

FINAL
MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) Program Plan
Permit Year 4 Update

JOINT BASE LANGLEY EUSTIS–FORT EUSTIS, VIRGINIA



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Statement of Limitations

This report was prepared in accordance with the customary thoroughness and competence of environmental science and engineering consulting professionals and in accordance with the standard for professional services for a national consulting firm at the time these services were provided. The analysis, conclusions, and recommendations expressed in this report were developed based upon a limited scope of services and the information made available to AECOM at the time this work was conducted.

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LIST OF ABBREVIATIONS AND ACRONYMS

733d CED	773rd Civil Engineer Division
733d CED/CEIE	733rd Civil Engineer Division / Environmental Element
733d CED/CEO	733rd Civil Engineer Division / Operations
733d CED/GIO	733rd Civil Engineer Division / GeoBase
AAFES	Army Air Force Exchange Service
AEC	Activity Environmental Coordinator
AEM	Advanced Environmental Management
AF	Air Force
AFB	Air Force Base
AFCEC	Air Force Civil Engineer Center
AFCEE/EQ	Air Force Center for Environmental Excellence / Environmental Quality Directorate
AFDPO	Air Force Departmental Publishing Office
AFI	Air Force Instruction
AFOSH	Air Force Occupation Safety and Health
AFPD	Air Force Policy Directive
AST	Aboveground Storage Tank
ATSC	Army Training Support Center
BEMA	Basic Environmental Management Awareness
BMP	Best Management Practice
BX	Base Exchange
CFR	Code of Federal Regulations
CFT	Cross Functional Team
cfu	Colony-forming Units
COR	Contracting Officer's Representative
CSCE	Comprehensive Site Compliance Evaluation
DCR	Department of Conservation and Recreation
DoD	Department of Defense
DSN	Defense Switched Network
E&SC	Erosion and Sediment Control
EM	Emergency Management
EMP	Environmental Management Procedure
EMS	Environmental Management System
EPA	Environmental Protection Agency
EPC	Environmental Protection Committee
ESOH	Environmental, Safety, and Occupational Health
ESOHTN	Environmental, Safety, and Occupational Health Training Network
ETL	Engineering Technical Letter
FSD	Force Support Division
GIS	Geographic Information System
GMS	Global Management Services
GOV	Government Owned Vehicle
HQ AFCEA/CESC	Headquarters Air Force Civil Engineer Support Agency / Community and Environment Scrutiny Committee

LIST OF ABBREVIATIONS AND ACRONYMS (Continued)

HUC	Hydrologic Unit Code
HWC	Hazardous Waste Coordinator
ICP	Integrated Contingency Plan
IDA	Intensely Developed Area
IDDE	Illicit Discharge Detection and Elimination
ISO	International Organization for Standardization
IST	Installation Support Team
JBLE–Eustis	Joint Base Langley-Eustis – Fort Eustis
JBLE–I	Joint Base Langley-Eustis Instruction
JRRF	James River Reserve Fleet
L2	Level 2
LEMAC	Leadership Environmental Management Awareness and Competency
MARAD	Maritime Administration
MCM	Minimum Control Measure
MFH	Military Family Housing
MS4	Municipal Separate Storm Sewer System
N/A	Not Applicable
NCO	Non-Commissioned Officer
NMP	Nutrient Management Plan
NPDES	National Pollutant Discharge Elimination System
O&M	Operation and Maintenance
ODUS	Old Dominion Utility Services
OPR	Office of Primary Responsibility
P2	Pollution Prevention
P4	Public-Public; Public-Private
PAO	Public Affairs Office
PCB	Polychlorinated Biphenyl
POC	Pollutants of Concern
POI	Program of Instruction
POL	Petroleum, Oil, and Lubricants
POV	Privately Owned Vehicle
PY	Permit Year
RMA	Resource Management Area
RPA	Resource Protection Area
SC	Special Condition
SCM	Stormwater Control Measure
SDSFIE	Spatial Data Standards for Facilities, Infrastructure, and Environment
SMART	Specific, Measurable, Achievable, Realistic, and Timely
SPCC	Spill Prevention, Control, and Countermeasures
SRP	Sustainable Range Program
SWCB	State Water Control Board
SWPPP	Stormwater Pollution Prevention Plan
SWPPT	Stormwater Pollution Prevention Team

LIST OF ABBREVIATIONS AND ACRONYMS (Continued)

TA	Training Area
TMDL	Total Maximum Daily Load
TN	Total Nitrogen
TP	Total Phosphorus
TRADOC	United States Army Training and Doctrine Command
TSE	Training Support Enterprise
TSS	Total Suspended Solids
UA	Urbanized Areas
UEC	Unit Environmental Coordinator
U.S.	United States
USATC	United States Army Transportation Corps
VDEQ	Virginia Department of Environmental Quality
VDH	Virginia Department of Health
VESC	Virginia Erosion and Sediment Control
VESCL	Virginia Erosion and Sediment Control Law
VPDES	Virginia Pollutant Discharge Elimination System
V-REMS	Virginia Regional Environmental Management System
VSMA	Virginia Stormwater Management Act
VSMP	Virginia Stormwater Management Program
WG	Working Group
WIP	Watershed Implementation Plan
WLA	Waste Load Allocation
WOAC	Warrant Officers Advanced Course

June 2016

JBLE–Eustis
733d CED

SUBJECT: INSTALLATION-WIDE IMPLEMENTATION OF THE MS4 PROGRAM
TO: DISTRIBUTION

1. Forwarded is the “Municipal Separate Storm Sewer System (MS4) Program Plan” for JBLE–Eustis.
2. The long title of this document is the “Municipal Separate Storm Sewer System Program Plan for JBLE–Eustis” and the short title is “MS4 Program Plan.”
3. This plan satisfies applicable state and federal requirements for the development of a MS4 Program Plan.
4. This document is UNCLASSIFIED; however, the maps included in Appendix B are FOR OFFICIAL USE ONLY in accordance with Air Force Policy Directive (AFPD) 32-70, *Environmental Quality*.
5. This plan is effective for implementation upon receipt, and it has full support of the Installation Commander.
6. The Office of Primary Responsibility (OPR) for this document is 733d CED.
7. This document will be reviewed annually and updated as is appropriate. All addressees of the plan are requested to advise this office of any factors that may prevent the execution of this plan as presented herein. Recommendations for changes should be submitted within 60 days after receipt of this document.
8. The OPR shall properly coordinate with the Environmental Protection Committee (EPC) to develop policies for employees and public awareness, staff training requirements, daily operating procedures, and internal inspection or auditing programs for this plan.
9. The OPR shall coordinate with the EPC to identify and correct deficiencies in the daily operating procedures, storage facilities, equipment, structures, and associated facilities.

