

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

For

**Virginia General Permit for Small Municipal
Separate Storm Sewer Systems
VPDES Permit #VAR040093**



September 2014

**Regulated Small MS4: Fort Belvoir Military Installation
Fairfax County, Virginia**

**Regulated Small MS4 Operator: U.S. Army Garrison,
Fort Belvoir
9820 Flagler Road
Fort Belvoir, Virginia 22060**

1. BACKGROUND

In accordance with the requirements set forth in the Virginia Stormwater Management Act and the Virginia Stormwater Management Program (VSMP) Permit regulations, this MS4 Program Plan identifies the minimum control measures to be implemented at properties owned and operated by the U.S. Army Garrison Fort Belvoir (USAG, FB) (Fort Belvoir, Fort Belvoir North Area).

Rivanna Station, located north of Charlottesville, Virginia, 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”. Therefore, USAG, FB is not required to obtain an MS4 permit for Rivanna Station.

Humphreys Engineer Center (HEC) is immediately adjacent to Fort Belvoir on the northeastern corner (approximately 585 acres) and is owned and operated by U.S. Army Corps of Engineers and is not included in the Fort Belvoir MS4 permit.

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, Section IIB of the General VPDES Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems. Unless specifically noted, the minimum control measures described within this stormwater program plan will be implemented on a regional scale at the above referenced properties.

2. HYDROLOGIC UNIT CODES

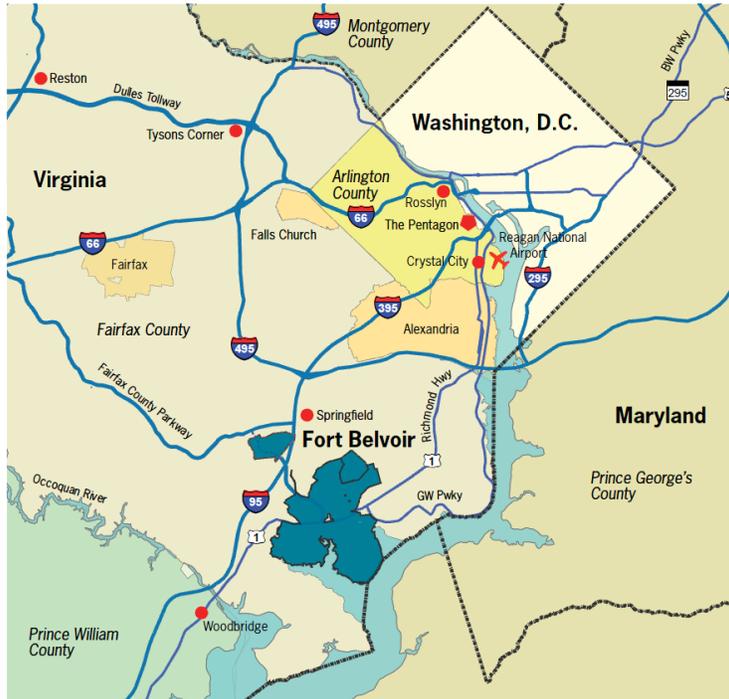
The Hydrologic Unit Codes (HUC) identified in the most recent version of Virginia’s 6th Order National Watershed Boundary Dataset as receiving discharges or have the potential to receive discharges from the Fort Belvoir MS4 are as follows:

- PL27 Dogue Creek
- PL28 Potomac River – Little Hunting Creek
- PL29 Pohick Creek
- PL30 Accotink Creek

These areas were determined by using the Virginia Department of Conservation and Recreation (VADCR) Interactive Map of Virginia Hydrologic Units found at:

<http://dswcapps.dcr.virginia.gov/htdocs/maps/HUExplorer.htm>. All stormwater discharges from Fort Belvoir eventually enter the Potomac River.

3. ESTIMATED DRAINAGE AREA AND LAND USE



Fort Belvoir consists of approximately 8,500 acres and is divided into two broad land areas: Main Post and Fort Belvoir North Area (FBNA) with Main Post being located east of I-95 and FBNA being located west of I-95 (Figure 3-1. Location Map) **Note:** HEC is also shaded as bright blue in the north-eastern corner of Fort Belvoir but is not included in this MS4 Permit.



Figure 3-2. Fairfax County Watershed Delineation

Based on the Fairfax County watershed mapping, Fort Belvoir has three watersheds as delineated by Fairfax County. (Fort Belvoir is shaded in light yellow and FBNA is not demarcated on this map.) These watersheds include: Pohick Creek, Dogue Creek, and Accotink Creek. Fort Belvoir completed a watershed delineation project in March 1999 which further subdivides these watersheds. For purposes of this plan, the Fairfax County watershed delineation will be utilized to describe drainage areas with associated land use below.

Pohick Creek Watershed encompasses approximately 1,200 acres and includes Fort Belvoir's Pohick Creek and Pohick Bay watersheds. Land uses in this watershed include: a portion of the Accotink Bay Wildlife Refuge, undeveloped wooded areas and operational ranges for engineer/troop training.

Accotink Creek Watershed encompasses approximately 4,005 acres and includes Fort Belvoir North Area (FBNA) (approximately 800 acres). FBNA land uses include a campus for a major mission partner and associated support facilities with approximately 300 acres that are undeveloped. On Fort Belvoir Main Post, this watershed includes major mission partners requiring secure campuses, Davison Army Airfield (DAAF), two 18-hole golf courses, an elementary school, administration facilities and a clustering of community facilities (post exchange, commissary, convenience store, gas station, bank and chapel) and a portion of the Accotink Bay Wildlife Refuge.

Dogue Creek Watershed encompasses approximately 3,880 acres and includes Fort Belvoir's Dogue Creek, Accotink Bay, Potomac River and Gunston Cove watersheds. Land uses in this watershed include: Jackson Miles Abbott Wetland Refuge, a family housing area, and Humphreys Engineer Center to the north of U.S. Route 1, and family housing areas, administration facilities, medical services, education, research and development,

community/recreational facilities, the T-17 Wildlife Refuge and a portion of the Accotink Bay Wildlife Refuge to the south of U.S. Route 1.

4. IMPAIRED WATERS

Based on a review of the *Final 2012 305(b)/303(d) Water Quality Assessment Integrated Report*, Virginia Department of Environmental Quality, dated January 2014, the Fort Belvoir MS4 discharges into the impaired receiving surface waters listed in Table 1.

