water flow.
- Street sweeping to remove large and small debris and pollutants that collect on city streets as well as snow removal to treat parking lots, roadways, and sidewalks or other paved surfaces.

The contract is directly overseen by the COR and Contract Performance Specialists (CPSs) that monitor contract performance and deliverables as their primary duty. The COR is in frequent contact with the KO at

the MICC for contract performance reporting and to discuss issues with the contract. Contract Deliverables must be received and performed work must be accepted for payment to be made. The CPSs inspect randomly selected lots and can reject the entire lot, if work on one or more of the samples of the lot is unacceptable. The COR can submit Contractor Deficiency Reports (CDRs) if work is not being performed in accordance with the contract, which are being submitted to the Contracting Officer for further action.

Deliverables are also being submitted to the MS4 Program Manager (PM) for review and acceptance. If they are acceptable, then the PM will notify the COR that the deliverables were accepted. If they are found to be deficient, the PM will contact the COR to request and obtain compliant information, data, and revised deliverables. The ultimate enforcement of the contract is through the KO at the MICC.

BMP 6.1 WRITTEN PROCEDURES FOR OPERATIONS AND MAINTENANCE ACTIVITIES

Operations and Maintenance activities are accomplished by the DPW O&M Division through the Base Ops Contract described above, which is valid for five years. The current contract has a period of performance from 7 September 2023 – 6 October 2028 and has TEs that specify the details of each aspect of the work performed including applicable BMPs.

Tenant commands not covered under the Base Ops contract conduct their own operation and maintenance (facility maintenance, pavement clearance (snow removal) and grounds maintenance) within their facilities as specified in IAAs maintained by the Directorate of Resources Management. Additionally, Fort Belvoir RCI, the privatized housing partner, also conducts their own operations and maintenance of the housing units located on Fort Belvoir as outlined in a ground lease agreement maintained by the Master Planning Division, DPW.

Part I.E.6.a requires that written procedures are designed to:

1. Prevent illicit discharges,
2. Ensure permittee staff or contractors properly dispose of waste materials, including landscape wastes and prevent wastes from entering the MS4,
3. Prevent the discharge of wastewater or wash water not authorized in accordance with 9VAC25-890-20 D 3 u, into the MS4 without authorization under a separate VPDES permit, and
4. Minimize the pollutants in stormwater runoff.

As there is not one consolidated O&M Division operating on Fort Belvoir, DPW ED has taken the approach of developing BMP Fact Sheets which can be distributed to various O&M contractors/tenant commands/privatized housing performing operations and maintenance functions on Fort Belvoir. Each fact sheet contains a description of the activity, guidelines that identify BMPs for stormwater pollution prevention, any maintenance, if required, and spill response procedures. When O&M activities not covered by an existing BMP fact sheet are discovered and found to be contributing to stormwater pollution, new fact sheets are developed. To date, fact sheets have been developed that address the following activities:

a. Above Ground Storage Tanks
b. Outdoor Storage and Handling of Materials and Waste
c. Outdoor Storage and Handling of Raw Materials and Waste
d. Salt Storage and Loading
e. Salt Application
j. Marina Activities
k. Fats, Oils, and Grease Handling
l. Firefighting Activities
m. Brine Mixing
n. Aircraft Deicing Operations
o. HVAC Coil Cleaning and Maintenance
p. Dewatering Activities

f. Aircraft, Vehicle, and Equipment Washing and Degreasing Activities
g. Aircraft, Vehicle, and Equipment Fueling
h. Aircraft, Vehicle, and Equipment Maintenance and Repair Activities
i. Hazardous Waste Handling and Disposal
q. PCB Awareness
r. Outdoor Pressure Washing
s. Blasting and Painting Activities
t. Landscaping/Ground Maintenance
u. Portable Toilets
v. Dumpster Management
w. Animal Waste

These BMP Fact Sheets are incorporated into the MS4 Program plan by reference, are available on the Fort Belvoir Environmental Webpage, and are available upon request.

- ***Measurable Goals*:**
  - Annually review BMP Fact Sheets and revise as needed.
  - Within 90 days of identification of a new activity/process that contributes to stormwater pollution, DPW ED will develop new process-specific BMP Fact Sheets.
  - New BMP Fact sheets will be posted to the website and distributed within 30 days.
- ***Annual Reporting and Record Keeping*:**
  - Provide a summary of any BMP Fact Sheets revisions (Part I.E.6.y.(1)).
  - Provide a list of new BMP Fact Sheets developed during the reporting period and information on distribution.
- ***Responsible Party:***
  - DPW ED is responsible for the development, maintenance, and distribution of BMP Fact Sheets. DPW ED also completes windshield inspections of all areas on the installation to ensure that Various Contractors/Tenant Commands/Privatized Housing Partner are applying BMPs while completing O&M functions within their specified areas.
  - DPW O&M Division is responsible for ensuring the Base Ops Contractor completes all contracted work as specified in the Attachments and TEs.

BMP 6.2 DEVELOP, IMPLEMENT, AND MODIFY STORMWATER POLLUTION PREVENTION PLANS (SWPPPS)

Part I.E.6.g requires Fort Belvoir to identify any new high-priority facilities located in the expanded 2020 census urban areas with a population of at least 50,000 within 12 months of state permit coverage (by 31 October 2024). Since Fort Belvoir does not have a population of at least 50,000, any newly identified HPFs will remain within the current MS4 service area as defined by the 2010 census urban areas. Part I.E.6.i requires a site specific SWPPP for each facility identified to be maintained and implemented. HPFs are defined as facilities that have a high potential for discharging pollutants and includes those facilities that are not covered under a separate VPDES permit and for which any of the following materials or activities occur and are expected to have exposure to stormwater resulting from rain, snow, snowmelt, or runoff:

1. Areas where residuals from using, storing, or cleaning machinery or equipment remain and are exposed to stormwater.
2. Materials or residuals on the ground or in stormwater inlets from spills or leaks.
3. Material handling equipment.
4. Materials or products that would be expected to be mobilized in stormwater runoff during loading/unloading or transporting activities (e.g., rock, salt, fill dirt).
5. Materials or products stored outdoors (except final products intended for outside use where exposure to stormwater does not result in the discharge of pollutants).

6. Materials or products that would be expected to be mobilized in stormwater runoff contained in open, deteriorated, or leaking storage drums, barrels, tanks, and similar containers.
7. Waste material except waste in covered, non-leaking containers (e.g., dumpsters).
8. Application or disposal of process wastewater (unless otherwise permitted).
9. Particulate matter or visible deposits of residuals from roof stacks, vents or both not otherwise regulated (i.e., under an air quality control permit) and evident in the stormwater runoff.

Fort Belvoir completed an evaluation of facilities during the last permit cycle (2018-2023) and identified 12 facilities that are not covered under a separate VPDES permit and met the description above. As required by Part I.E.6.k, all HPFs will be reevaluated for the non-exposure exemption as well as their potential to discharge pollutants annually, no later than 30 June each year. A modified Virginia DEQ No Exposure Certification Form is used to determine and document whether individual sites defined as an HPF are considered to have a high potential for discharging pollutants or if they qualify for the non-exposure exemption. Sites that are evaluated to have a high chance to discharge pollutants are assigned a MS4 HPF Identifier (ID) and a facility specific SWPPP is developed no later than 31 December of that same year, if one does not already exist.

SWPPPs have been developed for most HPFs and include the following as per Part I.E.6.j.

1. A site description that includes a site map identifying all outfalls, direction of stormwater flows, existing source controls, and receiving water bodies,
2. A description and checklist of the potential pollutants and pollutant sources,
3. A description of all potential non-stormwater discharges,
4. A description of all structural control measures,
5. A maintenance schedule for all SMFs and other pollutant source controls,
6. Written procedures designed to reduce and prevent pollutant discharge,
7. A description of the applicable training,
8. An inspection frequency of no less than once per year and maintenance requirements for site specific source controls, and
9. A log of each unauthorized discharge, release, or spill incident.

Table 8 below summarizes the MS4 HPFs, the status of SWPPP development, and the results of the 2022-2023 annual assessment.

Table 8: MS4 High Priority Facility Evaluations and Findings

MS4 HPF ID	Facility Name	Exposure Determination	SWPPP Development Status	Justification	2022-2023 Recommendation
MS4 HPF-001	Golf Course (Building 2920)	Low Potential to Discharge	Complete	The site is located outside of the regulated MS4 area and therefore no SWPPP is required. The facility also feeds to grass swales allowing for infiltration before entering a storm pond preventing pollutants from directly discharging to waterways.	**No Major Modifications to SWPPP** Maintain SWPPP to encourage current compliance status. **Note:** Portions of the Golf Course are currently covered under another VPDES permit. This SWPPP may require expansion in the future to cover these areas.

MS4 HPF ID	Facility Name	Exposure Determination	SWPPP Development Status	Justification	2022-2023 Recommendation
MS4 HPF-002A	Defense Army and Air Force Exchange Services (AAFES) PX (Building 2321)	High Potential to Discharge	Complete	The facility currently has a SWPPP, but site has been found to be out of compliance with requirements even after multiple rounds of training, increased inspections, and Grease Management and Spill Response Guides being posted around Facility.	**No Major Modifications to SWPPP** Maintain increased inspection schedule and routine windshield inspections of the area.
MS4 HPF-002B	AAFES Commissary (Building 2325)	High Potential to Discharge	Complete	The facility currently has a SWPPP, but site has been found out of compliance with requirements even after multiple rounds of training and increased inspections.	**SWPPP Developed, No Major Modifications to SWPPP** Maintain increased inspection schedule and routine windshield inspections of the area.
MS4 HPF-003	DLA Contract Yard	Non-Exposure	Complete	The facility currently has a SWPPP and has remained compliant with its requirements. Due to the lack of construction currently ongoing site has had minimal materials.	**No Major Modifications to SWPPP** Maintain SWPPP to encourage current compliance status and to cover any upcoming construction projects.
MS4 HPF-004	AMSA 91 Motorpool (Building 2292)	Non-Exposure	Complete	The facility currently has a SWPPP and has remained compliant with its requirements. The facility is also fitted with an OWS that feeds to sanitary and all runoff is captured by a storm pond preventing pollutants from directly entering the waterways.	**No Major Modifications to SWPPP** Maintain SWPPP to encourage current compliance status.
MS4 HPF-005	Caisson Stables (Building 3045)	Low Potential to Discharge	Complete	The facility currently has a SWPPP. Site personnel are aware of proper manure storage and disposal process.	**No Major Modifications to SWPPP** Maintain SWPPP to encourage current compliance status.
MS4 HPF-006	Auto Skills Center (Building 1462)	Low Potential to Discharge	Complete **CLOSED July 2021**	The facility ceased Operations in June 2021 and was vacated in July 2021. All materials were removed from the site, which is no longer a self-service auto center and has new management.	**SWPPP CLOSED** Operations ceased and therefore Facility specific SWPPP has been closed and archived. Master SWPPP updated to reflect Facility Closure.
MS4 HPF-007	Theote Road Housing Storage Yard	Low Potential to Discharge	Complete	The facility currently has a SWPPP and has remained compliant with its requirements.	**No Major Modifications to SWPPP** Maintain SWPPP to encourage current compliance status.
MS4 HPF-008	Housing Annex (Building 1108)	Low Potential to Discharge	Complete	The facility currently has a SWPPP and has remained compliant with its requirements.	**No Major Modifications to SWPPP** Maintain to encourage current compliance status.
MS4 HPF-009	Bowling Alley (Building 1199)	Non-Exposure	Complete	Although grease is managed outside in a dedicated storage location away from any inlets, no spills were noted at the facility and the probability of a spill entering the storm sewer system is	**SWPPP CLOSED** **Continue Training** as prescribed in the Training Plan focused on grease management and outdoor storage requirements.

MS4 HPF ID	Facility Name	Exposure Determination	SWPPP Development Status	Justification	2022-2023 Recommendation
				low. All conditions of a non-exposure were met.	
MS4 HPF-010	Fort Belvoir Community Hospital	Low Potential to Discharge	Not Required	All grease is managed outside; only small spills associated with the unloading of dumpsters were noted at the facility. The facility is also fitted with multiple structural BMPs including sand filters and storm ponds preventing the direct discharge of pollutants to waterways.	**SWPPP CLOSED** **Continue Training** as prescribed in the Training Plan focused on illicit discharges and targeting both Medical and Facilities personnel. **Continue Training** area via windshield inspection route 4.
Potential MS4 HPF-011	Burger King AAFES	Non-Exposure	Not Required	All grease is managed internally within the facility and pumped out regularly; the potential for pollutants to enter state waters is extremely low due to the oil/water/grit separator and infiltration basin available at the site. Additionally, any discharge from the infiltration basin enters an earthen channel over 500 ft long before entering any waterway.	**Continue Training** as prescribed in the Training Plan focused on grease management. Consider expanding training for connected AAFES shop focusing on spills and outdoor storage.
Potential MS4 HPF-012	Community Club (Building 1200)	Non-Exposure	Not Required	Although grease is managed outside, there is a dedicated storage location away from any inlets. Sheet-flow from the area enters a heavily wooded area and can infiltrate prior to reaching any waterway.	**Continue Training** as prescribed in the Training Plan focused on grease management and outdoor storage requirements.
Potential MS4 HPF-013	Precision Auto Tune Up Shop	Non-Exposure	Not Required	Although vehicle maintenance occurs on site, all source material is located under cover. Therefore, all conditions of non-exposure were met.	**Continue Training** as prescribed in the Training Plan focused on preventative maintenance and material management.

- ***Measurable Goals*:**
  - Implement facility specific SWPPPs throughout the year.
    - Review the contents of any SWPPP no later than 30 days after any unauthorized discharge, release, or spill.
    - Update SWPPP no later than 90 days after an unauthorized discharge.
  - No later than June 30 of each year, complete the annual HPF evaluation as described above.
    - If a facility is determined to have a high potential to discharge pollutants, a SWPPP will be developed no later than 31 December of that same year.
- ***Annual Reporting and Record Keeping*:**
  - Provide a confirmation statement that all HPFs were reviewed to determine if SWPPP coverage is needed during the reporting period (Part I.E.6.y.(2)).

  - Provide a summary of any new SWPPPs developed in accordance with Part.I.E.6.i that fall under the current MS4 regulated service area as defined under the 2010 census urban areas (Part I.E.6.y.(3)).
  - Provide a summary of any SWPPP modified in accordance with Part I.E.6.l or the rationale of delisting any HPF in accordance with Part I.E.6.n (Part I.E.6.y.(4) and (5)).
- ***Responsible Party:***
  - DPW ED is responsible for completing annual evaluations of HPFs, the development and modification of site specific SWPPPs, and tracking of unauthorized discharges that may result in SWPPP modifications.
  - Facility Operators are responsible for upkeeping the SWPPP and implementing requirements spelled out within at their respective facilities as per Part I.E.6.m.

BMP 6.3 IMPLEMENT NUTRIENT MANAGEMENT PLANS

Per Part I.E.6.p, Fort Belvoir maintains and implements turf and landscape nutrient management plans that have been developed by a certified turf and landscape nutrient management planner in accordance with §10.1-104.4 of the Code of Virginia, for all lands where nutrients are applied to a contiguous area greater than one acre. DPW ED, Conservation Branch has a Certified Turf and Landscape Management Planner on staff.

Fort Belvoir currently has six (6) Nutrient Management Plans that cover a total 231.4 acres in the MS4 service area and one (1) Nutrient Management Plan (Fort Belvoir Golf Club) that covers a total of 232.08 acres in the unregulated service area. Nutrient Management Plans are valid for three years and are reviewed and updated, as needed. The Nutrient Management Plans are incorporated into the MS4 Program plan by reference and are available upon request.