Colonel William S. Gailbraith
Commander

**MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROGRAM PLAN
CERTIFICATION**

As required by Section III.K.2 of General Permit No. VAR040035, all reports required by state permits, and other information requested by the board shall be signed by a principal executive office or ranking elected official as described in 9 VAC 25-870-370(A), or a duly authorized representative.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Type or Print the following information:

Name: _____ Area Code and Telephone No.: _____

Official Title: _____

Signature: _____ Date Signed: _____

Permit Number: VAR040035 MS4 Name: Joint Base Langley-Eustis – Fort Eustis

Record of Updates for MS4 Program Plan (1 July 2013 – 30 June 2018)

Date	Annual Review (Yes / No)	Responsible Party	Description of Change
9 April 2015	No	733d CED/CEIE Stormwater Program Manager, Ronald Holcomb	New MS4 Program Plan developed
30 June 2015	Yes	733d CED/CEIE Stormwater Program Manager, Ronald Holcomb	MS4 Program Plan updates, specifically, MCMs 1, 4, and 6.
19 August 2016	Yes	AECOM on behalf of 733d CED/CEIE	MS4 Program Plan update to MCMs 1-6, SCs 1 and 2, and additional reorganization of the plan.

MS4 Program Plan Requirements Cross-Reference Table

General Permit No. VAR040035		JBLE–Eustis MS4 Program Plan
Section / Table	Description	
Table 1	Schedule for MS4 Program Plan Updates Required in the Permit	Table 1-1
I.B	Special conditions for approved total maximum daily loads (TMDLs) other than the Chesapeake Bay TMDL	Section 4.1; Appendix H
I.C	Special Condition for the Chesapeake Bay TMDL	Sections 4.2; Appendix I
II.B.1	Minimum Control Measure (MCM) 1: Public Education and Outreach	Section 3.1
II.B.1.c	Updates to the education and outreach program and determination of program effectiveness	Sections 3.1.2 and 3.1.3
II.B.1.f	MS4 Program Plan Requirements for MCM 1	Section 3.1
II.B.2	MCM 2: Public Involvement and Participation	Section 3.2
II.B.2.c	MS4 Program Plan Requirements for MCM 2	Section 3.2
II.B.3	MCM 3: Illicit Discharge Detection and Elimination (IDDE)	Section 3.3 and Appendix D
II.B.3.b	Prohibit illicit discharges through ordinance	Section 3.3.2 and Appendix D
II.B.3.c	IDDE Procedures	Appendix D
II.B.3.e	MS4 Program Plan Requirements for MCM 3	Section 3.3
II.B.4	MCM 4: Construction Site Stormwater Runoff Control	Section 3.4 and Appendix E
II.B.4.e	MS4 Program Plan Requirements for MCM 4	Section 3.4 and Appendix E
II.B.5	MCM 5: Post-Construction Stormwater Management in New Development and Development on Prior Developed Lands	Section 3.5
II.B.5.d	MS4 Program Plan Requirements for MCM 5	Section 3.5
II.B.6	MCM 6: Pollution Prevention / Good Housekeeping for Municipal Operations	Section 3.6
II.B.6.b	Municipal facility pollution prevention and good housekeeping Section	Sections 3.6.2 and 3.6.3; Appendix F
II.B.6.c	Turf and Landscape Management	Sections 3.6.2 and 3.6.3; Appendix G
II.B.6.d	Employee Training	Sections 3.6.2 and 3.6.3
II.B.E	MS4 Program Evaluation and Assessment	Sections 3.1.3, 3.2.3, 3.3.3, 3.4.3, 3.5.3, and 3.6.3; Appendix C

EXECUTIVE SUMMARY

Discharges from MS4s are regulated under the Virginia Stormwater Management Act (VSMA), the Virginia Stormwater Management Program (VSMP) permit regulations, and the Clean Water Act as point source discharges. MS4 regulations were developed and implemented in two phases. Implementation of the first phase began in the early 1990s and required that operators of MS4s serving populations of greater than 100,000 people (per the 1990 decennial census) apply for and obtain a permit to discharge stormwater from their outfalls. The second phase of MS4 regulations became effective 23 March 2003, and required that operators of small MS4s in "urbanized areas" (as defined by the latest census) obtain a permit to discharge stormwater from their outfalls.

Joint Base Langley-Eustis – Fort Eustis (JBLE–Eustis), Virginia, holds a General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems, General Permit No. VAR040035, issued by the Commonwealth of Virginia Department of Environmental Quality (VDEQ) on 1 July 2013. In accordance with provisions outlined in this permit, JBLE–Eustis has developed and implemented a comprehensive stormwater management program designed to prevent or reduce the discharge of sediment and other pollutants into the installation's stormwater conveyance system. General Permit No. VAR040035 Section II.E.1 requires JBLE–Eustis to evaluate the MS4 program on an annual basis to assess program compliance, the appropriateness of the identified BMPs, and progress towards achieving the identified measurable goals. Table ES-1 provides a checklist of compliance items for Permit Year 4 to be used to assist the installation with maintaining compliance with the permit and completing an assessment of the status of the six minimum control measures (MCM).

Table ES-1. MS4 Program Plan Annual MCM Compliance Checklist

Minimum Control Measure / Special Condition	Program Compliance Requirement	
MCM 1: Public Education and Outreach on Stormwater Impacts	<input type="checkbox"/>	Review previous identified high-priority water quality issues for applicability. Identify new water quality issues as needed and provide justification for update in the program plan and annual report.
	<input type="checkbox"/>	Identify and estimate the population size of the target audience or audience who is most likely to have significant impacts for each high-priority water quality issue. **This should be reviewed and updated at least annually for existing issues. **
	<input type="checkbox"/>	Develop relevant messages and associated educational and outreach materials for message distribution to the selected target audiences.
	<input type="checkbox"/>	Provide for public participation during public education and outreach program development.
	<input type="checkbox"/>	Annually conduct sufficient education and outreach activities designed to reach an equivalent of 20% of each high-priority issues target audience. **Documentation to justify the reported percentage of the target audience that was reached in permit year must be maintained and included in the annual report. **
	<input type="checkbox"/>	Assess the education and outreach program, identify any weaknesses or shortcomings, and provide for the adjustment of target audiences and messages including educational materials and delivery mechanisms.
MCM 2: Public Involvement/Participation	<input type="checkbox"/>	Update the MS4 Program Plan at least annually.
	<input type="checkbox"/>	Post the MS4 Program Plan on the JBLE–Eustis Environmental website within 30 days of the submittal of the annual report to VDEQ.1
MCM 2: Public Involvement/Participation	<input type="checkbox"/>	Post the annual report for each permit year on the Environmental website within 30 days of submittal to VDEQ and retain copies of each annual report on the website for the duration of the permit term.