Table 1. Impaired Receiving Surface Waters

Cause Group Code <i>Impaired Use</i>	Water Name <i>Cause</i>	Cause Category	Initial List Date	TMDL Development Date
A15R-01-PCB <i>Fish Consumption</i>	Accotink Creek <i>PCB in Fish Tissue</i>	5A	2010	2022
A15R-01-BEN <i>Aquatic Life</i>	Accotink Creek <i>Benthic-Macroinvertebrate Bioassessments</i>	5A	1996	2016
A15E-01-PH <i>Aquatic Life</i>	Pohick Bay <i>pH</i>	5A	2012	2024
A16E-01-BZOKFL <i>Fish Consumption</i>	Pohick Creek <i>Benzo{k}fluoranthene</i>	5A	2002	2014
A16R-01-BAC <i>Recreation</i>	Pohick Creek <i>Escherichia coli</i>	5A	2006	2018
A12E-01-PCB <i>Fish Consumption</i>	Potomac River Embayments <i>PCB in Fish Tissue</i>	4A	2006	9/28/2007 Rev. 10/31/2007
A15R-01-BAC <i>Recreation</i>	Accotink Creek <i>Escherichia coli</i>	4A	2004	2016

5. TOTAL MAXIMUM DAILY LOAD (TMDLs) Waste Load Allocation (WLA)

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 Section I. B. are stated as follows:

“B. Special conditions for approved total maximum daily loads (TMDL) other than the Chesapeake Bay TMDL. An approved TMDL may allocate an applicable wasteload to a small MS4 that identifies a pollutant or pollutants for which additional stormwater controls are necessary for the surface waters to

meet water quality standards. The MS4 operator shall address the pollutants in accordance with this special condition where the MS4 has been allocated a wasteload in an approved TMDL.

The operator shall maintain an updated MS4 Program Plan that includes a specific TMDL Action Plan for pollutants allocated to the MS4 in approved TMDLs. TMDL Action Plans may be implemented in multiple phases over more than one state permit cycle using the adaptive iterative approach provided adequate progress to reduce the pollutant discharge in a manner consistent with the assumptions and requirements of the specific TMDL wasteload is demonstrated in accordance with subdivision 2 e. of this subsection. These TMDL Action Plans shall identify the best management practices and other interim milestone activities to be implemented during the remaining terms of this state permit.”

Table 2 lists TMDLs that have been issued and their applicability to Fort Belvoir MS4.

Table 2. TMDLs Issued

Name of document	Date Issued	Waste Load Allocation (WLA) for Regulated Stormwater (MS4)	Percent Reduction (%)
<i>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</i>	September 28, 2007; revised October 31, 2007	Accotink Creek 0.0992 g PCBs/year Dogue Creek 20.2 g PCBs/year Gunston Cove 0.517 g PCBs/year Pohick Creek 7.58 g PCBs/year	92.0 65.7 87.1 61.2
<i>Bacteria TMDL for the Lower Accotink Creek Watershed</i>	September 2008	1.73E+12 cfu/year	97.00
<i>TMDL for Benthic Impairments in the Accotink Watershed (Fairfax County, City of Fairfax and Town of Vienna, Virginia)</i>	April 18, 2011	This TMDL established by the United States Environmental Protection Agency, Region III was overturned in the U.S. District Court on January 3, 2013 and is not applicable.	N/A
<i>*Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorous and Sediment</i>	December 29, 2010	N/A	N/A

* Fort Belvoir was not assigned an individual WLA for the Chesapeake Bay TMDL.

5.1 Polychlorinated Biphenyls (PCBs) TMDL

A review of the Virginia Department of Environmental Quality (VADEQ) Approved and Draft Implementation Plans Listing found on the VADEQ website

<http://www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs/TMDL/TMDLI>

[mplementation/TMDLImplementationPlans.aspx](#)) was conducted. A PCB TMDL implementation plan was not listed on the VADEQ website.

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 September 30, 2007 states under the section titled "Implementation Plan Development" that:

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

At the request of Virginia Department of Conservation and Recreation, a PCBs TMDL Schedule for Implementation was provided in a letter dated May 30, 2012, and an update on the Schedule of Implementation is provided below in Table 3.

Table 3. PCB TMDL Schedule for Implementation

MS4 Permit Citation	Action	Schedule	Status
Section I.B.1	Update the MS4 Program Plan to include PCBs TMDL allocations.	Completed September 2013	Completed September 2013 as part of the Annual Report.
Section I.B.2	Document historical use of PCBs at Fort Belvoir to determine extent of drainage of PCBs storage areas to impaired waters (Accotink Creek, Dogue Creek, Pohick Creek and Gunston Cove).	Completed March 2013	Historical use documented in the Final <i>Virginia Pollutant Discharge Elimination System MS4 Permit, Fort Belvoir PCB TMDL Action Plan</i> prepared by Tidewater, Inc. dated March 2013.
Section 1.B.3	Integrate an awareness campaign into its existing public education and outreach program that promotes methods to eliminate and reduce discharges of the pollutant identified in the WLA.	Completed June 2014	Information on PCBs was included in the Illicit Discharge Training Module that was completed in June 2014.
Section 1.B.4	Incorporate applicable Best Management Practices (BMPs) identified in the TMDL implementation plan.	Completed September 2013	Incorporated into the MS4 Program Plan as part of the MS4 Annual Report.
Section 1B.5	Perform an outfall reconnaissance	Completed	A survey of ten sites was completed and results are

Fort Belvoir Municipal Separate Storm Sewer Systems (MS4) Program Plan

MS4 Permit Citation	Action	Schedule	Status
	inventory (ORI).	November 2012	documented in the Final <i>Virginia Pollutant Discharge Elimination System MS4 Permit, Fort Belvoir PCB TMDL Action Plan</i> prepared by Tidewater, Inc. dated March 2013.
Section 1.B.6.a-b.	Characterize runoff (Conduct fall/spring sampling) of areas where PCBs are currently stored, has been transferred, transported or historically disposed of in a manner that would expose it to precipitation.	Completed December 2013	Based on the ORI results, two outfalls were identified that require sampling for characterization of runoff. Sampling was completed in December 2013. Results were submitted to VADEQ in MS4 Annual Report for period July 1, 2013 – June 30, 2014.
Section 1.B.6.c	Determine if BMPs currently being used are sufficient to address PCBs issues. If not, develop and implement a schedule to minimize the discharge of PCBs. Include findings in 2012 Annual report.	2015	Strategy to address PCB contamination ongoing.
Section 1.B.7	Conduct annual characterization for each impaired water segment, as necessary, once characterization of runoff has been completed.	2015	Requirement to conduct annual characterization to be determined once characterization of runoff has been completed for two outfalls.
Section 1.B.8	Update MS4 Program Plan to include any new information regarding the TMDL.	October 1, 2014	Completed October 1, 2014 as part of the MS4 Annual Report.
Section 1.B.9.a-b	Annual reporting requirements for the PCB TMDL to be included in the 2013 Annual Report.	October 1, 2014	Completed October 1, 2014 as part of the MS4 Annual Report.

The Final Fort Belvoir PCB TMDL Action Plan was completed in March 2013 which includes documentation for actions in Table 3 that have been annotated as completed. In addition, the Plan recommended BMPs that can be addressed under the MS4 permit to minimize discharge of PCBs as well as a sampling plan for outfalls that were identified in the ORI to characterize

annual runoff. The complete PCB TMDL Action Plan is incorporated into the MS4 Program Plan by reference and is available upon request. The recommended BMPs from the final PCB Action Plan have been incorporated into the MS4 Program Plan below:

- **BMP PCB.1 Develop Information Sheet on PCBs**

Information to be included in information sheet is as follows: basic facts about PCBs and the PCB TMDL, summary of where PCBs were historically found at Fort Belvoir, what has been done to eliminate PCB contamination and what an individual should do if they encounter an old transformer.