In general, if nutrients are being applied to achieve final stabilization of a land disturbance project, application of fertilizer follows the manufacturer's recommendations. A list of lands for which turf and landscape nutrient management plans are required and currently being implemented is provided in Table 9 below.

Table 9: Nutrient Management Plans

Date of Plan	Location	Acreage
30 June 2022	Fort Belvoir Residential Communities Initiative – A (Cedar Grove, Colyer, Gerber, Herryford, Lewis, Vernondale Villages)	61.0 acres
30 June 2022	Fort Belvoir Residential Communities Initiative – B (Belvoir, Jadwin, Fairfax, Park, Rossell Villages)	54.0 acres
21 July 2023	Fort Belvoir Residential Communities Initiative – C (Dogue Creek, Washington, River, Woodlawn Villages)	70.0 acres
2 February 2023	Fort Belvoir Golf Club	232.08 acres
28 July 2023	DLA/DCAA Headquarters Complex	33.0 acres
21 July 2023	Missile Defense Agency Headquarters	4.4 acres
18 March 2020	National Geospatial-Intelligence Agency Campus East	39.0 acres

- ***Measurable Goals*:**
  - Develop new Nutrient Management Plans, as needed, for lands where nutrients are applied to a contiguous area greater than one acre.

    - Review and update existing Nutrient Management Plans every three years, as needed, for the term of the MS4 permit.
        - During permit year 1, ensure all expired Nutrient Management Plans are reviewed, updated, and approved.
- ***Annual Reporting and Record Keeping*:**
    - Provide a summary of any new turf and landscape nutrient management plans developed that includes the location and total acreage of each land area and the date of the approved nutrient management plan (Part I.E.6.y.(6)).
    - Provide a summary of the existing plans that were reviewed and updated during the reporting period.
- ***Responsible Party***:
    - DPW ED is responsible for the management and development of Nutrient Management Plans.

BMP 6.4 IMPLEMENT AND MAINTAIN THE WRITTEN TRAINING PLAN

The Fort Belvoir Combined ISW and MS4 Stormwater Pollution Prevention Training Plan, dated May 2019 is a large document and therefore is incorporated into this MS4 Program plan by reference and is available upon request. The Training Plan enforces the written procedures established in accordance with Part I.E.6.a. and has been written to ensure the following, per Part I.E.6.d:

1. Field personnel receive training in the recognition and reporting of illicit discharges no less than once per 24 months,
2. Employees performing road, street and parking lot maintenance receive training in pollution prevention and good housekeeping associated with those activities no less than once per 24 months,
3. Employees working in and around maintenance, public works, or recreational facilities receive training in good housekeeping and pollution prevention practices associated with those facilities no less than once per 24 months,
4. Employees working in and around HPFs with a SWPPP shall receive training in applicable site-specific SWPPP procedures no less often than once per 24 months,
5. Employees whose duties include emergency response have been trained in spill response. Training of emergency responders such as firefighters and law enforcement officers on the handling of spill releases as part of a larger emergency response training shall satisfy this training requirement and be documented in the training plan.
6. Employees and contractors who apply pesticides and herbicides are trained or certified in accordance with the Virginia Pesticide Control Act. Certification by the Virginia Department of Agriculture and Consumer Services Pesticide and Herbicide Applicator program shall constitute compliance with this requirement.

The Training Plan manages certifications for employees meeting the qualification described in (1)-(6) above. Spill Response training is provided and documented by the Spill Response Program Manager and Directorate of Emergency Services (DES). As per Part I.E.6.e, documentation of each training event conducted is also kept in the plan and includes the following information:

1. The date of the training event,
2. The number of employees attending the training event, and
3. The objective of the training event.

- ***Measurable Goals*:**
  - Implement the Training Plan throughout the reporting cycle.
    - During permit year 1, ensure all outstanding HPF personnel are receiving direct training.
  - Review and revise the existing written Training Plan, as needed.
- ***Annual Reporting and Record Keeping*:**
  - Provide a list of training events conducted during the reporting period, the date of the training event, the number of employees who attended the training event, and the objective of the training (Part I.E.6.y.(7)).
  - Provide a summary of changes made to the Training Plan during the reporting period.
- ***Responsible Party:***
  - DPW ED is responsible for maintenance of the Training Plan, development of new training materials, and providing training to all applicable personnel.

9. TOTAL MAXIMUM DAILY LOADS (TMDLS) WASTE LOAD ALLOCATION (WLA)

Section 303(d) of the Clean Water Act and the U.S. EPA's Water Quality Planning and Management Regulations (40 CFR Part 30) direct States to establish a Total Maximum Daily Load (TMDL) for water bodies that are exceeding water quality standards. TMDLs represent the total pollutant loading that a waterbody can receive without violating water quality standards. The TMDL process establishes the allowable loadings of pollutants (waste load allocation (WLA)) needed to achieve and maintain water quality standards. Section (d)(1)(vii)(B) of 40 CFR §122.44 requires all new or revised NPDES permits to be consistent with assumptions and requirements of any applicable TMDL WLA.

The Commonwealth of Virginia, VADEQ regulates the management of pollutants carried by stormwater runoff under the VPDES program. TMDL WLAs are specifically addressed through the iterative implementation of programmatic BMPs. Part I.B of the permit states:

"For the purposes of this permit term, implementation of MCMs in Part I E and the Chesapeake Bay and local TMDL requirements in Part II (as applicable) consistent with the provisions of an iterative MS4 Program required pursuant to this general permit constitutes compliance with the standard of reducing pollutants to the MEP, provides adequate progress in meeting water quality standards, and satisfies the appropriate water quality requirements of the State Water Control Law and its attendant regulations."

The special conditions found within the General VPDES Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems at 9VAC-25-890-40 Part II.B.10 are stated as follows:

"The MS4 Program plan as required by Part I.B of this permit shall incorporate each local TMDL action plan. Local TMDL action plans may be incorporated by reference into the MS4 Program plan provided that the program plan includes the date of the most recent local TMDL action plan and identification of the location where a copy of the local TMDL action plan may be obtained."

Table 10 summarizes the TMDLs that have been issued and their applicability to Fort Belvoir MS4.

Table 10: TMDLs Issued Applicable to USAG Fort Belvoir

Name of Document	Document Date	Waste Load Allocation (WLA) for Regulated Stormwater (MS4)	Percent Reduction (%)
Total Maximum Daily Loads of Polychlorinated Biphenyls (PCBs) for Tidal Portions of the Potomac and Anacostia Rivers in the District of Columbia, Maryland, and Virginia	28 September 2007; revised 31 October 2007	Accotink Bay 0.0992 g PCBs/year Dogue Creek 20.2 g PCBs/year Gunston Cove 0.517 g PCBs/year Pohick Creek/Pohick Bay 13.5 g PCBs/year	92.0 65.7 87.1 61.2
Bacteria TMDL for the Lower Accotink Creek Watershed	September 2008	1.76E+12 cfu/year	97.0
Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorous and Sediment	29 December 2010	USAG Fort Belvoir was not assigned an individual WLA	N/A
TMDL for Benthic Impairments in the Accotink Watershed (Fairfax	18 April 2011	This TMDL established by the United States Environmental	N/A

Name of Document	Document Date	Waste Load Allocation (WLA) for Regulated Stormwater (MS4)	Percent Reduction (%)
County, City of Fairfax and Town of Vienna, Virginia)		Protection Agency, Region III was overturned in the U.S. District Court on 3 January 2013 and is not applicable.	
Volume III Chloride TMDLs for the Accotink Creek Watershed, Fairfax County, Virginia	30 August 2017	Aggregate MS4 WLA of 3,294,323 lbs/year for Lower Accotink Creek	N/A
Volume II Sediment TMDLs for the Accotink Creek Watershed, Fairfax County, Virginia	30 August 2017	235 tons/year	55.0

9.1. CHESAPEAKE BAY TMDL FOR NITROGEN, PHOSPHOROUS, AND SEDIMENT

The *Chesapeake Bay TMDL for Nitrogen, Phosphorous and Sediment* dated 29 December 2010 did not assign an individual WLA to Fort Belvoir. In response to this TMDL, the U.S. EPA required the individual States to submit Watershed Implementation Plans (WIPs). The Commonwealth of Virginia developed and submitted the following WIPs to address the Chesapeake Bay TMDL:

- Phase I Chesapeake Bay TMDL Watershed Implementation Plan, dated 29 November 2010.
- Phase II Chesapeake Bay TMDL Watershed Implementation Plan, dated 30 March 2012.
- Phase III Chesapeake Bay TMDL Watershed Implementation Plan, dated 23 August 2019.

The Phase III WIP identified planning goals for federal agencies which included:

- Federal agencies are expected to meet all applicable permit requirements and to achieve Local Area Planning Goal reductions. In addition, federal agencies are expected to:
    - Offset any increases in loads resulting from land use change through 2025.
    - Reduce nutrient loads from all onsite systems (septic and alternative onsite systems) on federally owned lands (6% Nitrogen reduction goal from 2017 levels).
- Virginia, Department of Defense, and other federal agencies will jointly develop a Memorandum of Understanding to formalize commitment to leading by example in meeting Chesapeake Bay water quality goals and achieving the necessary reductions.
- Based on the Phase II WIP, Virginia will continue to utilize MS4 permits to ensure that BMP implementation on existing developed regulated federal lands achieves nutrient and sediment reductions equivalent to Level 2 (L2) scoping run reductions by 2025. L2 implementation equates to an average reduction of:
    - 9% of nitrogen loads, 16% phosphorous loads and 20% of sediment loads from impervious regulated acres, and
    - 6% of nitrogen loads, 7.25% of phosphorous loads and 8.75% sediment loads beyond 2009 progress loads for pervious regulated acreage.
- Federal MS4 operators will be given three full permit cycles (15 years) to implement the necessary reductions to meet the L2 implementation levels.
    - No later than 31 October 2028, a total reduction of 100% of L2 shall be achieved (end of the 15-year period over three permit cycles).

USAG, FB has subsequently over the years published a Phase I, Phase II, and DRAFT Phase III Chesapeake Bay TMDL Action Plan. The following paragraphs will provide an overview of progress made over time.

The Phase I Chesapeake Bay TMDL Action Plan was submitted to VADEQ for review and approval on 30 September 2015 and was approved by VADEQ on 22 March 2016. The TMDL Action Plan concluded that approximately 30,600 pounds of Total Nitrogen (TN), 2,200 pounds of Total Phosphorous (TP) and 1.45 million pounds of Total Suspended Solids (TSS) are loaded into the waterways from Fort Belvoir annually, based on 2009 land use data.

Based on these baseline loads, Fort Belvoir was required to reduce nutrient loads by approximately 2,360 pounds of TN, 310 pounds of TP, and 265,800 pounds of TSS by the end of the third MS4 permit cycle. Fort Belvoir met pollutant load reductions using street sweeping, stream and shoreline restoration, and land use change BMPs. Implementation of the projects (2009 – 2015) in the Phase I ChesBay TMDL Action Plan resulted in annual reduction of pollutants of concern in the Potomac River Basin, as shown in Table 11.

Table 11: Phase I ChesBay Reduction Achieved by BMP Implementation

Pollutant of Concern	Annual Load Reduction (lbs/yr)	Percentage of L2 Reduction Achieved After Implementation
Total Nitrogen	2,664.79	109%
Total Phosphorous	681.53	289%
Total Suspended Solids	969,828	365%

The completed/implemented projects were found to far exceed the L2 reduction requirements for TN, TP and TSS. Therefore, no additional BMPs were identified that were required to be implemented to meet Level 2 scoping run pollutant load reductions by 2025. Stream and shoreline restoration and land use change BMPs were completed prior to the plan being finalized (between 2009 and 2015). The only BMP that is required to be conducted annually to maintain the annual load reduction credit is street sweeping.

A Draft Phase II TMDL Action Plan was submitted to VADEQ on 29 May 2018 for review and comment along with the General Permit Reapplication Package as required under Section I.C.5.b of the 2013-2018 General Permit. The Final Phase II TMDL Action Plan was updated and posted for a minimum of 15 days for public comments from 3 October 2019 until 25 October 2019. No comments were received, and the Plan was finalized and submitted to VADEQ in a letter dated 28 October 2019, as required by Part II.A.11 of the 2018 – 2023 MS4 General Permit.

In the Phase II TMDL Action Plan, Fort Belvoir looked at the required load reduction based on the original 2009 land use as well as the adjusted 2017 land use. Based on the urban area as characterized by the 2010 census, Fort Belvoir was required to reduce nutrient loads by approximately 2,500 pounds of TN, 236 pounds of TP and 183,700 pounds of TSS by the end of the third MS4 permit cycle. Fort Belvoir met and exceeded the pollutant load reductions based on both the 2009 and 2017 land use data using BMPs such as a Regional SMF, street sweeping, stream and shoreline restoration, and land use change BMPs. Additionally, the Phase II plan did not consider credits from approximately 250 urban structural BMPs installed on USAG, FB and took a conservative approach of assuming that street sweeping only occurred once per year. Implementation of the projects (2009 – 2018) considered in the Phase II ChesBay TMDL Action Plan resulted in annual reduction of pollutants of concern in the Potomac River Basin, as shown in Table 12.

Table 12: Phase II ChesBay Reduction Achieved by BMP Implementation

Pollutant of Concern	Land Use	Existing Regulated Acres[1] (2009)	Reduction based on 2009 Land Use[3] (lbs. /yr.)	Existing Regulated Acres[2] (2017)	Reduction based on 2017 Land Use[3] (lbs. /yr.)	Total Reductions Achieved[4] (lbs. /yr.)
Nitrogen	Urban Impervious	1050.73	***2,367.27***	614.5	***2,495.81***	***2,949.08*** *126% of 2009* *118% of 2017*
	Urban Pervious	1279.2		2,587.5		
Phosphorous	Urban Impervious	1050.73	***310.37***	614.5	***236.19***	***804.57*** *266% of 2009* *341% of 2017*
	Urban Pervious	1279.2		2,587.5		
Total Suspended Solids	Urban Impervious	1050.73	***265,825.51***	614.5	***183,757.45***	***1,033,048.73*** *390% of 2009* *562% of 2017*
	Urban Pervious	1279.2		2,587.5		

[1] Regulated Acres Calculated by the Phase I Chesapeake Bay TMDL Action Plan dated March 2016.
[2] Regulated Acres Calculated in this Phase II Chesapeake Bay TMDL Action Plan based on 2010 census urban area and additional urban areas considered by Fort Belvoir.
[3] Total Phase III Reductions (100%) as calculated using the adjusted loading rates provided in Part II.2 of the Chesapeake Bay TMDL Special Condition Guidance (GM 15-2005).
[4] Total achieved Reductions shown here are the sum of the reductions achieved through the implementation of all structural and non-structural methods using methodologies presented in Appendix V of GM 15-2005.

The *General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems, Permit #VAR040093* issued on 1 November 2023 required that no later than 12 months after the permit effective date, the permittee shall submit a Final Phase III Chesapeake Bay TMDL Action Plan. Prior to submittal of the action plan, the permittee shall provide for an opportunity for public comment on the additional BMPs proposed to meet the reductions in the Phase III Chesapeake Bay TMDL action plan for no less than 15 days (Part II.A.12.b and 13.).

A Draft Phase III TMDL Action Plan was submitted to VADEQ on 5 September 2023 for review and comment along with the General Permit Reapplication Package as required under Part III.M of the 2018-2023 General Permit. This Draft Phase III Action Plan is to be finalized and formally submitted within 1 year of the 2023-2028 General Permit effective date as required under Part II.12.b. The Final Phase III TMDL Action Plan is currently being prepared for submittal, and this section will be updated once complete. As such, it currently describes what was assessed and included within the Draft Phase III TMDL Action Plan.