Table ES-1. MS4 Program Plan Annual MCM Compliance Checklist (Continued)

Minimum Control Measure / Special Condition	Program Compliance Requirement	
	<input type="checkbox"/>	(PY 5 Requirement) Notify the installation population of the reapplication process and allow for public comment on the MS4 Program Plan prior to submittal of the permit renewal application. The Program Plan should state how comments were considered and incorporated into the development of the Program Plan.
	<input type="checkbox"/>	Participate in at least four public activities annually via promotion, sponsorship, or other involvement. **Documentation to justify the participation must be maintained for submittal with the annual report. **
MCM 3: Illicit Discharge Detection and Elimination	<input type="checkbox"/>	Maintain accurate stormwater discharge system maps with information specified in Section 3.3.1.
	<input type="checkbox"/>	Maintain an information table with information specified in Section 3.3.1.
	<input type="checkbox"/>	Prohibit through an installation policy (equivalent of an ordinance) and EMP, non-stormwater discharges to the stormwater drainage system.
	<input type="checkbox"/>	Promote, publicize, or otherwise facilitate public reporting of illicit discharges into or from MS4s (e.g., IDDE reporting hotline)
	<input type="checkbox"/>	Include all IDDE procedures developed with the MS4 Program Plan.
	<input type="checkbox"/>	Maintain a list of any notifications of physical interconnections that the installation provides to any other MS4s.
	<input type="checkbox"/>	Maintain a list of the outfalls screened during the reporting period (i.e., permit year), dry weather screening results at each outfall, and details for any follow-up activities based on the screening results.
MCM 3: Illicit Discharge Detection and Elimination	<input type="checkbox"/>	Develop a brief summary to be included with the annual report of each suspected illicit discharge investigation conducted by 733d CED/CEIE personnel.
MCM 4: Construction Site Stormwater Runoff Control	<input type="checkbox"/>	Address discharges entering the MS4 from land-disturbing activities as defined in Section 3.4.1 of the MS4 Program Plan through the JBLE–Eustis Construction Site Stormwater Runoff Control Program.
	<input type="checkbox"/>	Maintain and implement the Standards and Specifications for Erosion and Sediment Control document, which outlines the installation Construction Site Stormwater Runoff Control Program.

Table ES-1. MS4 Program Plan Annual MCM Compliance Checklist (Continued)

Minimum Control Measure / Special Condition	Program Compliance Requirement	
	<input type="checkbox"/>	Track on-going land-disturbing activities including completion of erosion and sediment control (E&SC) inspections.
	<input type="checkbox"/>	Maintain required certifications for inspectors and plan reviewers (See Section 3.4.2 for requirements.)
	<input type="checkbox"/>	Maintain the stormwater hotline and track reports of observations related to construction site stormwater control.
	<input type="checkbox"/>	Incorporate E&SC control issues into required training for installation personnel
MCM 5: Post-Construction Stormwater Management in New Development and Development on Prior Developed Lands	<input type="checkbox"/>	Develop, implement and enforce a program for post-construction stormwater management. Review the program for the following items: Description of legal authorities utilized to ensure compliance with the MCM. Written procedures for stormwater control measure (SCM) Written inspection procedures and associated documents utilized during the inspection (including inspection of privately owned facilities [i.e., MFH])
	<input type="checkbox"/>	Implement Engineering Technical Letter (ETL) 14-1, Construction and Operations and Maintenance Guidance for Stormwater Systems.
	<input type="checkbox"/>	Completion of SCM inspections in accordance with ETL 14-1 and/or the manufacturer’s and/or engineer of record’s recommendations, but no less than annually.
MCM 5: Post-Construction Stormwater Management in New Development and Development on Prior Developed Lands	<input type="checkbox"/>	Track and maintain an up to date spreadsheet of all installation and privately-owned SCMs that discharge to the MS4. See Section 3.5.2 for items to be included in the tracking file. **This will be included in the annual report submitted to VDEQ. **
	<input type="checkbox"/>	Develop a report with the total number of SCM inspections completed during the reporting year, as well as the number of enforcement actions taken to ensure long term maintenance.
MCM 6: Pollution Prevention/Good Housekeeping for Municipal Operations	<input type="checkbox"/>	Develop and implement written procedures designed to minimize or prevent pollutant discharge from daily operations (e.g., road, street, and parking lot maintenance); equipment maintenance; and the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers.
	<input type="checkbox"/>	Maintain an up to date list of identified high-priority municipal (non-industrial) facilities and determine which facilities have a high potential of discharging pollutants. See Appendix F.

Table ES-1. MS4 Program Plan Annual MCM Compliance Checklist (Continued)

Minimum Control Measure / Special Condition	Program Compliance Requirement	
	<input type="checkbox"/>	Develop an SWPPP for each facility determined to have a high potential of discharging pollutants based on Section II.B.6.b (2) of the permit.
	<input type="checkbox"/>	Implement turf and landscape nutrient management plans (NMP) for all lands owned or operated by the installation where nutrients are applied to a contiguous areas greater than one acre. Facilities that currently have an NMP are the Pines Golf Course, FSD Athletic Fields, and MFH.
	<input type="checkbox"/>	Annually track the total acreage of lands where NMPs are required as well as lands where NMPs have been implemented.
	<input type="checkbox"/>	Do not apply deicing agents containing urea or other forms of nitrogen or phosphorus to parking lots, roadways, sidewalks, or other paved surfaces.
	<input type="checkbox"/>	Conduct employee training as discussed in the Section 3.6.2 of the MS4 Program Plan, which outlines the installation annual training plan.
SC 1: TMDL Special Conditions Compliance Other than the Chesapeake Bay TMDL	<input type="checkbox"/>	Update and implement the Fecal Coliform TMDL Action Plans for the James River, Warwick River, and Skiffes Creek.
SC 2: TMDL Special Conditions Compliance for the Chesapeake Bay TMDL	<input type="checkbox"/>	Review and update the Chesapeake Bay TMDL Action Plan on an annual basis and report of the progress made to meet the Chesapeake Bay TMDL pollutant reduction requirements.
	<input type="checkbox"/>	Document methods utilized to implement the Chesapeake Bay TMDL Action Plan.
Overall Program	<input type="checkbox"/>	Develop and deploy surveys to installation personnel and residents for feedback related to the implementation of each MCM, knowledge of the hotline, and general stormwater education awareness.

Note:

¹Maps showing JBLE–Eustis assets and infrastructure are considered to be “For Official Use Only”. Maps of the installation showing this information, specifically Appendix B of this Program Plan, will be removed from the version posted to the Environmental website.

1.0 INTRODUCTION

1.1 Purpose and Objectives

Joint Base Langley-Eustis – Fort Eustis (JBLE–Eustis), Virginia, holds a General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems, General Permit No. VAR040035, issued by the Commonwealth of Virginia Department of Environmental Quality (VDEQ) on 1 July 2013. In accordance with provisions outlined in this permit, JBLE–Eustis has developed and implemented a comprehensive stormwater management program designed to prevent or reduce the discharge of sediment and other pollutants into the installation’s stormwater conveyance system.