- ✚ **Measurable Goal:** In permit year 2, develop an information sheet and make it available at Accotink Bay Wildlife Refuge Education Center, Fort Belvoir website, family housing resident guidelines, and other training avenues, as needed.
- ✚ **Reporting and Record Keeping:** In the annual report, provide a narrative on the progress of development and include copies of education materials that have been developed during the reporting period
- ✚ **Responsible Party:** DPW ENRD will coordinate with various departments to insure widest dissemination of information to include (PAO, NEC, The Michaels' Group, etc.).

- **BMP PCB.2 Maintain a GIS Data Layer**

- ✚ **Measurable Goal:** Annually update and maintain a GIS Data Layer that includes the locations of past and present PCB sites.
- ✚ **Reporting and Record Keeping:** In the annual report, provide a narrative on updates conducted during the reporting period.
- ✚ **Responsible Party:** DPW ENRD will coordinate with GIS department for maintenance of data layer.

- **BMP PCB.3 Develop and Implement PCB Sampling Plan**

- ✚ **Measurable Goal:** In permit year 1, develop a PCB sampling plan to comply with PCB TMDL requirements. In permit year 2, implement the sampling plan.
- ✚ **Reporting and Record Keeping:** In the annual report, provide a narrative on the progress of development and include sampling results and characterization of runoff.
- ✚ **Responsible Party:** DPW ENRD

- **BMP PCB.4 Incorporate PCB information into " BMP 6.1 Develop and Implement Written Training Plan "**
 - ✚ **Measurable Goal:** In permit year 2, incorporate materials into the training plan which specifically highlight transformer storage and reporting of possible PCB leaks. In permit years 3-5, implement training plan.
 - ✚ **Reporting and Record Keeping:** In the annual report, provide a narrative on the progress of development and include copies of education materials that have been developed during the reporting period.
 - ✚ **Responsible Party:** DPW ENRD

- **BMP PCB.5 Site Specific BMP for Building 1495**
 - ✚ **Measurable Goal:** In permit years 1-5 periodically conduct site visits to confirm containment materials are intact and perform routine maintenance of structural BMPs until PCB contamination is remediated.
 - ✚ **Reporting and Record Keeping:** In the annual report, provide a narrative on the site visits and progress of remediation.
 - ✚ **Responsible Party:** DPW ENRD

5.2 Bacteria TMDL – Accotink Creek

A review of the VADEQ Approved and Draft Implementation Plans Listing found on the VADEQ website

(<http://www.deq.state.va.us/Programs/Water/WaterQualityInformationTMDLs/TMDL/TMDLImplementation/TMDLImplementationPlans.aspx>) was conducted. A Bacteria TMDL implementation plan has not been developed by the Commonwealth of Virginia.

The Bacteria TMDL for the Lower Accotink Creek Watershed was issued in September 2008. The *General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems, Permit #VAR040093* issued on July 1, 2013 requires that “TMDL Action Plans for applicable TMDLs approved between July 2008 and June 2013” are to be updated by 36 months after permit coverage. A Fort Belvoir Bacteria TMDL Action Plan will be developed by 1 July 2016.

5.3 Chesapeake Bay TMDL for Nitrogen, Phosphorous and Sediment

The *Chesapeake Bay TMDL for Nitrogen, Phosphorous and Sediment* dated December 29, 2010 did not assign an individual WLA to Fort Belvoir. In response to this TMDL, the U.S.

Environmental Protection Agency required the individual States to submit Watershed Implementation Plans. The Commonwealth of Virginia developed and submitted the following watershed implementation plans (WIP) to address the Chesapeake Bay TMDL:

- Phase I Chesapeake Bay TMDL Watershed Implementation Plan , November 29, 2010
- Phase II Chesapeake Bay TMDL Watershed Implementation Plan, March 30, 2012

The Phase II WIP identified strategies for federal facilities which included:

- In accordance with Executive Order (EO) 13514, Section 438 of Energy Independence and Security Act (EISA) and EO 13508, all federal facilities are to demonstrate leadership and commitment to controlling pollution, leveraging expertise and resources to contribute significantly to improving the health of the Chesapeake Bay.
- 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.
- Virginia will utilize MS4 permits to ensure that BMP implementation on existing developed regulated federal lands achieves nutrient and sediment reductions equivalent to Level 2 scoping run reductions by 2025. Level 2 (L2) implementation equates to an average reduction of 9 percent of nitrogen loads, 16 percent phosphorous loads and 20 percent of sediment loads from impervious regulated acres and 6 percent of nitrogen loads, 7.25 percent of phosphorous loads and 8.75 percent 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.

The U.S. Army Corps of Engineers (USACE) was contracted by Installation Management Command to put together a database that contains site specific information for each Virginia Army installation which will assist Fort Belvoir in tracking phosphorous, nitrogen and sediment loading for the Chesapeake Bay TMDL. In addition, the database will assist with maintenance of stormwater management facilities by identifying maintenance requirements and tracking when the maintenance was completed. This database was updated as part of the maintenance inspection effort in June 2014.

Phase II of the USACE project includes development of the Chesapeake Bay TMDL Action Plan. Phase II work is currently underway. USACE staff continues to work with the Virginia Department of Environmental Quality to ensure that reduction requirements are addressed in the Fort Belvoir Chesapeake Bay TMDL Action Plan. The Chesapeake Bay TMDL Action Plan is due by July 1, 2015.

6. MINIMUM CONTROL MEASURES

The General VPDES Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems' requirement found in 9VAC25-890-40 Section II.A states:

"The operator of a small MS4 must develop, implement, and enforce a MS4 Program designed to reduce the discharge of pollutants from the small MS4 to the maximum extent practicable (MEP), to protect water quality, to ensure compliance by the operator with water quality standards, and to satisfy the appropriate water quality requirements of the Clean Water Act and its attendant regulations. The MS4 Program must include the minimum control measures described in paragraph B of this section. Implementation of best management practices consistent with the provisions of an iterative MS4 Program required pursuant to this section constitutes compliance with the standard of reducing pollutants to the "maximum extent practicable", protects water quality in the absence of a TMDL wasteload allocation, ensures compliance by the operator with water quality standards, and satisfies the appropriate water quality requirements of the Clean Water Act and regulations in the absence of a TMDL WLA."

The six minimum control measures described in 9VAC25-890-40 Section II.B are:

- Public education and outreach on stormwater impacts
- Public involvement and participation
- Illicit discharge detection and elimination
- Construction site stormwater runoff control
- Post-construction stormwater management in new development or redevelopment
- Pollution prevention/good housekeeping for military operations

6.1 Minimum Control Measure #1: Public Education and Outreach on Stormwater Impacts

The educational materials and/or public outreach program(s) implemented will inform staff, residents and contractors about the steps that can be taken to reduce stormwater pollution to the maximum extent practicable (MEP). BMPs identified in this plan as BMP 1.1 through BMP 1.3 will be executed to satisfy the public education and outreach requirements set forth by Section II.B.1 of the General Permit (VAR04) found in 9VAC25-890-40.

- **BMP 1.1 Support Accotink Bay Wildlife Refuge Environmental Education Center**
The Accotink Bay Wildlife Refuge Environmental Education Center will provide activities to educate children attending Fort Belvoir Elementary with educational topics on stormwater pollution and prevention.