Under the 2023-2028 General Permit, Fort Belvoir is required to achieve the 100% Chesapeake Bay TMDL reduction targets by 31 October 2028 for nitrogen and phosphorus. The required reductions in the Draft Phase III TMDL Action Plan were calculated for each permit cycle based on the Phase III WIP and MS4 General Permit special conditions, which state that MS4 permittees will need to meet L2 scoping reduction requirements for existing sources. During the first MS4 permit cycle (2013-2018), practices were implemented sufficient to achieve 5% of the L2 reduction target. During the second permit cycle (2018-2023), Fort Belvoir implemented additional practices sufficient to achieve 35% of the L2 reduction target, for a total of 40%. The remaining 60%, or total reduction targets, need to be met by 2028. The Chesapeake Bay Preservation Act requires these same reductions to be completed by 2025; therefore, 2025 was chosen as the target year. Next, all projects implemented by Fort Belvoir since the 2009 progress run for credits as

described in the VADEQ Guidance Memo 20-2003 were considered. The archived reductions from each implemented BMP were compared to the cumulative load reduction required by the end of the third permit cycle. Fort Belvoir met and exceeded the pollutant load reductions based on both the 2009 and 2023 land use data using BMPs such as urban structural SMFs, street sweeping, stream and shoreline restoration, and land use change BMPs. The analysis found that Fort Belvoir has both met and exceeded the required reductions for all phases. Table 13 below summarizes the progress towards meeting the 100% reductions.

Table 13: Phase III ChesBay Progress Summary on Meeting 100% Reductions

Pollutant of Concern	Land Use	Existing Regulated Acres[1] (2009)	Reduction based on 2009 Land Use[3] (lbs/yr)	Existing Regulated Acres[2] (2023)	Reduction based on 2023 Land Use[3] (lbs/yr)	Total Reductions Achieved[4] (lbs/yr)
Nitrogen	Urban Impervious	1050.73	***2,367***	611	***2,543***	***4,420*** *187% of 2009* *174% of 2023*
	Urban Pervious	1279.2		2,675		
Phosphorus	Urban Impervious	1050.73	***310***	611	***238***	***792*** *255% of 2009* *333% of 2023*
	Urban Pervious	1279.2		2,675		
Total Suspended Solids[5]	Urban Impervious	1050.73	***265,826***	611	***184,283***	***545,915*** *205% of 2009* *296% of 2023*
	Urban Pervious	1279.2		2,675		

[1] Regulated Acres Calculated by the Phase I Chesapeake Bay TMDL Action Plan dated March 2016.
[2] Regulated Acres Calculated in Phase II and Phase III Chesapeake Bay TMDL Action Plan based on 2010 census urban area and additional urban areas considered by Fort Belvoir.
[3] Total Phase III Reductions (100%) as calculated using the adjusted loading rates.
[4] Total achieved Reductions shown here are the sum of the reductions achieved through the implementation of all structural and non-structural methods. All calculations are provided in the following sections and were completed using methodologies presented in Appendix V of the Chesapeake Bay TMDL Special Condition Guidance (GM 20-2003).
[5] Although formerly required under the 2018-2023 permit cycle, sediment load reductions are no longer a requirement of the current 2023-2028 permit cycle but have been kept in this plan as a courtesy.

The BMPs for implementation of the approved Phase II ChesBay TMDL Action Plan have been incorporated into the MS4 Program Plan below. As goals of the Phase I , II, and III WIPs were found to have already been met by Fort Belvoir, the Draft Phase III ChesBay TMDL Action Plan focused on what should be done to maintain credits already achieved. This is reflected in the BMP CHESBAY.1 discussed below.

CHESBAY.1 CHESAPEAKE BAY TMDL ACTION PLAN IMPLEMENTATION

- ***Measurable Goal***:
    - Permit years 2-5 (2024-2028), Implement Action Plan to ensure credits are maintained including:
        - Inspection and maintenance of all urban structural SMFs where deficiencies noted during inspections are addressed within one (1) year.

        - Inspections and verification of the stream restoration projects considered in the plan shall occur once every five (5) years and deficiencies noted during inspections are addressed within one (1) year.
        - Inspections and verification of the shoreline management projects considered in the plan shall occur once every five (5) years and deficiencies noted during inspections are addressed within one (1) year.
        - Perform and document street sweeping as per the O&M Contract at a minimum of once per year.
- ***Annual Reporting and Record Keeping:*** In the annual report, provide a narrative on the progress of implementation to include:
    - A list of BMPs, not including annual practices, implemented prior to the reporting period including the number of BMPs for each BMP type, the estimated reduction of pollutants of concern achieved by each and reported in pounds per year, and a confirmation statement that the BMPs inspected were electronically reported using the DEQ BMP Warehouse (Part II. A.14.d),
    - A list of newly implemented BMPs including annual practices implemented during the reporting period that includes the following information for each reported BMP or a statement that no BMPs were implemented during the reporting period:
        - BMP type and location,
        - Estimated reduction of Pollutant of Concern (POC) achieved by each BMP and reported in pounds of pollutant reduction per year, and
        - Confirmation statement that the BMPs were electronically reported using the DEQ BMP Warehouse.
    - The progress, using the final design efficiency of the BMPs, toward meeting the required cumulative reductions for total nitrogen and total phosphorus (Part II. A.14.g), and
    - A list of BMPs that are planned to be implemented during the next reporting period (Part II. A.14.i).
- ***Responsible Party:***
    - DPW ED is responsible for reviewing, tracking, and reporting of inspections and maintenance and is responsible for funding and completing scoping for projects to complete verification of ChesBay BMPs required to maintain credits.
    - In cases where deficiencies are noted, whomever (tenant, unit, or DPW) is operating that facility will be responsible for submitting and tracking work requests. DPW O&M Division is responsible for approving and coordinating such work requests. DPW O&M will coordinate with the appropriate entity to accomplish work requested by DPW ED. The PWO Review Board is responsible for reviewing and approving funding for such requests.

9.2. BACTERIA TMDL FOR THE LOWER ACCOTINK CREEK WATERSHED

The Bacteria TMDL for the Lower Accotink Creek Watershed was approved by U.S. EPA on 18 December 2008 and subsequently by the State Water Control Board on 28 April 2009.

Part II.B.2.a of the VPDES Permit #VAR040093 issued on 1 November 2023 requires that:

"For TMDLs approved by the EPA prior to July 1, 2018, and in which an individual or aggregate wasteload has been allocated to the permittee, the permittee shall develop and initiate or update as applicable the local TMDL action plans to meet the conditions of Part II B.4, B.6, B.7, and B.8 as applicable, no later than 18 months after the permit effective date and continue implementation of the action plan."

The original Fort Belvoir Bacteria TMDL Action Plan was submitted to VADEQ for review and approval on 30 September 2016. The Plan received approval and became an enforceable part of the MS4 Program Plan in a letter from VADEQ dated 9 December 2016.

Review and updates to the Bacteria TMDL Action Plan were most recently completed in mid-2023 and finalized on 24 August 2023 to comply with the 2018-2023 General Permit.

Updates to comply with Part II.B.2.a of the new permit are currently under way, scheduled to be completed prior to the 1 May 2025 due date, and this section will be updated once completed.

The current Bacteria TMDL Action Plan dated 24 August 2023 is incorporated into the MS4 Program Plan by reference and is available on the Fort Belvoir Environmental Website or upon request. The Plan recommended BMPs that can be implemented under the MS4 permit to eliminate and/or minimize discharges of bacteria sources to the Lower Accotink. The focus of the BMPs selected for implementation are operational controls and involve educating Fort Belvoir tenants, partners, employees, and residents in the bacteria water quality issue and what their role is in mitigating and reporting.

BAC.1 BACTERIA TMDL ACTION PLAN REVISION AND REPORTING

- ***Measurable Goal***:
  - Consider potential bacteria sources for any new or proposed projects occurring within the Lower Accotink Creek Watershed. Ensure that proper control measures and/or strategies are selected and implemented as required by Part II.B.5.b and detailed in Table 5 of the MS4 General Permit.
  - Update the Action Plan as needed to include new sources and controls.
- ***Annual Reporting and Record Keeping:***
  - Provide a summary of any projects considered to be a potential source of bacteria and the strategies used for bacteria reduction and management.
- ***Responsible Party:***
  - DPW ED is responsible for reviewing planned projects that may affect the MS4 including TMDL goal during the internal NEPA or Dig Permit review processes. DPW ED maintains the plan review status and dig permit tracking spreadsheet which details information requested and provided for each project reviewed.

BAC.2 INCORPORATE BACTERIAL TMDL INFORMATION INTO MS4 TRAINING PROGRAM

- ***Measurable Goal:***
  - Include information on the Accotink Creek Bacteria TMDL, the most common sources of bacteria, and strategies for bacteria reduction within the Stormwater Pollution Prevention Plan (SWPPP) Training (Levels 1 and 2), General SWPPP Training (Level 3), and Pre-Construction Training (Level 5).
    - During permit year 1, ensure the Training materials for Levels 3 and 5 are updated.
- ***Reporting and Record Keeping:***
  - Provide a summary of the audiences reached via the training program.
- ***Responsible Party:***

- DPW ED is responsible for updating, coordinating, and providing training to SWPPP facilities and targeted audiences as specified in the Training Plan discussed in *Minimum Control* Measure #6: Pollution Prevention/Good Housekeeping for Municipal Operations.

BAC.3 PUBLIC EDUCATION AND OUTREACH

- ***Measurable Goal***:
  - Publish one (1) article annually which discusses the bacteria water quality issue, sources of bacteria, reporting information, and steps that can be taken to reduce bacteria sources.
  - Distribute Pet Waste brochures throughout the housing communities and at facilities operated by the Directorate of Family and Moral, Welfare, and Recreation (DFMWR).
    - During permit year 1, ensure DFMWR receives all applicable brochures for posting and distribution and coordinate with housing to participate in the Pooch Plunge event.
- ***Annual Reporting and Record Keeping:***
  - Provide a narrative on publication of the article to include the title, focus, and date published.
  - Provide a summary of the audiences reached and methods used to distribute Pet Waste Brochures.
- ***Responsible Party***:
  - DPW ED will develop and distribute materials as needed. DPW ED will coordinate with appropriate organizations (DFMWR, PAO, Schools, Safety Office, MDA, Housing, etc.) to ensure the widest distribution of materials and involvement in events possible as per the Education and Outreach Plan discussed in *8.1*.

9.3. POLYCHLORINATED BIPHENYL (PCB) TMDL FOR THE POTOMAC RIVER

The *Total Maximum Daily Loads of Polychlorinated Biphenyls (PCBs) for Tidal Portions of the Potomac and Anacostia Rivers in the District of Columbia, Maryland and Virginia* dated 30 September 2007 states under the section titled Implementation Plan Development that:

"The WLA component of the TMDL is implemented through the NPDES permit program."

Part II.B.2.a of the VPDES Permit #VAR040093 issued on 1 November 2023 requires that:

"For TMDLs approved by the EPA prior to July 1, 2018, and in which an individual or aggregate wasteload has been allocated to the permittee, the permittee shall develop and initiate or update as applicable the local TMDL action plans to meet the conditions of Part II B.4, B.6, B.7, and B.8 as applicable, no later than 18 months after the permit effective date and continue implementation of the action plan."

The original Fort Belvoir PCB TMDL Action Plan was completed in March 2013 and officially accepted on 16 December 2015 by VADEQ. Per the requirements of the 2018-2023 permit, this plan was reviewed and revised in January 2018. This revision assessed the applicability of current BMPs and recommended any changes to BMPs that were required to minimize discharge of PCBs as well as a sampling plan for outfalls that were identified as needing sampling.

The plan has since been reviewed annually to update status of sites under remediation, with the last major update completed in June 2023. For this update the public comment period involved the posting of the Draft plan on the Fort Belvoir Home Page under Environmental Documents for Stormwater on 24 July 2023. A

Notice of Availability for the document was additionally posted on the main Fort Belvoir Facebook page on 28 July 2023.

Fort Belvoir provided for the public comment period to be open until 13 August 2023 allowing for at least 15 days for public comment. Fort Belvoir DPW did not receive any comments during this period.

The PCB TMDL Action Plan recommended BMPs that can be addressed under the MS4 permit to eliminate and/or minimize discharges of PCBs as well as a sampling plan for outfalls that were identified as requiring monitoring. The current PCB TMDL Action Plan dated 22 August 2023 is incorporated into the MS4 Program Plan by reference and is available on the Fort Belvoir Environmental Website or upon request. The BMPs PCB.1, PCB.2, and PCB.MP13 recommended for implementation within the 2023 PCB TMDL Action Plan have been incorporated into the MS4 Program Plan and are discussed below.

PCB.1 DISTRIBUTE EDUCATIONAL MATERIALS ABOUT PCBS

PCB fact sheets and brochures were produced as a part of the PCB TMDL Action Plan to include basic information on PCBs, their hazards, identification of PCB containing equipment, and reporting procedures. Additionally, training slides on the PCB TMDL have been developed, highlighting identification, and reporting of possible PCB leaks, and have been incorporated into MS4 training materials.

- ***Measurable Goal***:
  - Annually review and revise, as needed the PCB educational materials.
  - Annually distribute PCB Brochures to outdoor recreation by ensuring it is posted at trail heads and by maintaining posting on iSportsman Website.
- ***Annual Reporting and Record Keeping:***
  - Provide a narrative on any revisions made to educational materials.
  - Provide a narrative on locations, events, and/or entities to which educational materials are posted or distributed.
- ***Responsible Party:***
  - DPW ED will coordinate with various departments to ensure widest dissemination of information.

PCB.2 IMPLEMENT PCB SAMPLING PLAN

- ***Measurable Goal***:
  - Implement the Sampling Plan, provided in Section 10 of the PCB TMDL Action Plan throughout the 5-year MS4 permit cycle.
  - Monitor remediation efforts and status for active RCRA sites (MP11 and MP13) until site closure is reached.
- ***Annual Reporting and Record Keeping:***
  - Provide a narrative on the progress of the sampling effort and sampling results as compared to water quality criteria for PCBs.
  - Provide a narrative on the status of each historical PCB site under remediation until closure is reached.
- ***Responsible Party***:
  - DPW ED will ensure sampling occurs per the plan. DPW Restoration is responsible for site remediation under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or RCRA authority.

PCB.MP13 MAINTAIN A VEGETATIVE CAP AT HISTORICAL PCB SITE MP-13

- ***Measurable Goal***:
  - Use weekly windshield inspections to periodically inspect the site for erosion and bare areas.
- ***Annual Reporting and Record Keeping:***
  - Provide a narrative on whether any issues were noted at MP-13 and any Corrective Actions taken to prevent deposition of sediment from the site.
- ***Responsible Party:***
  - DPW ED is responsible for conducting windshield inspections as a part of the IDDE program discussed in *8.3*.

9.4. SEDIMENT TMDL FOR LOWER ACCOTINK CREEK

The Lower Accotink Creek Sediment TMDL approved by the State Water Control Board (SWCB) on 12 April 2018 and approved by the Environmental Protection Agency (EPA) on 23 May 2018.
Part II.B.2.b of the VPDES Permit#VAR040093 issued on 1 November 2023 requires that:

"For TMDLs approved by EPA on or after July 1, 2018, and prior to October 31, 2023, and in which an individual or aggregate wasteload has been allocated to the permittee, the permittee shall develop and initiate implementation of action plans to meet the conditions of Part II B.4, B.5, B.6, B.7, and B.8 as applicable for each pollutant for which wasteloads have been allocated to the permittee's MS4 no later than 30 months after the permit effective date."