The purpose of this Program Plan is to satisfy the regulatory requirements associated with the installation Municipal Separate Storm Sewer System (MS4) General Permit No. VAR040035 and to facilitate the management of activities that may affect water quality. The objective of this document is to serve as the primary reference for implementation of the MS4 Program and requirements outlined in General Permit No. VAR040035 including the six (6) minimum control measures (MCMs) and two (2) special conditions (SC) related to water quality conditions. JBLE–Eustis is required to develop measureable goals and objectives, best management practices (BMPs), and schedule for implementation. The six MCMs and two SCs presented in the permit include:

- **MCM 1:** Public Education and Outreach on Stormwater Impacts
- **MCM 2:** Public Involvement / Participation
- **MCM 3:** Illicit Discharge Detection and Elimination (IDDE)
- **MCM 4:** Construction Site Stormwater Runoff Control
- **MCM 5:** Post-Construction Stormwater Management in New Development and Development on Prior Developed Lands
- **MCM 6:** Pollution Prevention / Good Housekeeping for Municipal Operations
- **SC 1:** Total Maximum Daily Loads (TMDL) Special Conditions Compliance other than the Chesapeake Bay TMDL
- **SC 2:** TMDL Special Conditions Compliance for the Chesapeake Bay TMDL

This Plan documents the installation’s efforts to comply with General Permit No. VAR040035 for Permit Year (PY) 4. The Plan is required to be updated on an annual basis in conjunction with the Annual Report to the VDEQ.

1.2 Plan Organization

This MS4 Program Plan is organized into the following sections:

- Section 1 includes the purpose and objectives of the MS4 Program Plan, plan organization, implementation authority, and records retention requirements.

- Section 2 discusses the MS4 service area as well as the subwatersheds located within the installation’s boundaries.
- Section 3 describes each of the six MCMs, how JBLE-Eustis will implement and demonstrate compliance with each MCM listed in Section II.B of General Permit No. VAR040035; as well as annual reporting requirements related to each MCM.
- Section 4 presents the special condition requirements of General Permit No. VAR040035.
- Section 5 provides a list of additional documents that have been incorporated into the plan by reference as well as additional reference materials utilized by JBLE–Eustis to ensure compliance with the General Permit.
- Section 6 presents a list of references used during the preparation of this plan.

Additional information and documents incorporated into the MS4 Program Plan are included in the appendices listed below:

- Appendix A MS4 General Permit No. VAR040035
- Appendix B Overview Maps
- Appendix C MS4 Program Annual Reports
- Appendix D IDDE Procedure Manual
- Appendix E Standards and Specifications for Erosion and Sediment Control
- Appendix F High Priority Facility Stormwater Pollution Prevention Plans
- Appendix G Nutrient Management Plans
- Appendix H Fecal Coliform TMDL Action Plan
- Appendix I Chesapeake Bay TMDL Action Plan

1.3 MS4 Program Overview

Discharges from MS4s are regulated under the Virginia Stormwater Management Act (VSMA), the Virginia Stormwater Management Program (VSMP) Permit regulations, and the Clean Water Act as point source discharges. MS4 regulations were developed and implemented in two phases. Implementation of the first phase began in the early 1990s and required that operators of MS4s serving populations of greater than 100,000 people (per the 1990 decennial census) apply for and obtain a permit to discharge stormwater from their outfalls. The second phase of MS4 regulations became effective 23 March 2003, and required that operators of small MS4s in "urbanized areas" (as defined by the latest census) obtain a permit to discharge stormwater from their outfalls.

The United States (U.S.) Environmental Protection Agency (EPA) defines a small MS4 as “any MS4 not already covered by the Phase I Program as a medium or large MS4. The Phase II Rule automatically covers on a nationwide basis all small MS4s located in ‘urbanized areas’ (UAs) as defined by the Bureau of the Census (unless waived by the National Pollutant Discharge Elimination System [NPDES] permitting authority), and on a case-by-case basis those small MS4s located outside of UAs that the NPDES permitting authority designates.” In addition to this, the Phase II Final Rule, as stated in EPA’s

Fact Sheet 2.1, required the NPDES permitting authority to develop a set of designation criteria and apply them, at a minimum, to all small MS4s located outside of a UA serving a jurisdiction with a population of at least 10,000 and a population density of at least 1,000 people per square mile.

The EPA defines medium and large MS4s under the Phase I Stormwater Program. The two categories are for incorporated places or counties with populations of 100,000 or greater. JBLE–Eustis has been designated as a small MS4 as defined by the EPA’s *Stormwater Phase II Final Rule* (EPA, 2005a and EPA, 2005b).

1.4 Roles and Responsibilities

Stormwater Program Manager

The Stormwater Program Manager at JBLE–Eustis is tasked with the responsibility of overseeing the Stormwater Program as prescribed in General Permit No. VAR040035. All questions and comments regarding the implementation of the installation Stormwater Program should be directed to the following contact:

Stormwater Program Manager

733d Civil Engineering Division

1407 Washington Blvd.

Fort Eustis, VA 23604

Phone: (757) 878-5218

Stormwater Pollution Prevention Team (SWPPT)

As part of VPDES permit No. VA0025216, JBLE–Eustis has identified a team of individuals that help to develop, implement, maintain, and revise the installation industrial stormwater pollution prevention plan (SWPPP). In addition to these responsibilities, JBLE–Eustis has incorporated the SWPPT into the MS4 Program in order to help develop and implement the individual MCM programs. The 733d CED/CEIE Chief acts as the SWPPT Leader.

The purpose of the SWPPT is to assist in the implementation, evaluation, and revision of the industrial SWPPP as well as the installation MS4 Program. Team responsibilities include, but are not limited to, the following:

- Implementing the VPDES permit and SWPPP requirements,
- Implementing MS4 Permit No. VAR040035 and MS4 Program Plan requirements,
- Defining and agreeing upon an appropriate set of goals for the stormwater management programs (i.e., industrial and MS4),
- Being aware of any changes that are made in operations to determine whether any changes must be made to the SWPPP or MS4 Program Plan, and
- Maintaining a clear line of communication with installation leadership to ensure a cooperative partnership.

The SWPPT at JBLE–Eustis is outlined in Table 1-1.