- ✚ **Measurable Goal:** Support one activity per year, in permit years 1 through 5 to reach children attending Fort Belvoir Elementary on the effects of stormwater discharge on water quality.
 - ✚ **Reporting and Record Keeping:** In the annual report, include a copy of all educational materials distributed and number of people in attendance for each activity.
 - ✚ **Responsible Party:** DPW ENRD

- **BMP 1.2 Present Stormwater and General Watershed Information on the Fort Belvoir Website**

The Fort Belvoir website, <http://www.belvoir.army.mil/default.asp> will be utilized to present stormwater and watershed information.

 - ✚ **Measurable Goal:** In permit year 1, revise information presented regarding impacts of stormwater discharge to receiving waters and general watershed data on the Fort Belvoir DPW ENRD website (<http://www.belvoir.army.mil/dpw/enrd/enrdMain.asp>), a sub-site of the main Fort Belvoir website. In permit years 2 - 5, review and revise, as needed, annually.
 - ✚ **Reporting and Record Keeping:** In the annual report, include a copy of the website address and content. If revisions were made, include the date(s) that the website was revised.
 - ✚ **Responsible Party:** DPW ENRD will coordinate with the Public Affairs Office (PAO) and the Network Enterprise Center (NEC) to make revisions to the website.

- **BMP 1.3 Present Information on Watershed Protection to School Groups**

Attend Fort Belvoir Elementary School's Annual Career Day. Set up displays and make presentations regarding protection of the Chesapeake Bay watershed.

 - ✚ **Measurable Goal:** In permit years 1 - 5, attend Fort Belvoir Elementary School's Annual Career Day.
 - ✚ **Reporting and Record Keeping:** In the annual report, include a copy of all educational materials distributed and number of people in attendance for Career Day.
 - ✚ **Responsible Party:** DPW ENRD

- **BMP 1.4 Develop and Implement A Public Outreach Plan**

- ✚ **Measurable Goal:** In permit year 1, develop a Public Outreach Plan in accordance with the conditions set forth in 9VAC25-890-40 Section II, B.1. In permit years 2 - 5, annually conduct sufficient education and outreach activities designed to reach an equivalent of 20% of each high-priority issue target audience.
- ✚ **Reporting and Record Keeping:** In the annual report, 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 and an estimated percentage of the target audience or audiences that will be reached.
- ✚ **Responsible Party:** DPW ENRD will coordinate with the PAO to develop a Public Outreach Plan. DPW ENRD will conduct sufficient education and outreach activities.

6.2 Minimum Control Measure #2: Public Involvement/Participation

The BMPs identified in this plan as BMP 2.1 through BMP 2.3 will be executed to satisfy the public education and outreach requirements set forth set forth by Section II.B.1 of the General Permit (VAR04) found in 9VAC25-890-40.

- **BMP 2.1 Public Participation**

- ✚ **Measureable Goal:** In permit years 1 -5, participate, through promotion, sponsorship or other involvement, in a minimum of four local activities annually. Examples of possible activities include: Potomac River Cleanup, Richmond Highway (Route 1) Cleanup, community service projects with scout groups, hazardous waste cleanup days, etc. 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.
- ✚ **Reporting and Record Keeping:** In the annual report, include information on the event to include date the activity was held, any photographs taken, and approximate number of participants.
- ✚ **Responsible Party:** DPW ENRD

- **BMP 2.2 Publish the MS4 Program Plan and Annual Reports on the Fort Belvoir Website**
 - ✚ **Measureable Goal:** Update the MS4 Program Plan at a minimum once per year and in conjunction with the annual report. Post copies of the MS4 Program Plan on the Fort Belvoir webpage at a minimum of once a year and within 30 days of submittal of the annual report to the Virginia Department of Environmental Quality (VADEQ). Post copies of each annual report on the Fort Belvoir webpage within 30 days of submittal to the VADEQ and retain copies of annual reports online for the duration of the MS4 permit.
 - ✚ **Reporting and Record Keeping:** In the annual report, provide the web link to the MS4 Program Plan and annual reports.
 - ✚ **Responsible Party:** DPW ENRD will coordinate with the PAO and the NEC to make revisions to the website.

- **BMP 2.3 Provide for Public Notification and Receipt of Comments on the MS4 Program Plan**
 - ✚ **Measurable Goal:** In permit year 5, prior to submittal of the registration statement, provide for a public notification of a 30-day review and comment period of the MS4 Program Plan which may include a notice in the Belvoir Eagle and/or posting of the notice on the Fort Belvoir Facebook site and/or posting of the notice on the Fort Belvoir website.
 - ✚ **Reporting and Record Keeping:** As part of the reapplication, address how comments received were considered in the development of the MS4 Program Plan.
 - ✚ **Responsible Party:** DPW ENRD will coordinate with the PAO and/or the NEC to post notices.

6.3 Minimum Control Measure #3: Illicit Discharge Detection and Elimination

The BMPs identified in this plan as BMP 3.1 through BMP 3.12 will be executed to satisfy the Illicit discharge detection and elimination requirements set forth by Section II.B.1 of the General Permit (VAR04) found in 9VAC25-890-40.

- **BMP 3.1 Develop, Implement, Update and Support Geospatial Information System (GIS) layers**

Fort Belvoir manages GIS data for all watersheds and sub-watersheds including storm sewer utilities and stormwater best management

practices. The GIS aids 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 in the event that a spill or an illicit discharge is identified.

- ✚ **Measurable Goal:** In permit year 1, review existing GIS data layers to determine if existing layers need to be updated and identify additional data layers needed, if any. In permit years 2 -5, develop, implement, update and support GIS data layers containing stormwater systems (to include outfalls and stormwater management facilities), watershed/sub-watershed boundaries, utility data and other information pertinent to stormwater management to reflect changes or new information.
- ✚ **Reporting and Record Keeping:** In the annual report, provide a narrative on what GIS data layers were updated or added. Maintain GIS Stormwater Mapbook for reference.
- ✚ **Responsible Party:** The Directorate of Public Works, Environmental and Natural Resources Division will coordinate with The Directorate of Public Works, GIS office.

- **BMP 3.2 Develop Methods to Detect Illicit Discharges**

Develop standardized procedures and processes to perform evaluations of various facility or installation operations in order to identify illicit discharges.

- ✚ **Measurable Goal:** In permit year 1, develop standardized procedures and processes to perform evaluations of various facility or installation operations, such as smoke or dye tests of drains, in order to identify illicit discharges.
- ✚ **Reporting and Record Keeping:** Document activities conducted and in the annual report, provide a summary of activities that were conducted to identify illicit discharges.
- ✚ **Responsible Party:** DPW ENRD

- **BMP 3.3 Inform the Public of Water Quality Impacts Associated with Illicit Discharges**

Use various communication media (articles, newsletters, presentations, training modules, website etc.) to provide educational information on illicit discharge awareness.

- ✚ **Measurable Goal:** In permit year 1 - 5, provide information to the Fort Belvoir public on the identification and water quality effect of illicit discharges.
 - ✚ **Reporting and Record Keeping:** In the annual report, document dates and the communication media used, and provide copies of the information presented.
 - ✚ **Responsible Party:** DPW ENRD

- **BMP 3.4 Evaluate Storm Drain Outfalls**

By performing a reconnaissance inventory inspection on identified outfalls during dry weather, illicit discharges can be detected and measures can be taken to eliminate illicit discharges.