The original Fort Belvoir Lower Accotink Creek Sediment TMDL Action Plan was completed during the 2018-2023 General Permit cycle, submitted to VADEQ on 23 February 2021, and was accepted 15 October 2021 with the caveat that the Action Plan would be revised within 180 days after reissuance of the ISW Permit #VA0092771. The plan has since been reviewed annually, with the most recent major update completed in September 2023.

The overall goal of the Sediment TMDL Action Plan is to provide the means and methods and a general level of effort that will be needed for Fort Belvoir to meet the 55% Lower Accotink Creek TMDL reduction targets for sediment developed by the VADEQ. A WLA of 235 tons/year as well as a Baseline Load of 519 tons/year was already given by VADEQ through the Volume II Sediment TMDLs for the Lower Accotink Creek Watershed. However, it was noted that regulated areas within the MS4 service area have significantly changed since publication of this document, which used 2010 census data. Therefore, Fort Belvoir re-evaluated the baseline loads with the removal of areas within the MS4 Service Area due to additional VPDES Permits. Based off this re-evaluation, a Baseline Load of 312.80 tons/year was calculated, with a target reduction of 77.80 tons/year (or 155,600 pounds/year) of sediment to be achieved.

Fort Belvoir considered all projects completed since the 2009 progress run for credits and calculated all achieved reductions using methods described in VADEQ Guidance Memo No. 20-2003 as guidance for meeting Local TMDL waste load allocations for sediment. The following strategies were used to meet the newly required reductions of 77.80 tons/year (155,600 pounds/year) as summarized in Table 14.

Table 14: Lower Accotink Creek Sediment TMDL Reductions Achieved

Pollutants Of Concern	BMP	Required Reduction (lbs /yr)	Reductions Achieved (lbs /yr)	Percentage of Required Reduction
Total Suspended Solids	Urban Structural BMP's	***155,600***	100,230.40	64%
	Stream Restoration		5,113.94	3%
	Street Sweeping		22,846.1	15%
	Storm Drain Cleaning		0.00	0.0%
	Land Use Change		19,901.27	13%
Total Suspended Solids Reduction Achieved			***148,091.71***	***95%***

- **Urban Structural BMPs**. Constructing local stormwater facilities when new development, redevelopment, and retrofits are considered. To calculate the TSS reductions, retrofit curves developed by the Bay Program or the Bay Program Established Efficiencies are used.
- **Urban Stream Restoration.** Urban streams restored using one of the four expert panel report methodologies, as adjusted to account for the unregulated baseline load.
- **Street Sweeping.** Removing sediment from roadways before it can be transported offsite in Stormwater flows. Credit is dependent on the type of technology and the number of pass throughs.
- **Storm Drain Cleaning.** Removing solids directly from catch basins, within storm pipes, or captured at the storm drain outfalls. Sediment reduction credits are provided for solids that are directly removed from the system. Credits also apply to sediment removal from concrete-lined conveyance channels.
- **Land Use Change.** Credit for lands converted to a land use with a lower associated pollutant load.

The complete Sediment TMDL Action Plan dated 8 September 2023 is incorporated into the MS4 Program Plan by reference and is available on the Fort Belvoir Environmental Website or upon request. The completed/implemented projects have not met the reduction needed based upon the adjusted baseline loads, and reductions are still required.

The BMPs TSS.1 and TSS.2 recommended for implementation in the 2023 Sediment TMDL Action Plan have been incorporated into the MS4 Program Plan and are discussed below.

TSS.1 SEDIMENT TMDL ACTION PLAN IMPLEMENTATION AND REPORTING

- ***Measurable Goal***:
    - Permit years 4-5 (2027-2028), Implement the Sediment TMDL Action Plan to ensure credits are maintained including:
        - Inspection and maintenance of Urban Structural BMPs located within the Lower Accotink Creek Watershed, where deficiencies noted during inspections are addressed within one (1) year.
        - Inspections and verification of the stream restoration projects considered in the plan shall occur once every five (5) years and deficiencies noted during inspections are addressed within one (1) year.
        - Perform and document street sweeping as per the O&M Contract at a minimum of one (1) time per year.
        - Perform and document Storm Drain Cleaning as per the O&M Contract.

- ***Annual Reporting and Record Keeping:***
    - Report new Urban BMPs, Stream Restorations, or Land Use Changes within the Lower Accotink Creek Watershed and the achieved reductions.
    - The amount of street sweeping within the Lower Accotink Creek Watershed, the frequency, and the achieved reductions.
    - The Storm Drain Cleaning reductions achieved from the nutrient enrichment factor based on the dry weight of sediment removed during the reporting cycle within the Lower Accotink Creek Watershed.
- ***Responsible Party:***
    - DPW ED is responsible for reviewing, tracking, and reporting of inspections and maintenance and is responsible for requesting funding and completing scoping for projects to complete verification of BMPs required to maintain credits.
    - In cases where deficiencies are noted, DPW ED will be responsible for submitting work requests. DPW O&M Division is responsible for approving, coordinating, tracking, and executing such work requests as well as providing this information back to DPW ED. The PWO Review Board is responsible for reviewing and approving funding for such requests.

TSS.2 EDUCATION AND TRAINING

- ***Measurable Goal***:
    - Publish one (1) article annually that discusses the sediment transport and water quality issue, proper ESC measures, reporting information, and steps that can be taken to reduce sediment sources.
    - Provide specialized training on proper construction site ESC, importance of Stormwater BMPs and storm sewer maintenance, implementation, and benefits of urban stream restoration to audiences responsible for construction projects and O&M of the overall MS4 System including:
        - DPW Engineering Division
        - DPW O&M Division, including the Base Operations Contractor
        - Construction Contractors
- ***Annual Reporting and Record Keeping:***
    - Provide a narrative on publication of the article to include the title, focus, and date published.
    - Provide a summary of the audiences reached and methods used for specialized training.
- ***Responsible Party***:
    - DPW ED will develop and distribute materials as needed. DPW ED will coordinate with appropriate organizations (MWR, PAO, Schools, Safety Office, MDA, Housing, etc.) to ensure the widest distribution of materials and involvement in events possible as per the Education and Outreach Plan discussed in *8.1*.

9.5. CHLORIDE TMDL FOR LOWER ACCOTINK CREEK

The Accotink Creek Chloride TMDL approved by the SWCB on 12 April 2018 and approved by the EPA on 23 May 2018.

Part II.B.2.b of the VPDES Permit #VAR040093 issued on 1 November 2023 requires that:

"For TMDLs approved by EPA on or after July 1, 2018, and prior to October 31, 2023, and in which an individual or aggregate wasteload has been allocated to the permittee, the permittee shall develop and

initiate implementation of action plans to meet the conditions of Part II B.4, B.5, B.6, B.7, and B.8 as applicable for each pollutant for which wasteloads have been allocated to the permittee's MS4 no later than 30 months after the permit effective date."

The original Fort Belvoir Lower Accotink Creek Chloride TMDL Action Plan was completed during the 2018-2023 General Permit cycle and was submitted to VADEQ on 1 May 2021. The plan has since been reviewed annually, with the most recent major update completed in August 2023.

The overall goal of this Action Plan is to achieve reductions using the adaptive iterative approach. To accomplish this, a program evaluation for current processes and practices; baseline and target application rates; salt storage practices; and training, education, and outreach was completed. Based on the initial assessment of practices in place, the plan then provides recommendations for improvement and a method for conducting assessments annually to determine the efficacy of the program and to refine operations.

The Action Plan recommended the BMPs below, that were identified in the Virginia Salt Management Strategy (SaMS) and can be implemented under the MS4 permit to eliminate and/or minimize discharges of chloride sources to the Lower Accotink. The recommendations were made based on the baseline assessment completed in 2021 and confirmed using quantitative application data collected between 2017-2020. From this initial assessment, annual assessments occur to determine efficacy of the current program and implemented BMPs in meeting specified limits through an iterative process.

Some dates in the BMPs below fall within the previous permit cycle and will need to be updated. An update of this section will occur when the most current Chloride TMDL Action Plan is revised.

CL.1 CONTINUED MAINTENANCE OF EXISTING PROGRAMS

- ***Measurable Goal***:
    - Maintain existing program portions of the MS4 Program that were found to be effective in minimizing discharges chloride such as the Education and Outreach Programs (MCM1 and MCM2) and Training (MCM6), including:
        - Publishing an article where Chloride is the targeted POC and includes tips and tricks for winter storage and application to directly engage the public in the winter months as stated in The Education and Outreach Plan discussed in *8.1*.
        - Maintaining the direct reporting button on the Stormwater webpage to allow the public to directly report through the online form any potential issues and give DPW increased oversight of winter maintenance operations.
        - Maintain written procedural BMP Fact Sheets that are all posted publicly and widely distributed throughout the installation to pertinent tenant operations, specifically those related to chloride products.
            - BMP Factsheet 4 – Salt Storage and Loading
            - BMP Factsheet 5 – Salt Application
            - BMP Factsheet 13 – Brine Mixing
            - BMP Factsheet 14 – Aircraft Deicing Operations
        - Continued monitoring and training of HPFs with SWPPPs due to their salt storage activities and discussed in *8.6*.
            - Cover Chloride TMDL information in Level 1 and 2 SWPPP Training, as well as the Level 3 General Stormwater Pollution Prevention Training.

- ***Annual Reporting and Record Keeping:***
  - Provide a narrative on publication of the article to include the title, focus, and date published.
  - Provide information on any complaints received regarding winter maintenance via the IDDE Program and actions taken.
  - Report any updates or development of BMP Fact Sheets covering/related to chloride including date of posting to the website.
  - Report any chloride related issues at HPFs and how they were addressed, updates to training, and number of people trained.
- ***Responsible Party:***
  - DPW ED is responsible for the development and distribution of information under the Education and Outreach Program (MCM1 and MCM2) and written operational procedures (MCM6).
  - DPW ED is responsible for the tracking, investigating, and reporting under the IDDE Program (MCM3).
  - DPW ED is responsible for all HPF inspections and training under the Pollution Prevention Program (MCM6).

CL.2 REVISION OF PRACTICES AT DEFENSE LOGISTICS AGENCY (DLA)

- ***Measurable Goal:***
  - Revise current practices at DLA to adjust the frequency and application rates of Ice Melt Products that are being used within this Agency by 31 October 2023. (Note that this date falls within the previous permit cycle and will be updated once the current Chloride TMDL Action Plan is revised.)
- ***Annual Reporting and Record Keeping:***
  - Provide a narrative on progress made through working with DLA to update their Ice Melt application practices.
- ***Responsible Party:***
  - DPW ED is responsible for coordinating with DLA to share concerns with current procedures leading to over application of chloride products and provide guidance on operational practices.
  - DLA is an autonomous tenant of Fort Belvoir who is responsible for their own salt usage and management. It is their responsibility to update protocols for their facility.

CL.3 UPDATE BASE OPERATIONS CONTRACTOR SNOW PLAN

- ***Measurable Goal***:
  - Revise and update the Snow Plan, developed in November 2011, which is part of the contract with the Base Operations Contractor by 31 October 2023. (Note that this date falls within the previous permit cycle and will be updated once the current Chloride TMDL Action Plan is revised.)
- ***Annual Reporting and Record Keeping:***
  - Provide a narrative on progress made through working with DPW O&M to update the Snow Plan to identify a strategy for anti- or de-icing operations and to better reflect the current standards and equipment used, as well as incorporate practices to reduce chloride pollution.

- ***Responsible Party:***
    - DPW ED is responsible for coordinating with DPW O&M to share concerns with current procedures leading to over application of chloride products and provide guidance on operational practices and requirement of the new Snow Plan.
    - DPW O&M is responsible for ensuring contract requirements are met, issuance of any new contract, or modification to the current contract. Dependent on how the contract is written the Snow Plan may be developed by the O&M contractor under DPW guidance.

CL.4 REVISE SALT BRINE MIXING RATES

- ***Measurable Goal***:
    - Revise the current salt brine mixing practices at Fort Belvoir by 31 October 2023. (Note that this date falls within the previous permit cycle and will be updated once the current Chloride TMDL Action Plan is revised.)
- ***Annual Reporting and Record Keeping:***
    - Provide a narrative on progress made through working with DPW O&M to update the current mixing rate of brine (8.34 lbs/gallon of Magnesium chloride) to one closure to what is recommended by SaMS.
- ***Responsible Party:***
    - DPW ED is responsible for working with the O&M department to determine an effective mixing rate and revise current standards to potentially reduce the usage of Chloride containing products.
    - DPW O&M is responsible for issuance of any new contract or modification to the current contract.

CL.5 ESTABLISH A CALIBRATION PROCESS

- ***Measurable Goal***:
    - Establish a calibration protocol for salt equipment used on Fort Belvoir by 31 October 2023. (Note that this date falls within the previous permit cycle and will be updated once the current Chloride TMDL Action Plan is revised.)
        - During permit year 1, ensure the calibration of all equipment is occurring more than once per year and proper calibration training is occurring.
- ***Annual Reporting and Record Keeping:***
    - Provide a narrative on progress made through working with DPW O&M to establish calibration protocols in place for salt equipment. Establishing a calibration process could result in high potential cost savings as well as a more accurate picture of the amount of chloride containing products used.
- ***Responsible Party:***
    - DPW ED is responsible for working with the O&M department to establish and implement an equipment calibration process and get the requirements integrated into future winter maintenance contracts.
    - DPW O&M is responsible for issuance of any new contract or modification to the current contract.

CL.6 TARGETED TRAINING

The MS4 Program developed a Salt Management Training that is focused on salt applicators, supervisors, and decision-makers. The topics the training focuses on are: Plowing Practices, Equipment Calibration, Level of Service and Clearing Priorities, Anti-Icing Brine Mixing, Application Practices, Varying Application Rates, Use of Deicers at Different Temperatures, Salt Storage and Handling, Winter Maintenance Planning (Weather Forecasting/Surface Temperature Information), and Tracking and Reporting.

- ***Measurable Goal***:
    - Update the training program to include additional salt management training that is particularly focused towards salt applicators, supervisors, and decision-makers prior to the winter season by 31 October 2023. (Note that this date falls within the previous permit cycle and will be updated once the current Chloride TMDL Action Plan is revised.)
- ***Annual Reporting and Record Keeping:***
    - Provide a narrative on progress made to update the Training Plan.
    - Provide a narrative detailing when targeted training was provided, what the audience was, and how many people were reached.
- ***Responsible Party:***
    - DPW ED is responsible for all Training Plan updates and training under the Pollution Prevention Program (MCM6).

CL.7 ANNUAL ASSESSMENT AND REPORTING

The original Chloride TMDL Action Plan was developed in 2021 and submitted to VADEQ on 1 May 2021. The plan assessed current practices to serve as the baseline analysis for the current program and will be utilizing the data as a comparison point moving forward.

- ***Measurable Goal***:
    - Starting in the 2021-2022 permit year, Fort Belvoir will assess and update the Chloride TMDL Action Plan as needed after the annual salt management program assessment is completed.
        - Annual salt management program assessment shall occur post-season, to begin on or around 1 April and to be completed by no later than the end of the permit cycle, 30 June of each year.
        - Using reported data for the year, the application rate for each product shall be calculated to see if goals were met or if additional BMPs are required to be implemented.
        - The results of the annual assessment compared to the program goals and the TMDL Plan will be updated to reflect new and achieved goals annually.
        - The updated TMDL plan will be posted on the Fort Belvoir Environmental Homepage within 30 days of completing updates.
            - During permit year 1, update the action plan to reflect the results of the operational assessment that occurred during the 2022-2023 reporting period.
- ***Annual Reporting and Record Keeping:***
    - Provide a narrative on the annual salt management program assessment, findings for the reporting period, and updates/changes made to the TMDL Plan.