Table 1-1. SWPPT and Responsibilities, JBLE–Eustis

Title	Responsibilities
<p style="text-align: center;">SWPPT Leader <i>733d CED/CEIE Chief</i></p>	<ul style="list-style-type: none"> • Schedules SWPPT meetings. • Reviews and approves SWPPP updates and modifications, including the annual CSCE report. • Coordinates implementation of the SWPPP. • Reviews and approves MS4 Program Plan updates and modifications • Coordinates implementation of the MS4 Program Plan • Prepares cost estimates for BMP implementation.
<p style="text-align: center;">Team Member <i>Stormwater Program Manager</i></p>	<ul style="list-style-type: none"> • Monitors compliance with schedule plan activities. • Conducts or contracts the annual inspection. • Prepares/reviews the CSCE and other documents prior to submittal to the SWPPT Leader. • Monitors activity operations for changes that may affect the SWPPP and MS4 Program Plan and notifies the SWPPT Leader of any changes. • Conducts or contracts for the annual inspection and certification of non-stormwater dry weather discharges (i.e., illicit discharge dry weather screening) for industrial and MS4 outfalls. (MS4 outfall inspection schedules are provided in the IDDE Procedure Manual in Appendix D of the MS4 Program Plan.) • Updates the SWPPP to reflect recent spills and BMPs implemented to prevent reoccurrences. • Reviews and updates the SWPPP and MS4 Program Plan, at a minimum, annually. • Develops an MS4 Program Annual Report and completes an assessment of the program implementation for the reporting period. • Coordinates with VDEQ regarding spills and mitigation measures. • Assists industrial activity areas with BMP implementation. • Arranges appropriate SWPPP and MS4 required training for SWPPT members. • Arranges for additional training for facility personnel as needed on good housekeeping and procedural BMPs (e.g., drip pans and vehicle/equipment washing). • Conducts or selects another SWPPT member with knowledge of the stormwater system to visually inspect industrial outfalls.
<p style="text-align: center;">Team Member <i>Hazardous Materials/Waste Program Manager</i></p>	<ul style="list-style-type: none"> • Updates the hazardous materials/waste management standard operating procedure (SOP). • Conducts inspections of hazardous material and hazardous waste accumulation sites to determine compliance with hazardous materials/waste management SOP and SWPPP.
<p style="text-align: center;">Team Member <i>CE Engineering Flight Chief and CE Operations Flight Chief</i></p>	<ul style="list-style-type: none"> • Plans, manages, directs, and coordinates the operation and maintenance activities of the municipal utility systems (i.e., water, wastewater, and stormwater).

Title	Responsibilities
<p align="center">Team Member <i>AFCEC IST Water Programs Support</i></p>	<ul style="list-style-type: none"> • Conducts/contracts the annual inspection, if required. • Reviews the CSCE and other documents prior to submittal to the SWPPT Leader, as requested. • Conducts/contracts for the annual inspection and certification of non-stormwater dry weather discharges (i.e., illicit discharge dry weather screening) for industrial and MS4 outfalls. (MS4 outfall inspection schedules are provided in the IDDE Procedure Manual in Appendix D of the MS4 Program Plan.), if required. • Programs funding for stormwater-related services to support industrial and municipal stormwater compliance.
<p align="center">Team Member <i>Qualified Contractor</i></p>	<ul style="list-style-type: none"> • Assist the Stormwater Program Manager and AFCEC IST with the following tasks as requested: <ul style="list-style-type: none"> ○ Annual inspections ○ CSCE review and updates ○ Annual inspection and certification of non-stormwater dry weather discharges for industrial and MS4 outfalls ○ Review of permit and other regulatory requirements to which JBLE–Eustis is subject
<p align="center">Team Member <i>Fire and Emergency Services</i></p>	<ul style="list-style-type: none"> • Performs first responder duties for spills and implement BMPs to contain and clean up the spill. • Relays spill information and clean up measures to the Stormwater Program Manager.
<p align="center">Team Member(s) <i>Water/Land/Air Sector Maintenance Units</i></p>	<ul style="list-style-type: none"> • Performs facility inspections. • Implements SWPPP BMPs for site-specific industrial activities.
<p align="center">Team Member(s) <i>AAFES, FSD, Pines Golf Course, Balfour Beatty</i></p>	<ul style="list-style-type: none"> • Implement SWPPP BMPs for site-specific MS4 activities included in the MS4 Program Plan (Appendix F) • Performs facility inspections • Implement Nutrient Management Plans (FSD, Pines Golf Course, Balfour Beatty)
<p align="center">Team Member <i>Public Affairs Office</i></p>	<ul style="list-style-type: none"> • Coordinates statements to the media and the Commonwealth’s congressional delegation concerning any oil or hazardous substance spill events, in accordance with the JBLE–Eustis Integrated Contingency Plan (ICP). • Provides guidance to the SWPPT on the release of information related to stormwater management to the public.
<p align="center">Team Member <i>Judge Advocate</i></p>	<ul style="list-style-type: none"> • Provides guidance related to regulatory requirements applicable to the industrial stormwater management program.

1.5 Regulatory Authority

The VDEQ has been delegated authority over Virginia’s MS4 Program. All questions and comments regarding the implementation of the installation MS4 Program should be directed to the following contact:

MS4 Permits and Compliance Coordinator
Virginia Department of Environmental Quality
Tidewater Regional Office
5636 Southern Blvd
Virginia Beach, Virginia 23462
Phone: (757) 518-2136

1.6 Signatory Authority

General Permit No. VAR040035 Section III.K outlines the prescribed signatory authority criteria. The designated person for federal facilities is defined in General Permit No. VAR040035 Section III.K.1 (c) as a “principal executive officer or ranked elected official.” As for the installation, a ranking official must sign all applications. All reports must be signed by the ranking official or by a duly authorized representative of that person, as allowed by Part III.K.2 of the permit. The 633rd Air Base Wing Commander will determine the authorized representative of JBLE–Eustis. A signed signatory authorization form is included in Appendix A.

Part III.K.2 further states that “A person is a duly authorized representative only if:

- a) The authorization is made in writing by a person described in Section III.K.1;
- b) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
- c) The written authorization is submitted to the Department.”

1.7 Program Management

General Permit No. VAR040035 Section II.E.1 requires JBLE–Eustis to evaluate the MS4 program on an annual basis to assess the following:

- Program compliance
- The appropriateness of the identified BMPs
- Progress towards achieving the identified measurable goals

Installation-wide orders to implement this MS4 Program Plan and the aspects of the Stormwater Management Program are signed by the Commander and are provided at the front of this document.

In addition, the installation must:

- Maintain records required by the permit for at least three (3) years. These records should only be submitted to VDEQ upon request.
- Submit annual reports for the reporting period (1 July through 30 June) to VDEQ by 1 October of the following year.

1.7.1 Environmental Program Management

JBLE–Eustis manages its environmental program through policy and installation specific environmental management instructions including:

- JBLE–Eustis Environmental Policy Statement (4 June 2013)
- JBLE–Eustis Instruction 32-101 – Environment Management (28 January 2014)
- JBLE–Eustis Environmental Management Procedures (EMPs) (updated annually)

Environmental Policy

The JBLE-Eustis Environmental Policy Statement published 4 June 2013 implements the **C.L.E.A.N.** approach.

- **Comply** – The installation will comply with all environmental regulations and all other requirements while reducing compliance costs and liabilities.
- **Limit Impact** – JBLE–Eustis will prevent pollution and minimize waste while cleaning up previously identified sites of environmental concern as well as striving to achieve Chesapeake Bay conservation.
- **Execute Plans** – The installation will identify and attain energy, environment, safety, and occupational health objectives and targets through Specific, Measurable, Achievable, Realistic, and Timely (SMART) planning.
- **Achieve Improvements** – The installation will continuously improve the programs and processes currently being implemented at JBLE–Eustis through the use of effective management and planning.
- **Notify** – JBLE–Eustis will communicate environmental commitments and performance to all levels of the installation organization as well as the local community.