 - ✚ **Measurable Goal:** In permit years 1 - 5, perform an outfall reconnaissance inventory of 50 identified outfalls to detect illicit discharges utilizing methodology noted in the *U.S. Environmental Protection Agency's Illicit Discharge Detection and Elimination Guidance Manual* dated October 2004.
 - ✚ **Reporting and Record Keeping:** Maintain file copies on inspection sheets, photographs and comprehensive map of outfalls inspected. In the annual report, provide how many outfall inspections were conducted and findings.
 - ✚ **Responsible Party:** DPW ENRD

- **BMP 3.5 Perform Illicit Discharge Detection and Mitigation Procedures**
 - ✚ **Measurable Goal:** In permit years 2 - 5, perform previously developed illicit discharge detection procedures (BMP 3.1) at five facilities with the potential for illicit discharge and develop recommendations for potential mitigation actions.
 - ✚ **Reporting and Record Keeping:** Maintain file copies of illicit discharge detection procedures that were performed and locations. In the annual report, provide locations and findings.
 - ✚ **Responsible Party:** DPW ENRD

- **BMP 3.6 Develop a Plan for Operations That May Affect Stormwater**
 - ✚ **Measurable Goal:** In permit year 1, develop an assessment plan to identify and evaluate other routine operations such as waterline flushing, golf course irrigation, basement drains and condensation drains which may have an impact on stormwater quality

-  **Reporting and Record Keeping.** In the annual report, provide narrative on progress of the development of the assessment plan.
 -  **Responsible Party:** DPW ENRD

- **BMP 3.7 Perform Routine Operation Assessments and Develop BMPs**
 -  **Measureable Goal:** By the end of permit year 4, implement the assessment plan (developed for BMP 3.6) to identify potential impacts to stormwater quality from various routine operations. Develop BMPs or engineering controls to address identified non-stormwater discharges. Incorporate engineering controls or implement BMPs to address identified non-stormwater discharges that impact stormwater quality. In permit year 5, perform inspections and necessary maintenance on engineering controls or BMPs to ensure functionality.
 -  **Reporting and Record Keeping:** In the annual report, provide narrative on implementation of assessment plan to include identification of any impacts to stormwater quality from various routine operations, identification of any BMPs or engineering controls that were developed to address identified non-stormwater discharges that impact stormwater quality and a summary of the number of inspections and associated maintenance that were performed.
 -  **Responsible Party:** DPW ENRD

- **BMP 3.8 Evaluate Potential Combined Sewer Overflow Connections.**
 -  **Measurable Goal:** Conduct and/or evaluate studies of potential combined sewer overflow connections and develop recommendations and/or mitigation actions.
 -  **Reporting and Record Keeping:** In the annual report, provide narrative on any combined sewer overflow connections that were identified and recommendations and/or mitigation actions that were made to correct deficiencies noted.
 -  **Responsible Party:** DPW ENRD and Operations and Maintenance (O&M) Division will coordinate with American Water, the privatized water/wastewater provider, to collect data on combined sewer overflow connections.

- **BMP 3.9 Evaluate Stormwater Sampling**
 -  **Measureable Goal:** Evaluate the stormwater system for the potential development of a sampling strategy and, if appropriate, develop a

detailed sampling plan and perform sampling in accordance with plan (as needed).

✚ **Reporting and Record Keeping:** In the annual report, provide narrative on evaluation of stormwater sampling.

✚ **Responsible Party:** DPW ENRD

- **BMP 3.10 Develop and Provide an Integrated Annual Training Program**

✚ **Measurable Goals:** In permit years 1 - 5, conduct annual training for military and civilian staff, Fort Belvoir operations and maintenance contractors, Fort Belvoir partnering contractors and Fort Belvoir specialized contractors performing related industrial practices to increase awareness of the implications of illicit discharges and improper waste disposal.

✚ **Reporting and Record Keeping:** In the annual report, summarize training dates, number of staff trained and provide a copy of the information used.

✚ **Responsible Party:** DPW ENRD

- **BMP 3.11 Support Family Housing Orientation**

Develop and distribute materials about dumping waste oil and chemicals in stormwater systems to new housing residents.

✚ **Measurable Goal:** In permit years 1 -5, develop and distribute materials to new housing residents.

✚ **Reporting and Record Keeping:** In the annual report, include a copy of the education materials.

✚ **Responsible Party:** DPW ENRD will coordinate with the housing maintenance contractor.

- **BMP 3.12 Implement Fort Belvoir Pollution Complaint “Hot Line”**

Establish a phone listing accessible to persons living or working on Fort Belvoir in order for them to notify Fort Belvoir staff of concerns, questions, or perceived environmental issues.

✚ **Measurable Goal:** In permit year 1, develop consolidated list of various avenues used for the public to raise a question or concern about environmental protection and publish on the DPW ENRD website and/or in the *Belvoir Eagle*. In permit years 2 - 5, monitor concerns and provide responses to individuals raising questions or concerns.

✚ **Reporting and Record Keeping:** In the annual report, provide a copy of the web posting or newspaper articles and a list of reported concerns and follow-up responses.

✚ **Responsible Party:** DPW ENRD

6.4 Minimum Control Measure #4: Construction Site Stormwater Runoff Control

The BMPs identified in this plan as BMP 4.1 through BMP 4.6 will be executed to satisfy the construction site runoff control requirements set forth by Section II.B.1 of the General Permit (VAR04) found in 9VAC25-890-40.

- **BMP 4.1 Establish a Construction Project Review Procedure**

DPW ENRD staff issues a Land Disturbance Letter to construction applicants only after stormwater management plans and/or erosion and sediment control plans have been reviewed and approved.

✚ **Measurable Goal:** Establish a procedure to review construction projects to evaluate the project's potential to impact water quality and the project's compliance with MS4 Permit and state and federal regulations. Federal projects disturbing greater than 5,000 square feet, in accordance with the Energy Independence and Security Act Section 438 (EISA 438), are required to develop and redevelop in a manner that maintains or restores stormwater runoff to the maximum extent technically feasible. Copies of stormwater design analyses, stormwater management design plans and/or erosion and sediment control plans for projects greater than 5,000 square feet will be routed to Virginia-certified staff at Fort Belvoir for review. Design submittals will be reviewed to ensure that plans were prepared in accordance with the MS4 Permit, EISA 438, Virginia Erosion and Sediment Control Handbook (VESCH), Virginia Stormwater Management Handbook (VSWH), Fairfax County Public Facilities Manual (FCPFM) and the Virginia Erosion and Sediment Control and Stormwater Management Regulations. The VADEQ Stormwater Management Plan review checklist and the VADEQ Erosion and Sediment Control Plan review checklist will be utilized. Projects disturbing greater than or equal to 10,000 square feet will be required to submit Erosion & Sediment Control Plans to VADEQ for final review and approval. Projects disturbing greater than or equal to an acre will be required to submit Stormwater Management Plans to VADEQ for final review and approval. 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. Deficient or non-compliant documents will be returned to designers for modification and resubmission. Review 100% of construction projects 5,000 square feet or greater.