  - Provide a table showing the calculated annual application rate compared to program goals for the reporting period.
- ***Responsible Party:***
  - DLA, NGA, ADF-E, and the Base Operation Contractor are responsible for tracking usage throughout the winter months and reporting back to DPW.
  - The DPW ED Industrial Stormwater Program is responsible for the collection and sampling of key points where salt storage occurs across USAG, FB.
  - DPW ED is responsible for gathering sample results from industrial outfalls RO-008, 015, and 032 and salt application data for the reporting period from all groups responsible for salt application including DLA, NGA, ADF-E, and the Base Operation Contractor.
  - DPW ED is responsible for completing the annual salt management program assessment as described in Section 6 of the Chloride TMDL Action Plan and completing any plan and/or website updates.

2024

APPENDIX A

PROGRAM ADMINISTRATION: DELEGATION OF AUTHORITY

FORT BELVOIR MS4 PROGRAM PLAN

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

AMIM-BVP-E

MEMORANDUM FOR Ms. Sybille R. Vega, Chief, Environmental Division, Directorate of Public Works, 9430 Jackson Loop, Fort Belvoir, VA 22060-5116

SUBJECT: Delegation of Signature Authority for the Municipal Separate Storm Sewer System (MS4) Virginia Pollutant Discharge Elimination System (VPDES) Permit #VAR040093 for Routine Correspondence

1. You are authorized to sign all routine correspondence related to the Installation's MS4 VPDES Permit #VAR040093, effective upon submission of this delegation memorandum to the Virginia Department of Environmental Quality (VADEQ) as required by 9VAC25-870-370.B.3 and 9VAC25-890-40, Part III.K.2. All correspondence signed must comply with the provisions of AR 25-50, paragraph 6-2, concerning authority.

2. Fort Belvoir's storm water management program is performed in accordance with the Clean Water Act (33 USC Sec.1251), Virginia Storm Water Management Act (Virginia (VA) Code Sections (Secs) 62.1-44.15:24 et seq.), Virginia Erosion and Sediment Control Law (VA Code Secs 62.1-44.15:51 et seq.), Virginia Storm Water Management Regulations (9VAC25-870-10 et seq.; 9VAC25-880-1 et seq.; 9VAC25-890-1 et seq.) and Virginia Erosion and Sediment Control Regulations (9VAC25-840-10 et seq.; 9VAC25-850-10 et seq.).

3. Routine correspondence includes:

a. Correspondence related to and including submittal of annual reports for the MS4 VPDES Permit.

b. Correspondence related to Requests for Information received from the Commonwealth of Virginia, VADEQ.

c. Correspondence related to transmittal of Erosion and Sediment Control and Stormwater Management Plans to VADEQ for review and approval.

d. Land Disturbance Letters issued to construction contractors to signify that construction commencement is approved.

4. Signatory authority for submittal of MS4 VPDES Permit registration statement remains with the Garrison Commander.

5. Submittal of routine correspondence described in; 9VAC25-870-370 Part A.3 and Part B, and 9VAC25-890-40 Part 3.K.1.a shall include certification of reports or other information required under the aforementioned.

6. This delegation may be withdrawn at any time. Notice of withdrawal will be provided to the VADEQ.

7. Authority: AR 25-50 (Preparing and Managing Correspondence), paragraph 6-1, 10 October 2020.

JOSEPH V. MESSINA
COL, AG
Commanding

2024

APPENDIX B

MS4 PROGRAM GUIDANCE DOCUMENTS:

- *MS4 PROGRAM BULLETIN 1 – CONSTRUCTION DESIGN REVIEW PROCEDURES*
- *ESC TECHNICAL BULLETIN 1 – DEWATERING OPERATIONS*
- *ESC TECHNICAL BULLETIN 2 – SWPPP REQUIREMENTS*
- *ESC TECHNICAL BULLETIN 3 – ESC FOR UTILITY INSTALLATION*
- *ESC TECHNICAL BULLETIN 4 – SWPPP REQUIREMENTS FOR SMALL AND RENOVATION PROJECTS*

Fort Belvoir Directorate of Public Works (DPW)
Municipal Separate Storm Sewer System (MS4) Program

Bulletin #1: STORMWATER MANAGEMENT (SWM) AND EROSION AND SEDIMENT CONTROL (ESC) COMPLIANCE REQUIREMENTS AND PROCEDURES FOR LAND DISTURBANCE

A. APPLICABILITY

This bulletin is applicable to Garrison, Tenant and Contractor Operations for stormwater and erosion and sediment control design for projects disturbing land areas of 2,500 square feet and greater.

B. BACKGROUND

To comply with the Fort Belvoir General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 Permit #VAR040093), Energy Independence and Security Act Section 438 (EISA 438) and the Virginia Erosion and Sediment Control, Stormwater Management and Chesapeake Bay laws and regulations. Specific guidelines must be followed during design and construction of projects disturbing areas of 2,500 square feet and greater. As of July 1, 2014 Virginia Department of Environmental Quality (VADEQ) has review and approval authority for erosion and sediment control design plans for construction projects disturbing 10,000 feet or greater of land and stormwater management design plans for projects disturbing one acre or greater of land on properties owned by Fort Belvoir.

C. LAND DISTURBANCE COMPLIANCE REQUIREMENTS AND PROCEDURES

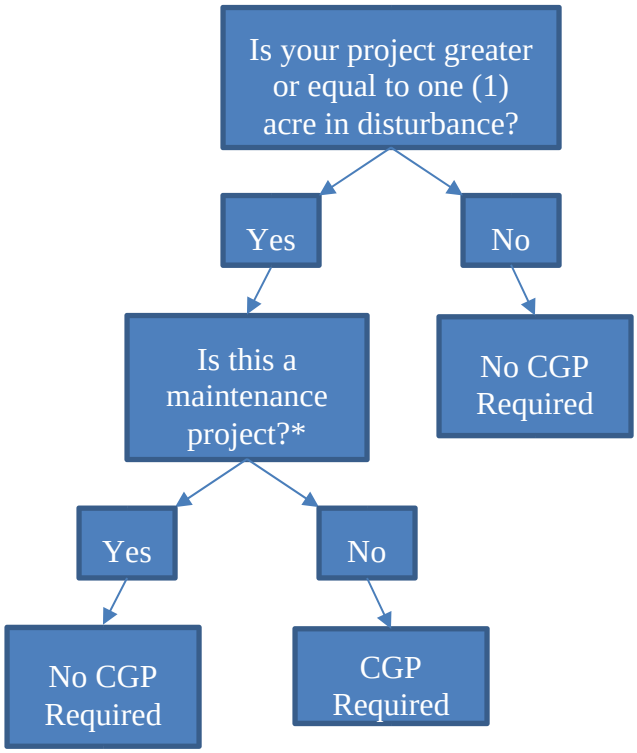
1. ***Plans Required based on Land Disturbance Thresholds***

   Please note that if your project involves land disturbance of greater than 5,000 square feet, AND includes the construction of a federal facility (See Section C.3.a. (1) for full definition), stormwater design must also comply with EISA 438.

Table 1. ESC and SWM Plans Requirements by Project Size

Project Size	Plans Required	Review Authority
Less than 2,499 sq.ft.	None	DPW-Environmental Division
Between 2,500 sq.ft. and 9,999 sq.ft.	ESC & SWM Plans	DPW-Environmental Division
Between 10,000 sq.ft. and 43,559 sq.ft.	ESC & SWM Plans	VADEQ (for ESC & SWM)
Greater than or equal to one (1) acre	ESC & SWM Plans	VADEQ (for ESC & SWM) CGP Issued

2. ***Construction General Permit (CGP) Threshold***



*Virginia Code 62.1-44.15:34 C.7, which states that "routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original construction of a project." A maintenance project means you are ONLY exempt from requiring a Construction General Permit and SWPPP. All other requirements still apply; please consult with DPW-Environmental to determine if your project may be considered maintenance.

3. ***Plan Requirements***

a. Stormwater Management Plan Requirements

(1) If the project includes the construction of a federal facility and disturbs greater than 5,000 square feet, the SWM Plan shall comply with Section 438 of the Energy Independence and Security Act (EISA 438). A federal facility is defined as any building that is constructed, renovated, leased, or purchased in part or in whole for use by the Federal Government. Technical guidance is located online at: https://www.epa.gov/sites/production/files/2015-08/documents/epa_swm_guidance.pdf.

(2) Incorporation of Low Impact Development Best Management Practices will be used to meet requirements of EISA 438. The design objective of LID is to maintain or

restore the hydrology of the site prior to the planned project being constructed with regard to the temperature, rate, volume and duration of flow. See https://mrsi.erdc.dren.mil/sustain/cx/lid for further guidance.

(3) The Stormwater Management (SWM) Plan must address all components outlined in 9VAC25-870-55.

(4) Per 9VAC25-870-63 and 65, the SWM Plan must utilize stormwater management BMPs from the Virginia BMP Clearinghouse to obtain the required water quality pollutant reductions. The required water quality pollutant reductions shall be calculated by using the Virginia Runoff Reduction Method (VRRM) Spreadsheet for site-specific project conditions. It should be noted Fort Belvoir does not allow purchasing of off-site nutrient credits to offset the requirements of water quality under 9VAC25-870-63 as it is not authorized under the National Defense Authorization Act (NDAA). Project proponents will need to meet all phosphorous load reduction requirements on-site. The VRRM Spreadsheets (currently version 3.0) are located online at:
https://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits/ConstructionGeneralPermit.aspx

(5) Per 9VAC25-870-66, each stormwater outfall location on the project site must be evaluated for Channel Protection and Flood Protection to the defined Limits of Analysis. Different design criteria are specified in the regulation dependent on whether the outfall is discharging into a natural or manmade system.

(6) The SWM Plan shall comply with Chapter 6 of the Fairfax County Public Facilities Manual (PFM), located online at:
https://www.fairfaxcounty.gov/landdevelopment/public-facilities-manual

(7) The VADEQ SWM Plan Review Checklist must also be completed by the designer and provided with plan submittal. This checklist is located online at:
http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits/ConstructionGeneralPermit.aspx

(8) Per 9VAC25-870-55, stormwater management plans shall be appropriately sealed and signed by a professional registered in the Commonwealth of Virginia pursuant to Article 1 of Chapter 4 of Title 54.1 of the Code of Virginia.

b. Erosion and Sediment Control Plan Requirements

(1) Erosion and Sediment Control (ESC) plans must be developed to comply with the 19 Virginia Minimum Standards (9VAC25-840-40). The plan shall also utilize erosion and sediment control standards and specifications listed in Chapter 3 of the Virginia

Erosion and Sediment Control Handbook (VESCH). Nomenclature for erosion and sediment control measures shall be consistent with the VESCH and the ESC Plan must follow the Virginia Uniform Coding System: http://www.deq.virginia.gov/Portals/0/DEQ/Water/StormwaterManagement/Erosion_Sed iment_Control_Handbook/Uniform%20Coding.pdf

(2) Guidance on development of ESC Plans can be found in Chapter 6 of the VESCH at the Virginia Department of Environmental Quality (VADEQ) website: http://www.deq.virginia.gov/Programs/Water/Laws,Regulations,Guidance/Guidance/Stor mwaterManagementGuidance.aspx

(3) The ESC Plan shall also comply with Chapter 11 of the Fairfax County Public Facilities Manual (PFM) and is located online at: https://www.fairfaxcounty.gov/landdevelopment/public-facilities-manual

(4) The VADEQ ESC Plan Review Checklist must also be completed by the designer and provided with plan submittal. The checklist is located online at: http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits/ConstructionGeneralPermit.aspx

4. Plan Review and Approval Procedures

The following steps are required for SWM and ESC plan approval. Table 1 *(found in Section C.1)* specifies the type of plan(s) necessary for submittal to DPW-Environmental and VADEQ based on land disturbance thresholds.

a. Submit Applicable Documents to DPW-Environmental
All Projects Start Here

(1) The project proponent is responsible for submitting one (1) hard copy and one (1) CD of the required plan(s) and supporting documentation (Ex: computations, geotechnical reports, etc.) to the DPW-Environmental Division National Environmental Policy Act (NEPA) Point of Contact (POC). Plan(s)/documents will be reviewed in accordance with permit requirements specified in the Fort Belvoir Small Municipal Separate Stormwater System (MS4) Permit.

(2) Comments will be generated from the review and provided to the project proponent through USACE ProjNet (formerly Dr. Checks), email, or other means identified by the project proponent. The project proponent is responsible for responding to all comments in writing and for making all required revisions to the project plan(s) before re-submitting. This process will continue until the plan(s) is determined to be adequate for signature by the Director of Public Works.

(3) The DPW-Environmental Division has a minimum review time of two (2) weeks for initial submittal and subsequent re-submittals.

(4) Follow instructions below in section b or c according to project size:

- Section b: for projects less than 10,000 square feet of land disturbance, OR
- Section c: for projects over 10, 000 square feet of land disturbance

b. Submit Approved Applicable Documents to DPW-Environmental
Projects Requiring DPW Plan Approval Only (Less than 10,000 square feet of Land Disturbance)

(1) Once the plans are determined to be adequate, four (4) hard copies of the plans will be submitted to the DPW-Environmental Division Stormwater POC for signature by the Director of Public Works. Once signed, two hard copies will be returned to the project proponent (one for construction contractor, one for the contracting authority) and two copies will be retained by the DPW (one hard copy for DPW ESC/SWM inspector and one hard copy for file). The project proponent is responsible for submitting one (1) CD that contains signed plans and any supporting documentation (calculations), if applicable, to the DPW-Environmental Division Stormwater POC for the Fort Belvoir permit files.

c. Submit Approved Applicable Documents to DPW and VADEQ
Projects Requiring DPW and VADEQ Approval (10,000 square feet and greater of Land Disturbance)

In addition to Steps in section C.4.a. (1) – (3) outlined above, if the project plan(s) also requires VADEQ approval (See Table 1, Section 1), the following steps will be completed prior to construction commencement.

(1) The designer is responsible for submittal of all required documents to VADEQ for review and approval. Required submittal documents include, but are not limited to: one (1) hard copy of SWM and/or ESC plans, one (1) copy of all supporting documents (calculations, geotechnical reports, etc.), one (1) copy of the applicable SWM and/or ESC checklists, one (1) copy of the Completed Construction General Permit Registration Statement (original ink, signed and dated), one (1) electronic copy (CD) of all documents submitted, and designer POC, phone number and email address. The complete package should be sent to the Virginia Department of Environmental Quality through a file-sharing service to NROSWMPlanReview@deq.virginia.gov

(2) The designer is also responsible for submittal of (1) CD to the DPW-Environmental Division Stormwater POC that contains all documents (plans and supporting stormwater calculations, geotechnical reports, plan review checklists, etc.) that were submitted to VADEQ for review and approval.

(3) The designer is responsible for addressing any comments received by VADEQ during the review and approval process and subsequent resubmittals until the plan is approved. For subsequent resubmittal(s) to VADEQ, one (1) copy of all documents (response to VADEQ comments, corrected plan set, corrected stormwater calculations, etc.) must be provided. In addition, one (1) CD of all documents resubmitted to VADEQ must be provided to the DPW-Environmental Division Stormwater POC at the time of resubmittal.