Environmental Management System

In addition to the Environmental Policy Statement, JBLE-Eustis Instruction 32-101, *Environment Management*, published 28 January 2014, has been developed in order to define the framework for the Environmental Management System (EMS) and conform to International Organization for Standardization (ISO) 14001:2004.

The core component of the JBLE–Eustis EMS program consists of one cross functional team (CFT) with Working Groups (WG). The WGs will meet at least quarterly throughout the year and then brief the CFT. The CFT will meet semi-annually in February and August at JBLE–Eustis’ Environmental, Safety, and Occupational Health (ESOH) Council meeting.

The ESOH Council is a forum to provide senior leadership involvement and direction at all levels of command; establish goals, measures, objectives and targets; and provide additional guidance to subordinate commands. The JBLE–Eustis ESOH Council is chaired by the 633d Air Base Wing Vice Commander.

The WGs develop objectives, targets, and tasks related to the previously determined significant aspects related to stormwater and then brief the CFT at the semiannual meetings. Significant aspects are re-evaluated every three years. The following significant aspects related to stormwater were identified by the CFT in February 2015, and updated in May 2016.

- Wetland Protection – Educate Mission Partners to avoid damage during operations and training, limit impact from construction and maintenance, and obtain proper permits
- Stormwater (Quality) – Identify best management practices and integrate the best management apparatus into all construction and repair projects
- Spills – Reduce number of reportable and non-reportable spills
- Hazardous Waste Reductions – Reduce waste but also reduce use, where possible, of hazardous materials that become wastes (Life Cycle approach)
- Stormwater (Quantity) – Ensure no net gain and reduce stormwater runoff as possible; identify Low Impact Development projects

During the recurring WG and CFT meetings, significant aspects will be reviewed and amended if emergent issues are identified. Emergent issues will also be presented to the ESOH Council.

Environmental Management Procedures

JBLE–Eustis has developed and implemented EMPs to address specific activities and installation operational requirements. JBLE–Eustis Instruction 32-101 defines the installation’s environmental policies and requirements, whereas the EMPs provide specific requirements for the implementation of the various environmental requirements (e.g., outline the requirements of the wastewater and stormwater programs). The installation maintains a website that provides environmental information to JBLE–Eustis personnel and residents (<http://www.jble.af.mil/About-Us/JBLE-Environmental-Information>). In addition to this website, installation personnel can also obtain the EMPs and Instruction 32-101 at <https://esohtn.com>.

1.7.2 Program Modifications

The MS4 Program Plan presents a summary of how JBLE–Eustis will implement and demonstrate compliance with each of the six MCMs listed in Section II.B of General Permit No. VAR040035. Table 1-2 summarizes the changes included in this Plan update for PY4. This table also presents a schedule for planning for future updates in order to maintain compliance with MS4 Permit No. VAR040035. Program update requirements that are due at the end of PY4 or later are specified in this table. In addition, continuous review and updates for requirements that have already been addressed are also specified.

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Table 1-2. MS4 Program Plan Update and Schedule Summary

Minimum Control Measure / Special Condition	Program Update Requirement	Permit Reference	Required to be Completed By Date	PY4 MS4 Program Plan Update Summary	MS4 Program Future Schedule Summary
MCM 1 – Public Education and Outreach on Stormwater Impacts	High Priority Water Quality Issues	Section II.B c (1)	1 July 2014	<ul style="list-style-type: none"> • Changed one of the high priority water quality issues • Updated the Training Area issue with specifics for public education and outreach for potential new uses in PY4 • Included a description of progress on previous significant issues from PY2 and PY3 	<ul style="list-style-type: none"> • Assessments of the high priority water quality issues identified are provided in the annual report. • Annual reports, including assessments of the program, for each permit year are included in an appendix of the Program Plan.
MCM 3 – Illicit Discharge Detection and Elimination	Illicit Discharge Procedures	Section II.B.3	1 July 2014	<ul style="list-style-type: none"> • Development of an installation-wide draft policy • EMP update and enforcement • IDDE Procedure Manual distribution and implementation 	<ul style="list-style-type: none"> • Implement installation-wide IDDE Policy in PY4 • Review and update the EMP annually • Assess knowledge and implementation of the IDDE Procedure Manual via annual reports in PY4 and PY5
MCM 5 – Post-Construction Stormwater Management in New Development and Development on Prior Developed Lands	Individual Residential Lot Special Criteria	Section II.B.5.c (1)(d)	1 July 2014	<ul style="list-style-type: none"> • Not applicable to JBLE–Eustis 	<ul style="list-style-type: none"> • Not applicable to JBLE–Eustis
MCM 5 – Post-Construction Stormwater Management in New Development and Development on Prior Developed Lands	Operator-Owned Stormwater Management Inspection Procedures	Section II.B.5	1 July 2014	<ul style="list-style-type: none"> • BMP Prioritization Memo discussion included for development of a path forward with the program • JBLE–Eustis Stormwater Program Manager attended Stormwater BMP Inspection and Maintenance Training held by North Carolina State University in PY3. 	<ul style="list-style-type: none"> • Development of Post-Construction SCM Inspection Procedures specific to JBLE–Eustis to be completed in PY4 • Implementation of SCM Inspection and Maintenance Procedures in PY5
MCM 6 – Pollution Prevention/Good Housekeeping for Municipal Operations	Identification of Locations Requiring SWPPPs	Section II.B.6.b	1 July 2014	<ul style="list-style-type: none"> • Updated existing list of municipal facilities requiring SWPPPs • Developed an additional appendix to the Program Plan (Appendix F) for SWPPPs to be stored • Included SWPPP excerpts related to facilities that are also included in the installation industrial SWPPP 	<ul style="list-style-type: none"> • Continue to review and update the list of municipal/non-industrial high priority facilities and determine if they require a SWPPP in PY4 and PY5 • Create additional SWPPPs based on the developed schedule in PY4
MCM 6 – Pollution Prevention/Good Housekeeping for Municipal Operations	Nutrient Management Plan Locations	Section II.B.6.b	1 July 2014	<ul style="list-style-type: none"> • Revised previously developed list of locations requiring Nutrient Management Plans 	<ul style="list-style-type: none"> • Continue to review areas determined to require Nutrient Management Plans • Develop additional plans as needed for newly identified areas

Table 1-2. MS4 Program Plan Update and Schedule Summary (Continued)