✚ **Reporting and Record Keeping:** In the annual report, provide a spreadsheet of all construction projects greater than 5,000 square feet under design review and a copy of the written procedure.

✚ **Responsible Party:** DPW ENRD

- **BMP 4.2 Communicate the Requirements of the Stormwater Program**

DPW ENRD staff has a checklist that details requirements for stormwater and erosion and sediment control measures and provides the checklist and a copy of the MS4 permit to all design engineers prior to the 35% design submittal.

✚ **Measurable Goal:** Distribute MS4 permit requirements to designers during initial planning phases of construction projects. All construction contract packages (including designs and specifications) shall incorporate a requirement to conform to the conditions of the MS4 Permit and Program Plan and Virginia Erosion and Sediment Control and Stormwater Management regulations.

✚ **Reporting and Record Keeping:** In the annual report, provide a distribution log tracking recipients of MS4 permit requirements and a copy of materials distributed.

✚ **Responsible Party:** DPW ENRD

- **BMP 4.3 Develop a Tracking System**

All construction packages are required to reference the MS4 Permit on the plans and in the specifications. References are checked before plans are approved and signed by the DPW. The DPW uses the Excavation Permit to track all major and minor construction projects on the installation. Each project is assigned a tracking number and the project description and acreage are recorded in the database.

✚ **Measurable Goal:** Establish a tracking system to ensure review comments are adequately addressed; include number and acreage of disturbed land. Develop in conjunction with National and Environmental Policy Act (NEPA) and Environmental Management System (EMS) regulation and policies.

✚ **Reporting and Record Keeping:** In the annual report, provide a copy of the tracking spreadsheet.

✚ **Responsible Party:** DPW ENRD

- **BMP 4.4 Obtain Registration under the General VPDES Permit for Discharges of Stormwater From Construction Activities (CGP) for Construction Projects**

All construction projects are required to obtain a project-specific CGP from VADEQ prior to construction. DPW ENRD will issue a Land Disturbance Letter to the construction contractor upon receipt of the registration statement/VADEQ letter, the stormwater pollution prevention plan, payment verification and mailing receipt, and Responsible Land Disturber certification.

✚ **Measurable Goal:** Construction projects that disturb an acre or greater of land must obtain permit registration under the CGPs and must comply with the requirements of the permit. DPW ENRD will incorporate a procedure under the utility clearance permit process to determine CGP applicability and verify existence of required erosion control plans prior to utility clearance permit approval.

✚ **Reporting and Record Keeping:** In the annual report, provide a list of all of the registration statements.

✚ **Responsible Party:** DPW ENRD

- **BMP 4.5 Initiate Erosion and Sediment Control Site Inspections.**

DPW ENRD staff maintains certification as Virginia Erosion and Sediment Control Inspectors and inspects active construction sites that possess a VADEQ CGP once every two weeks and within 48 hours of a storm event producing a 1/2 (.50) inch of rain or greater. Large construction projects may be supported by contract staff that submits reports to DPW ENRD and the project construction supervisor.

✚ **Measurable Goal:** Establish Erosion and Sediment Control inspection procedures to determine adherence to the approved Erosion and Sediment Control plan and the CGP and to evaluate performance of BMPs and/or engineering controls. Require site inspectors to be Virginia Certified Erosion and Sediment Control Inspectors. Any deficiencies identified during the inspection shall be rectified immediately. In the event that the same deficiency is noted during re-inspections an immediate report shall be filed with the Virginia Department of

Environmental Quality and site operations shall cease until the deficiency is corrected. Perform site inspections of 100% of construction projects.

- ✚ **Reporting and Record Keeping:** In the annual report, submit a copy of the inspection form used and the number of inspections conducted.
- ✚ **Responsible Party:** DPW ENRD

- **BMP 4.6 Evaluate Emerging Technologies**

Fort Belvoir continues to evaluate new technology for both erosion and sediment control and stormwater management. The installation is a proponent for Low Impact Development (LID) and advocates for including LID technology in all new developments.

- ✚ **Measurable Goal:** Review or evaluate one new product or engineering control designed to reduce soil erosion, consider possibility of use and potential effectiveness.
- ✚ **Reporting and Record Keeping:** In the annual report, submit photographs of any LID projects implemented and a list of new technologies evaluated and/or implemented.
- ✚ **Responsible Party:** DPW ENRD

6.5 Minimum Control Measure #5: Post-Construction Runoff Control

The BMPs identified in this plan as BMP 5.1 through BMP 5.9 will be executed to satisfy the post-construction runoff control requirements set forth by Section II.B.1 of the General Permit (VAR04) found in 9VAC25-890-40.

- **BMP 5.1 Establish a Construction Project Review Procedure**

- ✚ **Measurable Goal:** Establish a procedure to review construction projects to evaluate the project's potential to impact water quality and the project's compliance with MS4 Permit and state and federal regulations. Federal projects disturbing greater than 5,000 square feet, in accordance with the Energy Independence and Security Act Section 438 (EISA 438), are required to develop and redevelop in a manner that maintains or restores stormwater runoff to the maximum extent technically feasible. Copies of stormwater design analyses, stormwater management design plans and/or erosion and sediment control plans for projects greater than 5,000 square feet will be routed to Virginia-certified staff at Fort Belvoir for review. Design submittals will be reviewed to ensure that plans were prepared in accordance with the MS4 Permit, EISA 438, Virginia Erosion

and Sediment Control Handbook (VESCH), Virginia Stormwater Management Handbook (VSWH), Fairfax County Public Facilities Manual (FCPFM) and the Virginia Erosion and Sediment Control and Stormwater Management Regulations and that the design includes utilization of the Runoff Reduction Method as outlined in the stormwater design criteria (9VAC25-870-65). VADEQ Stormwater Management Plan review checklist and VADEQ Erosion and Sediment Control review checklist will be utilized for plan review. Projects disturbing greater than or equal to 10,000 square feet will be required to submit Erosion & Sediment Control Plans to VADEQ for final review and approval. Projects disturbing greater than or equal to an acre will be required to submit Stormwater Management Plans to VADEQ for final review and approval. 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. Deficient or non-compliant documents will be returned to designers for modification and resubmission. Review 100% of construction projects 5,000 square feet or greater.

 **Reporting and Record Keeping:** In the annual report, provide a spreadsheet of all construction projects greater than 5,000 square feet under design review and a copy of the written procedure.

 **Responsible Party:** DPW ENRD

- **BMP 5.2 Develop a Stormwater Management Facility Tracking System**

The DPW uses the installation GIS and an associated EXCEL spreadsheet to track all permanent stormwater management facilities/BMPs on the installation. Each facility/BMP is assigned a unique identification number and the project description and drainage area are recorded in the database.

 **Measurable Goal:** Establish a tracking system to include information regarding the type of facility/BMP, the latitude and longitude, the total number of acres treated by the facility/BMP to include a breakdown of pervious and impervious acres, the date the facility was brought online, the sixth order hydrologic unit (HUC) code and the name of any impaired water segments within each HUC listed, inspection and maintenance dates/information.