(4) Per 9VAC25-870-108, VADEQ has 15 calendar days to determine if plan is complete, 60 calendar days to review initial submittal and 45 days to review for each subsequent resubmittal. Based on past plan submittals, this process takes an average of three months to obtain VADEQ approval. Approval time may be less, dependent upon the size of the project, amount of VADEQ comments, and the turnaround time for document correction by the designer. Once the plan set is approved by VADEQ, the designer is responsible for submitting to the DPW-Environmental Division Stormwater POC the following: four (4) hard copies of the VADEQ approved plans (with approval block) and one (1) CD that contains the VADEQ approved plans with the VADEQ stamped cover sheet, all supporting documents (final stormwater calculations, geotechnical reports, plan review checklist(s), etc.) submitted to VADEQ and the VADEQ Approval Letter.

(5) Please keep in mind that a project must commence within 180 calendar days from receiving VADEQ approval. Plans that will begin outside of this time frame may be required to re-submit to VADEQ to start the review and approval process over again.

5. DPW-Environmental Final Approval-Land Disturbance Letter

Once plans are approved and the construction contractor has been selected, the following steps are required prior to issuance of the Land Disturbance Letter by DPW. This letter is the final approval step needed to begin land disturbance activity at Fort Belvoir.

a. Submit Applicable Documents to DPW-Environmental- *All Projects Start Here*

(1) The construction contractor will provide DPW-Environmental Stormwater POC with the contractor POC responsible for insuring that SWM and/or ESC plans are executed. This POC should be a VADEQ certified Responsible Land Disturber (RLD), and record of certification shall also be provided to DPW-

Environmental Division at this time. Information on what an RLD is and certification can be found here: http://www.deq.virginia.gov/ConnectWithDEQ/TrainingCertification/RLDGeneralInformation.aspx

(2) The construction contractor will complete and submit a Fort Belvoir Excavation Permit Application (Dig Permit) for processing to DPW-Business Office and Integration Division via usarmy.belvoir.id-sustainment.mbx.dpw-dig-permits@mail.mil For questions about the process, please contact Vanessa Castrejon at (703) 806-4732 or vanessa.castrejon.civ@army.mil.

b. Submit Construction General Permit Documents to VADEQ and DPW-Environmental – *Only applicable to Projects One Acre or Greater of Land Disturbance*

For projects greater than or equal to one acre of land disturbance (determined by the limits of construction), the construction contractor will complete steps (1) and (2) listed above and the additional requirements listed below:

(1) A Construction General Permit (CGP) must be obtained from VADEQ by the construction contractor. The contractor is responsible for completing and submitting the Registration Statement prior to construction commencement. Please see https://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits/ConstructionGeneralPermit.aspx for more information on the Registration Statement and associated CGP fees. As a reminder, if the construction contractor signs the Registration Statement, they are certifying that a SWPPP has already been prepared for the site. Land disturbance cannot start until the VADEQ CGP approval letter is received and provided electronically to DPW-Environmental Division Stormwater POC.

(2) In addition to applying for the CGP, the contractor must also simultaneously prepare a Stormwater Pollution Prevention Plan (SWPPP) (see 9VAC25-870-54). For EPA guidance and SWPPP templates, please see: https://www.epa.gov/npdes/constructiongeneral-permit-resources-tools-and-templates#swppp The SWPPP must be submitted to DPW-Environmental along with a completed DPW-Environmental SWPPP checklist for records prior to construction project commencement (9VAC25-880-70 Part II). The DPW-Environmental Division Stormwater POC may be contacted to obtain a copy of the SWPPP checklist.

c. Final Approval-DPW Land Disturbance Letter - *All Projects*

Once all project documentation has been received by the DPW-Environmental Division Stormwater POC, the Land Disturbance Letter (LDL) will be issued by DPW. This letter

documents that all stormwater requirements have been met and authorizes construction commencement, and is the final piece of paper required for breaking ground.

(1) Submit and ensure that the DPW-Environmental Division Stormwater POC has received the applicable items listed below in order to receive the LDL.

- VADEQ Plan Approval Letter
- VADEQ CGP Approval Letter (for sites greater than or equal to one acre in size)
- SWPPP (for sites greater than or equal to one acre in size)
- RLD Certificate
- Four (4) hard copies of the VADEQ Approved Plans
- Excavation Permit (DIG Permit) Application- **Please note the LDL will be held until dig permit approval. Ensure the dig permit application is submitted along with the documents above.**
- One (1) CD containing all the above documents

(2) Schedule a Pre-Construction Meeting **(Projects over 10,000 sf)**
Prior to groundbreaking, the construction contractor is required to contact the DPW-Environmental Division Stormwater POC (See Section C) to schedule a pre-construction meeting to review requirements of ESC plans, SWPPP and the CGP.

(3) Notify DPW-Stormwater POC Projected Ground-Breaking Day
After receiving the LDL and prior to groundbreaking, the construction contractor is required to contact the DPW-Environmental Division Stormwater POC (See Section C.) for assignment to a Fort Belvoir DPW-Environmental Division, Virginia certified, ESC and SWM inspector.

6. ESC/SWM Compliance During Construction

Once the construction project has started, the DPW-Environmental Division ESC/SWM inspector will conduct routine site inspections once every two weeks and within 48 hours after a rainfall event which produces greater than 0.5” of rain, and provide a written report of any deficiencies noted during the inspection. The RLD and a contracting officer’s representative is required to accompany the DPW-Environmental Division ESC/SWM inspector. ESC inspections are based upon the requirements identified in the Virginia Minimum Standards found at 9VAC25-840-40: http://leg1.state.va.us/cgibin/legp504.exe?000+reg+9VAC25-840-40 and conditions specified in the General Permit for Discharges of Stormwater from Construction Activities (General Permit No. VAR10 (9VAC25-880-70)). The DPW-Environmental Division ESC/SWM inspector will periodically conduct site inspections during the construction of the permanent stormwater management facilities.

Table 2 outlines the progressive compliance and enforcement strategy that Fort Belvoir DPW will implement to ensure that contractors are conducting land disturbance responsibly and in accordance with Virginia Department of Environmental Quality stormwater management and erosion and sediment control regulations.

Non-Compliance Item	**DPW ED Action**
Failure to obtain a Land Disturbance Letter prior to start of construction projects involving land disturbance of 2,500 square feet or greater.	Email notice of Non-Compliance sent to the Contracting Officer (CO); Document in ESC inspection report.
Failure to obtain a Construction General Permit (CGP) and/or an approved SWM and/or ESC plan from VADEQ prior to start of construction projects involving land disturbance of 10,000 square feet or greater.	Email notice of Non-Compliance sent to the Contracting Officer (CO); VADEQ Northern Regional Office notified via telephone within 24 hours of discovery.
Failure to provide copies of approved SWM and/or ESC plans, CGP authorization letter, SWPPP and/ or Responsible Land Disturber certification to DPW ED.	Email notice of Non-Compliance sent to the Contracting Officer's Representative (COR); Land Disturbance letter not issued by DPW until approved plans, permits, SWPPP and Responsible Land Disturber certification are received by DPW ED.
Non-compliance with ESC minimum standards (9VAC25-840-40), failure to update SWPPP, failure to install ESC measures as a first step before any land disturbance; failure to store construction materials correctly.	1st violation: DPW ED Inspector notes on ESC inspection report with corrective action due date and contractor is expected to complete the corrective action by the due date; 2nd violation: Email warning notice sent to the Contract Representative from the MS4 Stormwater Program Administrator; 3rd violation: Warning Letter sent to the Contract Representative signed by the Director of Public Works; A courtesy copy of the report will be provided to VADEQ staff administering the CGP (or ESC) program oversight. 4th violation: Notice of Non-Compliance sent to the Contract Representative signed by the Garrison Commander; 5th repeat violation: Referred to VADEQ for compliance assistance.
Release of any substance causing a reportable spill (including concrete wash out, paint runoff, or excess sediment).	DPW Director notified and email warning notice sent to the Contract Representative.

7. ESC/SWM Compliance upon Construction Completion

(1) Upon completion of the construction project, the DPW-Environmental Division ESC/ SWM inspector will perform a final inspection and release the contractor when all deficiencies that were noted have been corrected. At this time, copies of all close out documents (Notice of Termination Form, construction as-built drawings, and any manufacturer maintenance specifications for permanent SWM facilities) shall be submitted to the DPW-Environmental Division Stormwater POC on one (1) CD for records purposes and review prior to the next step.

(2) The contractor is responsible for submission of the Notice of Termination (NOT) of the CGP to the VADEQ (Department of Environmental Quality, Office of Stormwater Management, Suite 1400, P.O. Box 1105, Richmond, Virginia 23218, constructiongp@deq.virginia.gov. A blank VADEQ NOT is located online at: https://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits/ConstructionGeneralPermit.aspx. As part of this submission, the contractor is required to submit the construction as-built drawings (9VAC25-870-55) to the VADEQ on one (1) CD. The construction as-built drawing shall be appropriately sealed and signed by a professional registered in the Commonwealth of Virginia, certifying that the SWM facilities have been constructed in accordance with the approved plan.

(3) Contractor cannot close out the CGP without complete and final permanent stabilization of the project site. VADEQ defines this as a stand of grass that is "uniform, mature enough to survive and inhibit erosion.

C. DPW-ENVIRONMENTAL POINT OF CONTACTS

1. DPW-Environmental Division NEPA POC:

Name, Email and Phone Number:	Ms. Janesse Colon-Ruiz, NEPA Program Manager janesse.s.colonruiz.civ@army.mil 703-806-4008
Physical Location:	Bldg 1442, 2nd Floor, Room 226
Mailing Address:	9430 Jackson Loop, Bldg 1442 Directorate of Public Works

Fort Belvoir, VA 22060

2. *DPW-Environmental Division Stormwater POC*:

Name, Email and Phone Number:	Ashely McMahon, Acting MS4 Program Manager ashley.c.mcmahon2.civ@army.mil 703-806-0627
Physical Location:	Bldg 1442, 2nd Floor, Room 226
Mailing Address:	9430 Jackson Loop, Bldg 1442 Directorate of Public Works Fort Belvoir, VA 22060

Fort Belvoir Directorate of Public Works (DPW)
Municipal Separate Storm Sewer System (MS4) Program

Erosion & Sediment Control Technical Bulletin #1:
DEWATERING OPERATIONS

APPLICABILITY

This bulletin is applicable to Garrison, Tenant and Contractor Operations for emergency and non-emergency dewatering operations.

BACKGROUND

In order to comply with the Virginia Pollution Discharge Elimination System (VPDES), Virginia Stormwater Management Program (VSMP) Permits, and the Virginia Erosion and Sediment Control (ESC) Regulations published by the Virginia Department of Environmental Quality (VADEQ), specific guidelines must be followed during dewatering operations on construction sites and during maintenance and repair operations to prevent unauthorized discharges of sediment into the Fort Belvoir storm sewer system and wetlands.

NOTIFICATION

For construction sites, when dewatering operations, either emergency or non-emergency, are to be employed, please contact the ESC inspector that has been assigned to your project. All others may contact Ashley McMahon at 703-806-0026.

GENERAL CONSIDERATIONS

1. IN ALL INSTANCES, PUMPING DIRECTLY INTO THE STORM SEWER SYSTEM IS PROHIBITED!
2. The accumulated sediment which is removed from a dewatering device must be spread on-site and stabilized.
3. Furnishing materials necessary for meeting dewatering best management practice standards is the responsibility of the personnel performing the construction/maintenance activity.

BEST MANAGEMENT PRACTICES

The following practices are examples of potential best management practices to meet the minimum standards and regulations from VADEQ for use during both emergency and non-emergency dewatering operations.

1. **Geotextile Silt Bag:** Direct all pump discharge into a geotextile silt bag. The following specifications must be followed to insure proper use of a silt bag:
    - The silt bag must be sized according to the pump size.

- The silt bag must be located on top of non-erodible material. This can be well established grass, stone, pavement, riprap, etc. In no case may the silt bag be located on top of bare earth/mud.
- If the silt bag is located adjacent to a stormwater structure (curb inlet, yard inlet, etc), another erosion and sediment control measure should be used on that structure to further filter the water. For example, if the silt bag is placed on the pavement next to a curb inlet, install stone inlet protection or a gutter buddy on the curb inlet for additional filtration.
- The area where the silt bag is positioned must be flat or gently sloped to encourage the runoff to drain properly.
- Ensure that the water runoff from the silt bag is not causing erosion.
- Tie a water-tight connection between the hose and silt bag to prevent unfiltered water from leaving the silt bag.
- The silt bag should be checked on a regular basis to ensure there is **CLEAR** water leaving it.
- Replace the bag if it is damaged, when it no longer filters sediment (i.e. the exiting water is no longer clear), or is not passing water at a reasonable rate.
- Once full, the silt bag can either be disposed of altogether or opened up and the sediment distributed back onsite and stabilized.
- Restore the surface area beneath the bag to original condition upon removal of the silt bag.

2. **Existing Sediment Traps or Basins**: All pump discharge should be directed toward existing sediment traps or basins located within the construction site Limits of Disturbance (LOD) in such a manner not to cause bank erosion of the trap or basin.
    - Pump discharge into the trap or basin should be directed toward the point furthest away from the outfall to allow for the settling out of sediment before the water reaches the outfall.
    - Discharging directly into an outlet or riser is not authorized.
    - Additional slope and/or inlet protection may be warranted.
    - Existing sediment trap or basin must be properly maintained in accordance with Virginia Erosion and Sediment Control Handbook (VESCH) Standard and Specification 3.13 and 3.14.

3. **Filter Box (VESCH) Std & Spec 3.26, page III-241**: Direct all pump discharge through a filter box.
    - Consult VESCH for design and construction of the filter box.
    - The discharge from the filter box must be directed onto a well-established grass area a minimum distance of 50 feet between the discharge point and any channel.
    - Install gravel curb inlet sediment filters, or “rock socks”, to all curb inlets that may receive discharge water.
    - The device must be properly maintained in accordance with VESCH specifications to insure that the device adequately performs the function of sediment filtration.

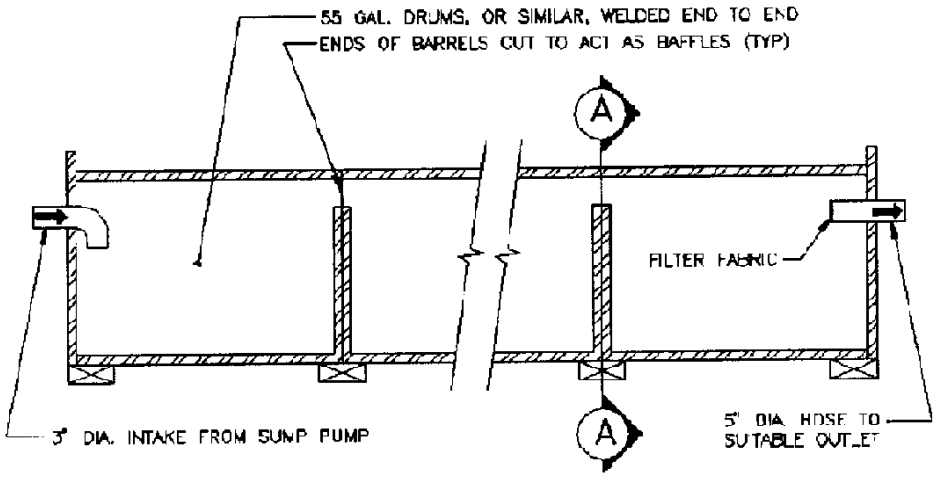
4. **Portable Sediment Tank (VESCH Std & Spec 3.26, page III-239)**: Direct all pump discharge into a portable sediment tank.
    - Consult VESCH for design and construction of the portable sediment tank.
    - Transport sediment tanks that have reached their capacity to a location within the construction site LOD and redistribute onsite.
    - The device must be properly maintained in accordance with VESCH specifications to insure that the device adequately performs the function of sediment filtration.