Minimum Control Measure / Special Condition	Program Update Requirement	Permit Reference	Required to be Completed By Date	PY4 MS4 Program Plan Update Summary	MS4 Program Future Schedule Summary
MCM 6 – Pollution Prevention/Good Housekeeping for Municipal Operations	Training Schedule and Program	Section II.B.6	1 July 2014	<ul style="list-style-type: none"> Revised training schedules and requirements based on updates to EMP 4.4.2 Tab 2, <i>Environmental Management Training Programs of Instructions (POIs)</i> 	<ul style="list-style-type: none"> Review EMP 4.4.2 Tab 2 and interview installation personnel that manage the training program and update as needed
SC 1 – Special Conditions for Approved TMDLs Other Than Chesapeake Bay	Updated TMDL Action Plans (TMDLs approved before July of 2008)	Section I.B	1 July 2015	<ul style="list-style-type: none"> Not applicable to JBLE–Eustis 	<ul style="list-style-type: none"> Not applicable to JBLE–Eustis
SC 2 – Special Condition for Chesapeake Bay TMDL	Chesapeake Bay TMDL Action Plan	Section I.C	1 July 2015	<ul style="list-style-type: none"> Chesapeake Bay TMDL Action Plan was updated and resubmitted to VDEQ Chesapeake Bay TMDL Action Plan reference in Section 4.2 of the report and added in Appendix I of this Program Plan for reference 	<ul style="list-style-type: none"> Continue to implement the Chesapeake Bay TMDL Action Plan developed in PY2 and revised in PY3 Assess the implementation of the Chesapeake Bay TMDL Action Plan in the annual report and revise the Program Plan as necessary in PY4 and PY5
MCM 4 – Construction Site Stormwater Runoff Control	Stormwater Management Progressive Compliance and Enforcement	Section II.B.5	1 July 2015	<ul style="list-style-type: none"> Updated specifics related to ordinances and enforcement for the installation Referenced Engineering Technical Letter (ETL) 14-1, which the installation has adopted to provide guidance for inspections Included <i>Erosion and Sediment Control Standards and Specifications</i> specific to JBLE–Eustis in Appendix E of the Program Plan 	<ul style="list-style-type: none"> Implementation of JBLE–Eustis specific <i>Standards and Specifications for Erosion and Sediment Control</i>
MCM 6 – Pollution Prevention/Good Housekeeping for Municipal Operations	Daily Good Housekeeping Procedures	Section II.B.6.a	1 July 2015	<ul style="list-style-type: none"> Reviewed good housekeeping procedures included in the PY3 MS4 Program Plan 	<ul style="list-style-type: none"> Continuous review and revision of good housekeeping procedures throughout PY4 and PY5 Assessments of procedures will be included in the annual report Updates to EMPs that address procedures will be made and noted in the Program Plan
SC 1 – Special Conditions for Approved TMDLs Other than Chesapeake Bay)	Other TMDL Action Plans for applicable TMDLs approved between July 2008 and June 2013	Section I.B	1 July 2016	<ul style="list-style-type: none"> Special Condition 1 text was updated to include a description of the Fecal Coliform TMDL Action Plan The Fecal Coliform TMDL Action Plan framework is included in Appendix H of the Program Plan. 	<ul style="list-style-type: none"> Develop the Fecal Coliform TMDL Action Plan based on the framework developed during PY3 Implement the Fecal Coliform TMDL Action Plan Review and revise the action plan as needed in PY4 and PY5 Assess the implementation of the Fecal Coliform Action Plan in the annual report and revise the Program Plan as necessary in PY4 and PY5

Table 1-2. MS4 Program Plan Update and Schedule Summary (Continued)

Minimum Control Measure / Special Condition	Program Update Requirement	Permit Reference	Required to be Completed By Date	PY4 MS4 Program Plan Update Summary	MS4 Program Future Schedule Summary
MCM 3 – IDDE – Applicable to new boundaries identified as “urbanized” areas in the 2010 Decennial Census	Outfall Map	Section II.B.3.a (3)	1 July 2017	<ul style="list-style-type: none"> • Included a description of on-going updates performed by staff to the installation stormwater GIS mapping layers • Included a description of progress of an on-going stormwater mapping and condition assessment project to include a timeline to completion • Expected completion estimate for Spring 2017 (PY4) 	<ul style="list-style-type: none"> • Outfall mapping update and condition assessment is on-going • Completion of updated stormwater layers scheduled for Spring 2017 (PY4) • Updates and assessments to be completed in the annual report
MCM 6 – Pollution Prevention/Good Housekeeping for Municipal Operations	SWPPP Implementation	Section II.B.6.b (3)	1 July 2017	<ul style="list-style-type: none"> • Revised the list of high priority municipal/non-industrial facilities • Developed a schedule for the requirement to develop required SWPPPs • Developed an additional appendix to the Program Plan (Appendix F) for SWPPPs to be stored • Included SWPPP excerpts related to facilities that are also included in the installation industrial SWPPP in Appendix F 	<ul style="list-style-type: none"> • Additional SWPPPs for high priority municipal facilities determined to have a high probability of pollutant discharge to be completed in PY4 • Those facilities that currently have SWPPPs, or are incorporated into the Industrial SWPPP will continue to enforce the SWPPPs during PY4 • Continuous assessment to be provided in the annual report
MCM 6 – Pollution Prevention/Good Housekeeping for Municipal Operations	Nutrient Management Plan Implementation	Section II.B.6.c (1)(b)	1 July 2018	<ul style="list-style-type: none"> • Revised previously developed list of locations requiring Nutrient Management Plans • Included three Nutrient Management Plans developed during PY3 in Appendix G of the Program Plan • Developed implementation plan for each Nutrient Management Plan 	<ul style="list-style-type: none"> • Nutrient Management Plans developed in PY3 will be implemented in PY4 and PY5. • Assess implementation of the plan at each location (Pines Golf Course, Athletic Fields, and MFH) and include assessment in the annual report

2.0 MS4 SERVICE AREA

2.1 Installation Description

JBLE–Eustis, formerly Fort Eustis, is located adjacent to the City of Newport News, Virginia which is part of the Norfolk, Hampton, and Newport News metropolitan area. The installation is located on Mulberry Island, a small peninsula bordered by the James River to the west, Warwick River to the east, and Skiffes Creek toward the north. Smaller waterbodies on or bordering the installation include Jail Creek, Morrison’s Creek, Island Creek, Bailey Creek, and Eustis Lake. The installation occupies approximately 8,000 acres and houses a variety of military organizations and support activities. Most of the development is located at the northern end of the installation, while the southern portion of the peninsula remains largely undeveloped. A golf course and an airfield are located near the center of the installation. A site location map is presented at Figure 2-1.

The installation is the home of the Headquarters United States Army Training and Doctrine Command (TRADOC), the Army Training Support Center (ATSC), and the 7th Transportation Brigade (Expeditionary). TRADOC is responsible for developing, educating, and training soldiers and civilians; supporting unit training; and designing, building, and integrating capabilities, formations, and equipment. The ATSC is responsible for managing the Army Training Support Enterprise (TSE), which provides oversight for programs that enable development, delivery, and sustainment of training and education support capabilities. The 7th Transportation Brigade (Expeditionary) provides logistics support around the world for port, terminal, and watercraft units conducting expeditionary operations in support of land operations. Other units on the installation include the Army Aviation Logistics School, Non-commissioned Officer’s (NCO) Academy, Aviation Applied Technology Directorate, and the James River Reserve Fleet (JRRF). The JRRF, a tenant managed by the Maritime Administration (MARAD), leases land on installation and maintains a number of vessels moored in the James River. The total population of the installation is approximately 14,550, comprised of approximately 6,800 military personnel and 2,800 dependents living on installation, as well as approximately 4,950 civilian non-residents who commute to the installation daily.