-  **Reporting and Record Keeping:** In the annual report, submit a spreadsheet of new stormwater management facilities brought online during the reporting period.
 -  **Responsible Party:** DPW ENRD

- **BMP 5.3 Initiate Periodic Stormwater Management Site Inspections**

Fort Belvoir staff is Virginia Certified Stormwater Inspectors and inspects active construction sites with a VADEQ CGP once every two weeks. Large construction projects may be supported by contract staff and they submit reports to ENRD and the project construction supervisor.

Measurable Goal: Establish periodic inspection procedures to determine adherence to the approved design plans and to observe status of the stormwater management facility/BMP. Establish periodic inspection procedures to determine adherence to the approved design plans and to evaluate performances of BMPs and/or engineering controls. In permit years 1 and 2, Fort Belvoir staff will complete training required for Virginia Certified Stormwater Inspectors. DPW ENRD Virginia Certified Stormwater Inspectors conduct post-construction inspections to evaluate the adequacy of new stormwater management facilities.

 -  Perform site inspections of 100% of active construction projects with a VADEQ CGP and 10% of post-construction projects (annually).
 -  **Reporting and Record Keeping:** In the annual report, submit a copy of the inspection form used and the total number of inspections completed.
 -  **Responsible Party:** DPW ENRD

- **BMP 5.4 Provide Information on the Fort Belvoir DPW ENRD Website about Low Impact Development (LID)**

Fort Belvoir continues to evaluate new technology for both erosion and sediment control and stormwater management. The installation is a proponent for LID and advocates for including LID technology in all new developments.

 -  **Measurable Goal:** Develop and maintain information on Low Impact Development on the Fort Belvoir DPW ENRD website that focuses on designing for low impact and sustainable development.
 -  **Reporting and Record Keeping:** In the annual report, include a copy of the website address and content.

-  **Responsible Party:** DPW ENRD will coordinate with the Public Affairs Office (PAO) and the Network Enterprise Center (NEC) to make revisions to the website.

- **BMP 5.5 Audits of Existing Stream Conditions**

Fort Belvoir DPW ENRD staff inspects existing conditions of stream channels annually. Changes are noted and the GIS database is updated.

 -  **Measurable Goal:** Perform an audit of the existing conditions of stream channels and banks, outfalls, etc. to include a visual inspection and collection of photographic documentation to allow visual comparisons of existing and future conditions.
 -  **Reporting and Record Keeping:** In the annual report, provide a narrative of what inspections were conducted and changes made to the GIS database.
 -  **Responsible Party:** DPW ENRD

- **BMP 5.6 Corrections of Existing Watersheds**

Fort Belvoir has identified watershed problems and detailed them in a watershed study. The installation has coordinated with the Army Corps of Engineers Waterways Experiment Station for prescriptive fixes to common problems. Funding shortfalls limited repairs, but requests will be made each year of the permit cycle.

 -  **Measureable Goal:** Systematically correct watershed damages caused by existing conditions, poor design of control structures, or inadequate maintenance of control structures. Program and implement an investment program where 10% of identified requirements are executed each year.
 -  **Reporting and Record Keeping:** In the annual report, provide a narrative description on work that was accomplished for the reporting period. Update EXCEL database of stormwater management facility inventory to reflect work conducted.
 -  **Responsible Party:** DPW ENRD

- **BMP 5.7 Implement Periodic Inspections and Clean Out of Storm Drains**
 -  **Measureable Goal:** Develop inspection and maintenance standards for cleaning of storm drains (curb inlets, yard inlets, storm pipes and concrete ditches) and disposal of collected waste material. Evaluate 25% of the maintenance activities for effectiveness.

- **BMP 6.1 Develop and Implement Written Training Plan**
 - ✚ **Measurable Goal:** In permit year 2, develop a written training plan in accordance with 9VAC25-890-40, Section II, B.6.d. In permit years 3 - 5, implement the training plan for installation staff, support contractors and tenant commands.
 - ✚ **Reporting and Record Keeping:** In the annual report, submit a summary to include a list of training events, the training date, the number of employees attending training and the objective of the training.
 - ✚ **Responsible Party:** DPW ENRD

- **BMP 6.2 Support Recycling and HAZMAT Programs.**

Support of these programs through periodic publication of educational materials facilitates appropriate waste management.

 - ✚ **Measurable Goal:** Provide relevant information to the public through monthly periodicals such as the *Belvoir Eagle* or Fort Belvoir website.
 - ✚ **Reporting and Record Keeping:** In the annual report, provide copies of published materials and web postings.
 - ✚ **Responsible Party:** DPW ENRD

- **BMP 6.3 Support Street Sweeping Activities.**
 - ✚ **Measurable Goal:** Develop street sweeping operations and maintenance standards to evaluate the effectiveness of sweeping activities and inspect 10% of the total street sweeping area for visible pollutants.
 - ✚ **Reporting and Record Keeping:** In the annual report, provide a narrative description of street sweeping activities.
 - ✚ **Responsible Party:** DPW ENRD will work with the O&M Division to develop and control the base operations contract for reporting documents.

- **BMP 6.4 Maintain Spill Response Vehicle/Trailer**

Fort Belvoir has a spill response plan and maintains a spill response trailer at the Davison Army Airfield and at the main Fire Station.

 - ✚ **Measurable Goal:** Maintain a minimum of one spill response trailer equipped with appropriate equipment and absorbents; ensure appropriate training of spill response staff.
 - ✚ **Reporting and Record Keeping:** In the annual report, provide a copy of the training materials and a manifest of materials kept in the trailer.
 - ✚ **Responsible Party:** DPW ENRD and the Fire Department.

- **BMP 6.5 Support "Self Help" Programs**
 - ✚ **Measureable Goal:** Fort Belvoir provides access to facilities at which tenants perform crafts or auto repair or accept chemicals and equipment for lawn maintenance. Prior to participating in such programs, individuals must understand proper use of the facility and provided materials. Insert information about these programs into stormwater pamphlets and include information about "Self Help" programs on the Fort Belvoir website.
 - ✚ **Reporting and Record Keeping:** In the annual report, provide copies of the pamphlets and the web postings.
 - ✚ **Responsible Party:** DPW ENRD and Directorate of Family, Morale Welfare and Recreation.

- **BMP 6.6 Develop and Implement Nutrient Management Plans**
 - ✚ **Measureable Goal:** In permit year 1, identify all applicable lands where nutrients are applied to a contiguous area of more than one acre. In permit year 2, 15% of all identified acres will be covered by nutrient management plans. In permit year 3, 40% of identified acres will be covered by nutrient management plans. In permit year 4, 75% of identified acres will be covered by nutrient management plans. In permit year 5, 100% of identified acres will be covered by nutrient management plans.
 - ✚ **Reporting and Record Keeping:** In the annual report, provide a summary that includes: location (latitude and longitude) of each piece of land requiring a nutrient management plan, total acreage of lands where turf and landscape nutrient management plans are required and acreage of lands upon which turf and landscape nutrient management plans have been implemented.
 - ✚ **Responsible Party:** DPW ENRD

- **BMP 6.7 Develop and Implement Stormwater Pollution Prevention Plans (SWPPP)**
 - ✚ **Measureable Goal:** In permit year 1, identify all municipal high priority facilities to include: composting facilities, equipment storage and maintenance facilities, materials storage yards, pesticide storage facilities, public works yards, recycling facilities, salt storage facilities, solid waste handling and transfer facilities and vehicle storage and

maintenance yards. In permit year 2, develop and implement SWPPPs for all high-priority facilities identified in permit year 1.