5. **Straw Bale/Silt Fence Pit (VESCH Std & Spec 3.26, page III-243):** For exceptionally large dewatering operations, construct a straw bale/silt fence pit in an area without underground utilities or environmental constraints. Install gravel curb inlet sediment filters (VESCH Std & Spec 3.07), or "rock socks", to all curb inlets that may receive discharge water.

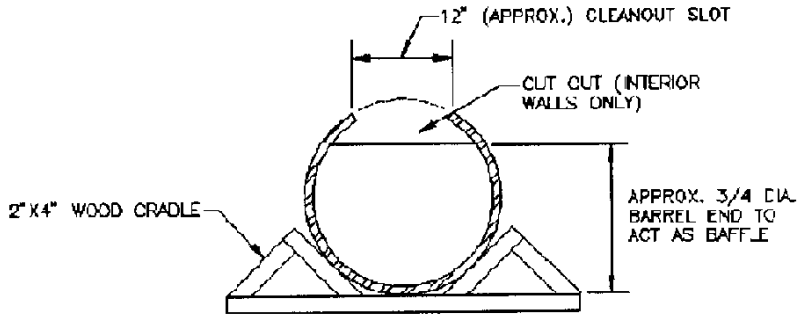
DPW-ENVIRONMENTAL DIVISION STORMWATER POC:

Name, Email and Phone Number:	Ashley McMahon, Acting MS4 Program Manager Ashley.c.mcmahon2.civ@army.mil 703-806-0026
Physical Location:	Bldg 1442, 2nd Floor, Room 226
Mailing Address:	9430 Jackson Loop, Bldg 1442 Directorate of Public Works Fort Belvoir, VA 22060

PORTABLE SEDIMENT TANK



ELEVATION

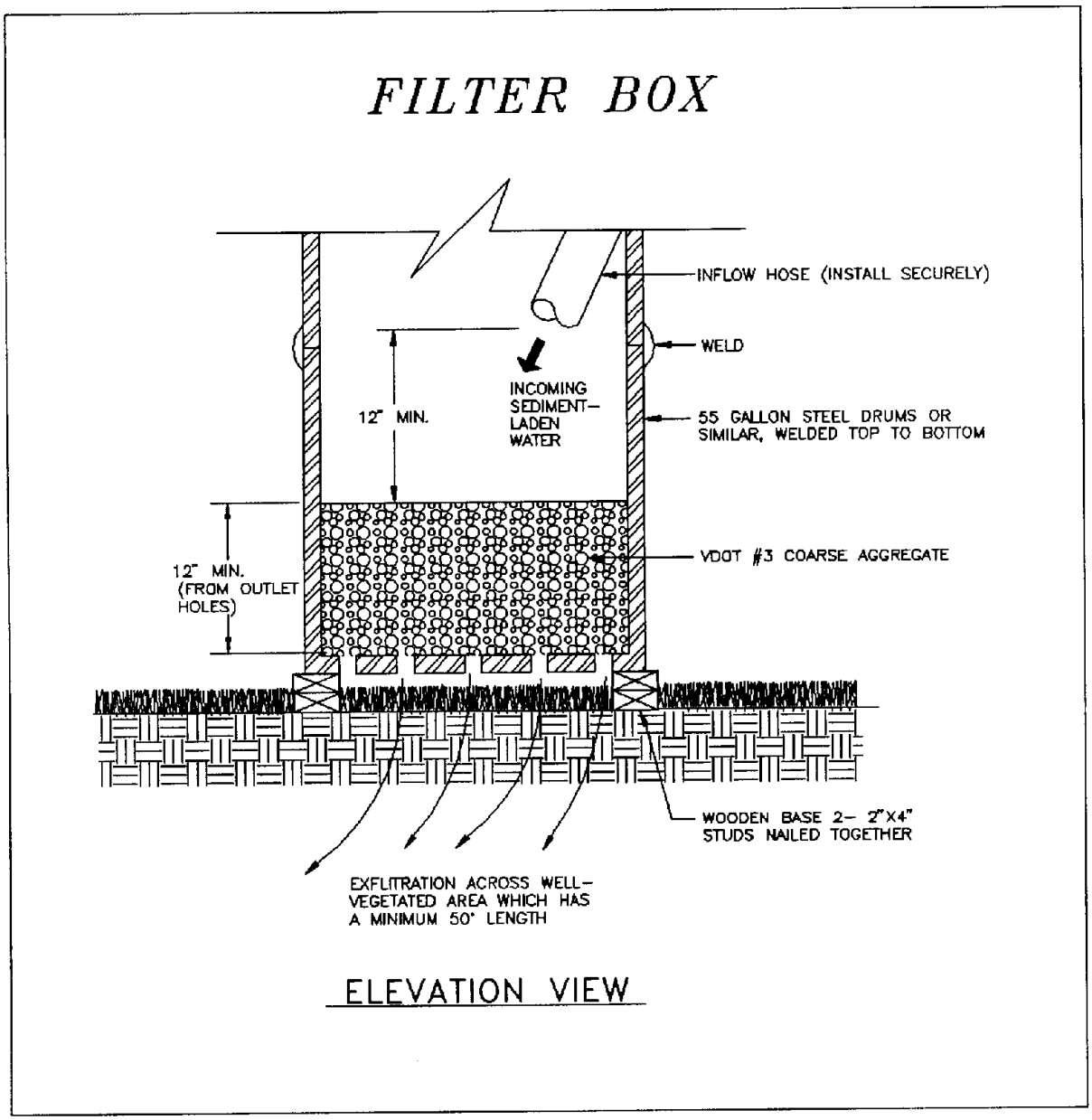


CROSS-SECTION A-A

Source: USDA-SCS

Plate 3.26-1

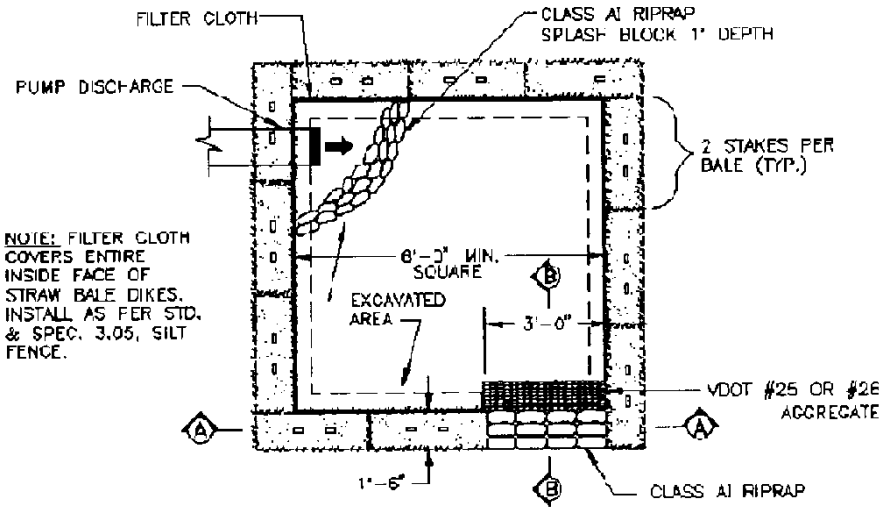
1992 3.26



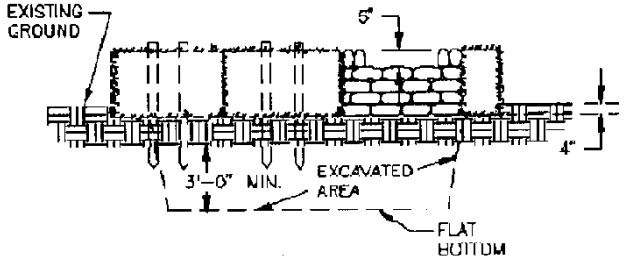
Source: Va. DSWC

Plate 3.26-2

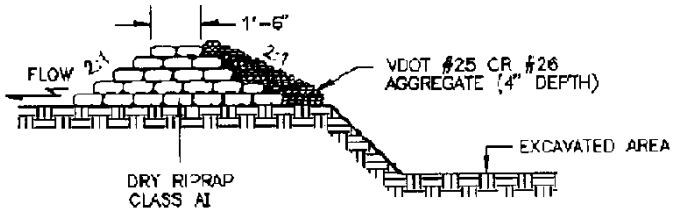
STRAW BALE/SILT FENCE PIT



PLAN VIEW



CROSS-SECTION A-A

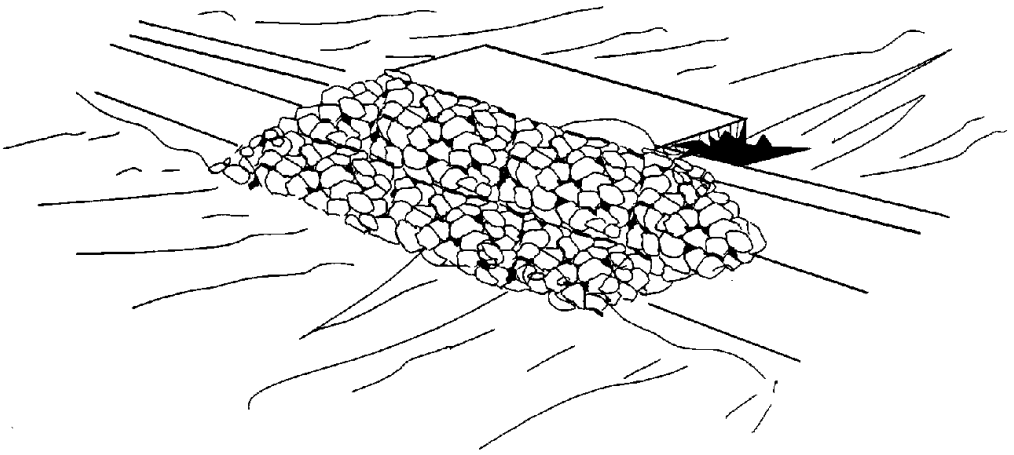


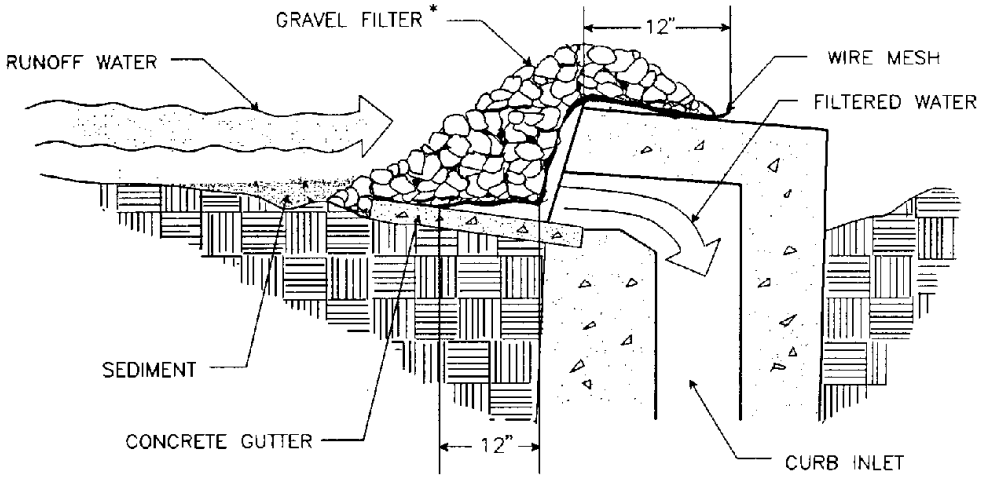
CROSS-SECTION B-B

Source: Va. DSWC

Plate 3.26-3

GRAVEL CURB INLET SEDIMENT FILTER





SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

* GRAVEL SHALL BE VDOT #3, #357 OR 5 COARSE AGGREGATE.

Source: Va. DSWC Plate 3.07-6

Fort Belvoir Directorate of Public Works (DPW)
Municipal Separate Storm Sewer System (MS4) Program

Erosion & Sediment Control Technical Bulletin #2: STORMWATER POLLUTION PREVENTION PLAN REQUIREMENTS

APPLICABILITY

This bulletin is applicable to all Garrison, tenant and contractor operations for projects involving land disturbance equal to or greater than one acre.

BACKGROUND

In order to comply with the Virginia Pollution Discharge Elimination System (VPDES), Virginia Stormwater Management Program (VSMP) Permits, and the Virginia Erosion and Sediment Control (ESC) Regulations published by the Commonwealth of Virginia, a Stormwater Pollution Prevention Plan (SWPPP) must be developed for construction projects prior to submission of a General Permit for Discharges of Stormwater From Construction Activities Construction General Permit (CGP) registration statement to Virginia Department of Environmental Quality (VADEQ) and implemented for the construction activity covered by the General Permit for Discharges of Stormwater From Construction Activities (9VAC25-880-70). As the MS4 Permit holder, Fort Belvoir Directorate of Public Works, Environmental Division (DPW-Environmental) reviews SWPPP's to ensure protection of stormwater quality that discharges into the Municipal Separate Storm Sewer System (MS4).

STORMWATER POLLUTION PREVENTION PLAN REQUIRMENTS

Stormwater Pollution Prevention Plans shall be prepared which address requirements of 9VAC25-880-70, Section II Stormwater Pollution Prevention Plan. Guidance on required components of the SWPPP may be found at: http://lis.virginia.gov/cgi-bin/legp604.exe?000+reg+9VAC25-880-70, and SWPPPs shall follow the template provided by the U.S. Environmental Protection Agency website at: https://www.epa.gov/npdes/construction-general-permit-resources-tools-and-templates#swppp.

DPW-Environmental will review SWPPP's based on the attached checklist and provide comments to ensure that SWPPP's comply with federal, state, and county stormwater management requirements. Comments generated from the SWPPP review will be provided to the construction contractor electronically by email. Once the SWPPP is deemed adequate, the construction contractor will submit a copy of the signed SWPPP to DPW-Environmental along with a copy of the VSMP permit registration statement and a copy of the check to prove payment. In addition, once the contractor has received the state permit coverage letter from VADEQ, a copy shall be provided to DPW-Environmental.

SWPPP COMPLIANCE DURING CONSTRUCTION

The SWPPP shall be retained, along with a copy of the Virginia VSMP General Permit, registration statement and state permit coverage letter from VADEQ, at the construction site or other location easily accessible during normal business hours from the date of commencement of construction activity to the date of final stabilization. A copy of the state permit coverage letter from VADEQ must also be posted on the job board on site, easily viewable by all.

The SWPPP must be made available, in its entirety, to the VADEQ, the VSMP authority, and the operator of a MS4 receiving discharges from the site for review at the time of an on-site inspection. If an on-site location is unavailable to store the SWPPP when no personnel are present, notice of the SWPPP's location must be posted near the main entrance at the construction site.

The construction contractor shall amend the SWPPP whenever there is a change in design, construction, operation, and/or maintenance that has a significant effect on the discharge of pollutants to state waters and that has not been previously addressed in the SWPPP. The SWPPP must be amended if, during ESC inspections, it is determined that the existing ESC measures are ineffective in minimizing pollutants in stormwater discharges from the construction site. Revisions to the SWPPP shall include additional or modified control measures designed to correct problems identified.

DPW-ENVIRONMENTAL DIVISION STORMWATER POC:

Name, Email and Phone Number:	Ashley McMahon, Acting MS4 Program Manager Ashley.c.mcmahon2.civ@army 703-806-0026
Physical Location:	Bldg 1442, 2nd Floor, Room 226
Mailing Address:	9430 Jackson Loop, Bldg 1442 Directorate of Public Works Fort Belvoir, VA 22060

Fort Belvoir Directorate of Public Works (DPW)
Municipal Separate Storm Sewer System (MS4) Program

Erosion & Sediment Control Technical Bulletin #3:

EROSION & SEDIMENT CONTROL REQUIREMENTS FOR UTILITY INSTALLATION

APPLICABILITY

This bulletin is applicable to Garrison, Tenant and Contractor Operations for excavation or installation of linear utilities.