 **Reporting and Record Keeping:** In the annual report for permit year 1, provide types of high priority facilities identified and locations (latitude and longitude) of each facility requiring a SWPPP. In the annual report for permit year 2, provide a summary of the development and implementation of required SWPPPs. In the annual report for permit years 3 - 5, provide a summary of the implementation of required SWPPPs.

 **Responsible Party:** DPW ENRD

7.0 Stormwater Activities to be Undertaken During July 1, 2014 – June 30, 2015 Reporting Cycle

BMP#	BMP Description	2014-2015 Planned Activities
BMP 1.1	Support Accotink Bay Wildlife Environmental Education Center	Support one educational activity.
BMP 1.2	Present Stormwater and General Watershed Information on the Fort Belvoir Website	Revise information presented on the Fort Belvoir website, as needed.
BMP 1.3	Present Information on Watershed Protection to School Groups	Attend Fort Belvoir Elementary School’s Career Day and present information on Chesapeake Bay watershed.
BMP 1.4	Develop and Implement a Public Outreach Plan	Complete the Public Outreach Plan and implement the plan.
BMP 2.1	Public Participation	Participate in 4 local activities.
BMP 2.2	Publish the MS4 Program Plan and Annual Reports on the Fort Belvoir Website	Update Fort Belvoir website to publish copies of the 2013/2014 annual report.
BMP 2.3	Provide for Public Notification and Receipt of Comments on the MS4 Program Plan	No action until permit year 5.
BMP3.1	Develop, Implement, Update and Support GIS layers	Review existing GIS data layers to determine if existing layers are updated and identify additional data layers needed, if any and update existing layers, as needed.
BMP 3.2	Develop Methods to Detect Illicit	Complete Illicit Discharge Detection and

BMP#	BMP Description	2014-2015 Planned Activities
	Discharges	Elimination (IDDE) Plan and implement the plan.
BMP 3.3	Inform the Public of Water Quality Impacts Associated with Illicit Discharges	Publish one article in the Fort Belvoir Eagle quarterly.
BMP 3.4	Evaluate Storm Drain Outfalls	Perform outfall reconnaissance inventory of 50 outfalls.
BMP 3.5	Perform Illicit Discharge Detection and Mitigation Procedures	Once IDDE Plan is completed, review five facilities for illicit discharges.
BMP 3.6	Develop a Plan for Operations that May Affect Stormwater	Assessment plan will be part of the IDDE Plan. Complete IDDE Plan.
BMP 3.7	Perform Routine Operation Assessments and Develop BMPs	No action until permit year 4.
BMP 3.8	Evaluate Potential Combined Sewer Overflow Connections	As needed.
BMP 3.9	Evaluate Stormwater Sampling	The IDDE Plan that is under development will provide procedures for when stormwater sampling is needed for illicit discharge identification.
BMP 3.10	Develop and Provide an Integrated Annual Training Program	Conduct annual training.
BMP 3.11	Support Family Housing Orientation	Develop and distribute materials to new housing residents.
BMP 3.12	Implement Fort Belvoir Pollution Complaint "Hot Line"	Monitor concerns reported and provide responses to individuals raising questions or concerns.
BMP 4.1	Establish a Construction Project Review Procedures	Review existing procedures and update as necessary.
BMP 4.2	Communicate the Requirements of the Stormwater Program	Update Bulletin 1: Stormwater Design, Review and Plan Approval Procedures and Erosion and Sediment Control (ESC) Compliance Procedures During Construction.
BMP 4.3	Develop a Tracking System	Update project status tracking spreadsheet quarterly.

Fort Belvoir Municipal Separate Storm Sewer Systems (MS4) Program Plan

BMP#	BMP Description	2014-2015 Planned Activities
BMP 4.4	Obtain Registration under Virginia Stormwater Management Permit (VSMP) for Construction Projects	Require construction projects with land disturbance of an acre or greater to obtain a Construction General Permit (CGP) from VADEQ.
BMP 4.5	Initiate Periodic Site Inspections	Conduct Erosion and Sediment Control inspections with Virginia-certified Erosion and Sediment Control Inspectors on construction projects with CGP.
BMP 4.6	Evaluate Emerging Technologies.	Review or evaluate one new erosion product or engineering control.
BMP 5.1	Establish a Construction Project Review Procedure	Review existing procedures and update as necessary.
BMP 5.2	Develop a Stormwater Management Facility Tracking System	Maintain existing EXCEL database and associated GIS layer for Stormwater Management Facilities.
BMP 5.3	Initiate Periodic Site Inspections	Continue inspection procedures of newly constructed stormwater management facilities prior to facility being turned over to Fort Belvoir for use and possession. Continue to obtain certifications for Virginia Stormwater Management Inspector and Plan Reviewer.
BMP 5.4	Provide Training Component on the Fort Belvoir DPW ENRD website on Low Impact Development (LID)	Continue development of information on Low Impact Development on the Fort Belvoir website.
BMP 5.5	Audits of Existing Stream Conditions	Continue to perform an audit on existing stream conditions.
BMP 5.6	Corrections to Existing Watershed	Continue to utilize the audits of existing streams and the stormwater management facility inventory to identify projects to correct existing watersheds.
BMP 5.7	Implement Periodic Inspections and Clean Out of Storm Drains	Follow inspection and maintenance standards for cleaning of storm drains and disposal of collected material.
BMP 5.8	Ensure Functionality of Existing Stormwater Management Structures	Conduct inspections as outlined in the <i>General Plan for Stormwater Management Facility Inspection and Maintenance</i> .
BMP 5.9	Support Stream Restoration	Conduct one stream restoration project if funding is provided this fiscal year.

Fort Belvoir Municipal Separate Storm Sewer Systems (MS4) Program Plan

BMP#	BMP Description	2014-2015 Planned Activities
BMP 6.1	Develop and Implement Written Training Plan	No action this year.
BMP 6.2	Support Recycling and HAZMAT Programs	Continue support.
BMP 6.3	Support Street Sweeping Activities.	Continue support.
BMP 6.4	Maintain Spill Response Vehicle/Trailer	Continue to maintain existing spill response trailer and designated areas with spill response supplies.
BMP 6.5	Support "Self Help" Programs	Evaluate "Self Help" programs to determine which programs are still being implemented.
BMP 6.6	Develop and Implement Nutrient Management Plans	Complete required Nutrient Management Plans needed to meet permit year #2 goal of coverage of 15% of identified acreage.
BMP 6.7	Develop and Implement Stormwater Pollution Prevention Plans (SWPPPs)	Develop Stormwater Pollution Prevention Plan
BMP PCB.1	Develop Information Sheet on PCBs	Develop information sheet.
BMP PCB.2	Maintain a GIS Data Layer	Coordinate with GIS on maintenance of PCB data layer.
BMP PCB.3	Develop and Implement Sampling Plan	Review sampling results and determine course of action.
BMP PCB.4	Incorporate PCB information into "BMP 6.1 Develop and Implement Written Training Plan	Completed.
BMP PCB.5	Site Specific BMP for Building 1495	Periodically conduct site visits and determine course of action for correction.