BACKGROUND

All work associated with the installation, maintenance, and repair of panel racks, conduit, manholes, and underground utility (communication, water, sewer, power, natural gas) lines must be conducted in accordance with the standards and specifications outlined in the Virginia Erosion and Sediment Control Handbook (VESCH) and in accordance with Minimum Standard 16 for Utilities (9VAC25-840-40.A.16).

EROSION AND SEDIMENT CONTROL REQUIREMENTS

If the project involves an area of land disturbance that is greater than 2,500 square feet, an Erosion and Sediment Control plan is to be submitted to DPW-Environmental. Refer to Fort Belvoir MS4 Program Bulletin #1 for more information on plan development and review requirements.

Regardless of the size of the area of land disturbance, the contractor is responsible for:

- Installing and maintaining erosion and sediment control measures to ensure disturbed ground does not leave the work site;
- Removing all excavated materials not required from the work site once the work has been completed;
- Grading the disturbed area once the work has been completed;
- Seeding and/or mulching the disturbed area(s)
- Employing dewatering procedures in accordance with Minimum Standard 16, the VESCH, and the Virginia Erosion and Sediment Control Regulations (VESCR).

In addition to the above, underground utility lines shall be installed in accordance with the following standards along with any other applicable criteria:

- No more than 500 linear feet of trench may be opened at one time
- Excavated material shall be placed on the uphill side of trenches
- Effluent from dewatering operations shall be filtered or passed through an approved sediment trapping device and discharged in a manner that does not adversely affect off-site property
- Material used for backfilling trenches shall be properly compacted in order to minimize erosion and promote stabilization
- Restabilization shall be accomplished in accordance with Std. & Spec. 3.32 or 3.33 of the VESCH
- Applicable safety regulations shall be complied with

The contractor is to notify DPW-Environmental when work has been completed to arrange for an inspection. This inspection will ensure that requirements of VESCR, the VESCH, and Minimum Standard 16 have been met.

DPW-ENVIRONMENTAL POINT OF CONTACT

Ms. Ashley McMahon, Acting MS4 Program Manager, Chief, 9430 Jackson Loop, Building 1442, Room 226, Directorate of Public Works, Fort Belvoir; Phone: 703-806-0627; Email: ashley.c.mcmahon2.civ@army.mil

Fort Belvoir Directorate of Public Works (DPW)
Municipal Separate Storm Sewer System (MS4) Program

Erosion & Sediment Control Technical Bulletin #4:

STORMWATER POLLUTION PREVENTION REQUIREMENTS FOR SMALL PROJECTS AND RENOVATION PROJECTS

APPLICABILITY

This bulletin is applicable to Garrison, Tenant and Contractor Operations for small construction projects that involve less than 2,500 sq.ft. of land disturbance and building renovation projects.

BACKGROUND

While projects less than 2,500 sq.ft. are not required to obtain a Virginia Department of Environmental Quality (VADEQ) Construction General Permit or go through any formal plan submittal & review process, projects are still held to the pollution prevention/good housekeeping requirements of Fort Belvoir's Small Municipal Separate Storm Sewer System (MS4) permit (VAR040093) (9VAC25-890-40 Section II.A.6).

EROSION AND SEDIMENT CONTROL REQUIREMENTS

Erosion and Sediment Control (ESC) practices over the course of work prevent discharges of sediment laden water to the storm sewer system. The following ESC practices are required to be implemented, when applicable.

- Install and maintain erosion and sediment control measures to ensure disturbed ground does not leave the work site. These measures will be left in place until final stabilization has been achieved.
    - Silt fence (VESCH STD. & SPEC. 3.05) should be installed on the downslope side of any disturbed area, and along walkways or roadways (see attached).
    - Inlet protection (VESCH STD. & SPEC. 3.07) should be installed on all inlets nearby and immediately downstream of the project site (see attached).
- Removing all excavated materials not required from the work site once the work has been completed.
- Grading the area once the work has been completed.
- Seeding and/or mulching the disturbed area to bring to final stabilization.

The contractor is to notify DPW-Environmental when work has been completed to arrange for an inspection. This inspection will ensure that requirements of VESCR and the VESCH have been met.

STORMWATER MANAGEMENT REQUIREMENTS

The contractor is responsible for using good practices to prevent the discharge of pollutants into the storm sewer system during work. The following list outlines practices that should be implemented during the course of work to prevent illicit discharges, when applicable.

- Portable toilets must be located a minimum distance of 25 feet away from the nearest Stormwater feature (inlets, swale, pond, etc.), they must also be maintained and cleaned, inspected for leaks, and placed on a level surface.
- Wash waters from equipment and vehicle washing, wheel wash water, and other wash waters must be treated in a temporary sediment basin or alternative control that provides an equal or greater level of treatment prior to discharging.

- If temporary fuel tanks are necessary, contact the Petroleum & Spill Response Program Manager at (703) 806-3694. These tanks must be a minimum distance of 25 feet away from the nearest Stormwater feature. Ensure that the temporary fuel tank has secondary containment, and if a plug is used with the secondary containment, the plug must remain in place for the duration of the project.
- For construction material storage, materials must be stored in a manner where they will not come in contact with Stormwater, i.e. covered and up off the ground. These materials must also be a minimum distance of 25 feet away from the nearest Stormwater feature. Materials include but are not limited to building products, construction wastes, trash, landscape materials, fertilizers, pesticides, detergents, paint, stucco, concrete, oils, gasoline, sealants, copper flashing, curing compounds, etc…
- For concrete use on site, a concrete washout must be utilized in accordance with the EPA Concrete Washout Guidelines.
- All dewatering operations must be performed in accordance with the Fort Belvoir ESC Technical Bulletin #1: Dewatering Operations.
- A “Spill Response Procedures” Placard must be posted, and followed should there be any spill on the site. This placard is attached to this bulletin. The contractor shall minimize discharges of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.
- A map outlining the locations of possible pollutant generating activities should be kept and maintained during the course of the work to be performed, and should include locations of trailers, dumpsters, staging and storage areas, vehicle washout area, concrete washout area, portable toilet area, and ingress/egress from site.

The following procedures are prohibited:

- Discharge of sanitary waste.
- Discharge of wash waters from equipment and vehicle washing, unless managed by an appropriate control.
- Discharge of soaps or solvents used in vehicle and equipment washing.
- Discharge of fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance.
- Discharge of concrete washout water, unless managed by an appropriate control.
- Discharge from dewatering activities, including discharges from dewatering of trenches and excavations, unless managed by an appropriate control.
- Discharge of wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials.

DPW-ENVIRONMENTAL POINT OF CONTACT

Name, Email and Phone Number:	Ashley McMahon, ashley.c.mcmahon.2.civ@army.mil 703-806-0627
Physical Location:	Bldg 1442, 2nd Floor, Room 226
Mailing Address:	9430 Jackson Loop, Bldg 1442 Directorate of Public Works Fort Belvoir, VA 22060

2024

APPENDIX C

ESC AND SWM INSPECTION FORM

FORT BELVOIR MS4 PROGRAM PLAN

Fort Belvoir Erosion and Sediment Control Inspection Report

Project Name:	Project Authority:	☐ Scheduled Inspection	Date:
RLD Name:	RLD No.	☐ Post Rain Inspection	
Project Location:	Attendees:	☐ Re-Inspection	Time:
Inspector Name:		☐ Other	

Yes	No	N/A	Regulation (1)	Minimum Standards (2)
			9VAC25-840-40.A.1	MS-1: Stabilization - Has permanent or temporary soil stabilization been applied appropriately?
			9VAC25-840-40.A.2	MS-2: Stockpiles, Waste and Borrow Areas - Are all soil stockpiles and borrow areas adequately stabilized or protected?
			9VAC25-840-40.A.3	MS-3: Permanent Vegetation - Has permanent stabilization been applied appropriately, and is it stabilized?
			9VAC25-840-40.A.4	MS-4: First Step Measures - Have sediment basins, sediment traps, and other perimeter controls been installed as a first step in any Land Disturbing Activity (LDA)?
			9VAC25-840-40.A.5	MS-5: Earthen Structure Stabilization - Are earthen structures such as dams, dikes, and diversions stabilized appropriately?
			9VAC25-840-40.A.6	MS-6: Sediment Traps and Basins - Are sediment traps and basins installed per specifications?
			9VAC25-840-40.A.7	MS-7: Cut and Fill Slopes - Are cut and fill slopes protected from erosion?
			9VAC25-840-40.A.8	MS-8: Concentrated Runoff - Are cut and fill slopes protected from concentrated runoff?
			9VAC25-840-40.A.9	MS-9: Water Seeps - Is there any water seepage on slope faces?
			9VAC25-840-40.A.10	MS-10: Inlet Protection - Do all operational storm sewer inlets have adequate inlet protection?
			9VAC25-840-40.A.11	MS-11: Conveyance Channel/Outlet Protection - Do all active outlets have adequate outlet protection
			9VAC25-840-40.A.12	MS-12: Watercourse Construction - Are watercourses adequately protected from runoff due to construction activities?
			9VAC25-840-40.A.13	MS-13: Temporary Stream Crossing - Are temporary stream crossings installed properly?
			9VAC25-840-40.A.14	MS-14: Other Watercourse Regulations - Are all applicable federal, state, and local regulations pertaining to live watercourses being met?
			9VAC25-840-40.A.15	MS-15: Bed and Bank Stabilization - Are stream bed and banks protected from erosion?
			9VAC25-840-40.A.16	MS-16: Utility Construction - Is there no more than 500 linear feet of utility trench open at any one time? If dewatering is occurring, are devices being used appropriately?
			9VAC25-840-40.A.17	MS-17: Vehicular Tracking, Construction Entrance - Are construction entrances installed properly, and are roadways free of sediment and sediment tracking?
			9VAC25-840-40.A.18	MS-18: Control Removal - Are all unnecessary Erosion and Sediment Control devices removed, or scheduled to be removed?
			9VAC25-840-40.A.19	MS-19: Downstream and Property Protection - Are properties and waterways downstream of the subject property protected from erosion and sediment?
Yes	**No**	**N/A**	**Regulation (1)**	**Construction General Permit Requirements (2)**
			9VAC25-870-310	Project has permit coverage?
			9VAC25-870-54.G	Notice of location of the SWPPP posted near site's entrance, if applicable, and information for public access is provided?
			9VAC25-880-70 Part II.A.4.e(1)	Are spill response procedures listed conspicuously on site?
			9VAC25-880-70 Part II.A.4.e(2)	Is there a spill kit on site in case of emergency?
			9VAC25-880-70 Part II.A.4.e(3)	Are harmful/deleterious materials being stored in a covered, protected area?
			9VAC25-880-70 Part II.A.4.e(4)	Are equipment and vehicle washing areas provided, with water conveyed through proper protective controls?
			9VAC25-880-70 Part II.A.4.e(5)	Are concrete washout areas provided where necessary, and has any spilled concrete been disposed of properly?
			9VAC25-880-70 Part II.A.4.e(6)	Is trash from construction activities being disposed of properly?
			9VAC25-880-70 Part II.A.4.e(7)	Are vehicle fuel, oil, petroleum wastes stored in a covered, protected area (secondary containment, covered)? Are sanitary facilities located away from drainage inlets?
			9VAC25-880-70 Part II. C	Project's coverage letter posted near the site entrance?
Yes	**No**	**N/A**	**Regulation (1)**	**Stormwater Pollution Prevention Plan (SWPPP) Requirements**
			9VAC25-880-70 Part II.A.1.a	Is there a signed registration statement within the SWPPP?

Fort Belvoir Erosion and Sediment Control Inspection Report

			9VAC25-880-70 Part II.A.1.b & c	Is there an active notice of coverage letter from the DEQ within the SWPPP along with a copy of the Construction General Permit?
			9VAC25-880-70 Part II.A.1.d & e	Is there a narrative description of the nature of the construction activity within the SWPPP along with a site plan?
			9VAC25-880-70 Part II.A.2.a-c	Is the Erosion and Sediment Control plan approved and properly implemented?
			9VAC25-880-70 Part II.A.3.a-b	Is the Stormwater Management Plan consistent with the CGP requirements for new and existing construction activities?
			9VAC25-880-70 Part II.A.4.a, b, c, d, and f	Is the Pollution Prevention Plan consistent with the requirements of the CGP and VSMP Regulations?
			9VAC25-880-70 Part II.A.5.a-b	Are discharges to impaired waters, surface waters with an applicable TMDL wasteload allocation established, and exceptional waters addressed as required in the SWPPP?
			9VAC25-880-70 Part II.A.6	Are the qualified personnel conducting inspections listed within the SWPPP?
			9VAC25-880-70 Part II.A.7	Is Delegation of Authority provided and signed in accordance with Part III K?
			9VAC25-880-70 Part II.A.8	Is the SWPPP signed and dated in accordance with Part IIIK?
			9VAC25-880-70 Part II.B.1, 2, 4, and 5	Is the SWPPP being amended, modified, and updated appropriately?
			9VAC25-880-70 Part II.B.3	Are Contractor(s) identified who will implement and maintain each control measure?
			9VAC25-880-70 Part II.D	Is there a SWPPP on site OR is it made available during the inspection?
			9VAC25-880-70 Part II.E	Are control measures implemented in accordance with the SWPPP and site plan?
			9VAC25-880-70 Part II.F	Are inspections conducted appropriately and at the required frequency?
Yes	**No**	**N/A**	**Regulation (1)**	**Permanent Stormwater Requirements (2)**
			9VAC25-870-114	Are approved stormwater management plans located on site?
			9VAC25-870-114	Do field observations match design plans and specifications? (BMP type, size, materials used, etc…)
			9VAC25-870-114	Is the condition of the stormwater BMP's consistent with the construction schedule and E&S phasing?
			9VAC25-870-114	Is the drainage area going to the BMP's stabilized appropriately?
			9VAC25-870-114	Are permanent structures free of erosion and sediment build-up requiring maintenance?
			9VAC25-870-114	Are additional control measures necessary to address a TMDL (Total Maximum Daily Load) being developed or implemented?
			9VAC25-870-114	Have certified as-built drawings been provided?
			9VAC25-870-114	Have previous VSMP inspection reports been received and deficiencies corrected, and are self-inspection reports and maintenance records located within the SWPPP?
Yes	**No**	**N/A**	**Regulation (1)**	**Final Requirements**
			9VAC25-880-70 Part II.G	Have all deficiencies from the previous report been addressed? (Seven days to correct any required action)

(1) Refers to applicable regulation found in the most recent publication of the *Virginia Erosion and Sediment Control Regulations* (9VAC25-840), *Virginia Stormwater Management Regulations* (9VAC25-870), or local ESC/SWM ordinance.

(2) Note whether or not off-site damage resulting from the problem/violation was evident during the inspection.

REQUIRED CORRECTIVE ACTION DEADLINE DATE:	Re-inspection Date:

The required corrective action deadline date applies to **all violations** noted on this report. If listed violation(s) currently constitute non-compliance and/or required corrective actions are not completed by the deadline, a **NOTICE TO COMPLY**, **STOP WORK ORDER** and/or other enforcement actions may be issued to the entity responsible for ensuring compliance on the above project.

Inspector Signature:	Date:

Acknowledgement of on site report incident:

Print Name	*Signature*	*Date*

This report will be provided to the necessary parties via mail, fax or e-mail within 24 hours of inspection:

Notes and Comments
Inspection Description:
1)
2)
3)
4)
5)
6)
7)
8)
9)
10)