Figure 2-1. Site Location Map, JBLE–Eustis

2.2 Subwatershed Summary

There are three subwatersheds that include portions of JBLE–Eustis. These include: Morrison’s Creek, Skiffes Creek, and the Warwick River. Table 2-1 presents each of these subwatersheds as well as the hydrologic unit code (HUC), length of the stream within the installation boundary, the drainage area, known impairments, as well as any TMDL waste load allocations (WLAs) that have been developed for the installation. In addition, Table 2-2 presents each MS4 outfall located on JBLE–Eustis, the associated HUC code, and MS4 area as required by Section II.B.3.a (2) of the permit.

Section II.B.3.a (1) of Permit No. VAR040035 requires that JBLE–Eustis maintain a stormwater system drainage map that shows the location of all MS4 outfalls as well as the name and location of all waters receiving discharges from the MS4 outfalls and the associated HUC. Figure 2-2 illustrates the HUC codes and boundaries for the subwatersheds as presented in Table 2-1. It also includes the names of the receiving waters. Appendix B includes overview maps of the installation that show the locations of the MS4 outfalls.

Table 2-1. Subwatersheds Located on JBLE–Eustis

Subwatershed	HUC	Waterbody Name	Waterbody ID1	Category1	Impairments1	TMDL Impairment	TMDL	TMDL Approval Year	JBLE–Eustis TMDL WLA	Is the WLA being met?
Morrison’s Creek-James River	020802060804	Fort Creek	Unavailable ²	Unavailable ²	Unavailable ²	N/A	No	N/A	N/A	N/A
		James River - Gravel Neck to Pagan River	VAT-G11E_JMS01A06	5D ³	Chlorophyll-a, Dissolved Oxygen, PCB in Fish Tissue	N/A	No	N/A	N/A	N/A
		Morrison’s Creek - Mulberry Island	VAT-G11E_MRS01A06	5D ³	Dissolved Oxygen, PCB in Fish Tissue	N/A	No	N/A	N/A	N/A
Skiffes Creek-James River	020802060802	Bailey Creek	Unavailable ²	Unavailable ²	Unavailable ²	N/A	No	N/A	N/A	N/A
		Blows Creek	Unavailable ²	Unavailable ²	Unavailable ²	N/A	No	N/A	N/A	N/A
		Eustis Lake	Unavailable ²	Unavailable ²	Unavailable ²	N/A	No	N/A	N/A	N/A
		James River - Gravel Neck to Pagan River	VAT-G11E_JMS01A06	5D ³	Chlorophyll-a, Dissolved Oxygen, PCB in Fish Tissue	N/A	No	N/A	N/A	N/A
		Skiffes Creek System	VAT-G11E_SFF01A08	4A ⁴	Dissolved Oxygen, PCB in Fish Tissue	Fecal Coliform	Yes – Fecal Bacteria TMDL Development for Warwick River	2008	2.87E+07 cfu/day	Yes
Skiffes Creek System [Admin Cond]	VAT-G11E_SFF02A08	4A ⁴	Dissolved Oxygen, PCB in Fish Tissue							
Warwick River	020802060901	Browns Lake	Unavailable ²	Unavailable ²	Unavailable ²	N/A	No	N/A	N/A	N/A
		Jail Creek	Unavailable ²	Unavailable ²	Unavailable ²	N/A	No	N/A	N/A	N/A
		Milstead Island Creek	Unavailable ²	Unavailable ²	Unavailable ²	N/A	No	N/A	N/A	N/A
		Warwick River - Lower Tidal Portion	VAT-G11E_WWK03A08	4A ⁴	Dissolved Oxygen, PCB in Fish Tissue	Fecal Coliform	Yes – Fecal Bacteria TMDL Development for Warwick River	2008	6.91E+07 cfu/day	Yes
		Warwick River - Middle Tidal Portion	VAT-G11E_WWK02A08	4A ⁴	Enterococcus, Dissolved Oxygen, PCB in Fish Tissue					
Warwick River - Upper Tidal Portion	VAT-G11E_WWK01A08	4A ⁴	Dissolved Oxygen, PCB in Fish Tissue							

Notes and Acronyms:

1The Waterbody ID, Category, and Impairments are from the 2012 VDEQ Integrated Report GIS layers (http://www.deq.virginia.gov/mapper_ext/default.aspx?service=public/2012_adb_anyuse).

2Waterbody IDs, categories, and impairments were not included in the 2012 VDEQ Integrated Report.

3A category 5D designation for a waterbody indicates that the water quality standard has not been attained and that pollutants remain requiring TMDL development.

4A category 4A designation for a waterbody indicates that the waterbody is impaired or threatened for one or more designated uses, but has an EPA approved TMDL.

cfu Colony-forming units N/A Not applicable TMDL Total maximum daily load
HUC Hydrologic unit code PCB Polychlorinated biphenyls WLA Waste load allocation

Table 2-2. Drainage Basin Location and Subwatershed Cross-Reference

Subwatershed	HUC	Drainage Basin IDs¹	MS4 Area in each Subwatershed (Acres)
Morrison's Creek- James River	020802060804	071	1.8
		131	6.1
Skiffes Creek-James River	020802060802	011	0.4
		013	0.6
		014	6.6
		015	2.0
		016	1.6
		017	4.6
		018	22.3
		022	19.4
		023	2.5
		027	3.3
		028	5.3
		029	37.8
		030	5.4
		031	67.7
		032	6.9
		033	14.7
		077	54.8
		084	57.4
		085	34.5
		086	3.0
		087	8.0
		089	2.8
		092	0.5
		093	1.2
		094	1.1
		095	0.5
096	5.4		
097	0.2		
098	5.2		
099	2.4		
100	3.0		

Table 2-2. Drainage Basin Location and Subwatershed Cross-Reference (Continued)

Subwatershed	HUC	Drainage Basin IDs¹	MS4 Area in each Subwatershed (Acres)
Skiffes Creek-James River (Continued)	020802060802	103	1.9
		104	1.6
		105	2.3
		106	6.4
		107	1.4
		115	0.6
		134	0.2
		135	1.3
		140	0.7
		143	2.5
Warwick River	020802060901	038	5.6
		039	3.7
		041	4.8
		042 ²	258.9
		043	11.3
		044	3.1
		045	4.7
		046 ²	15.1
		047	6.4
		048	5.4
		049	3.2
		050	5.6
		052	7.0
		053	1.0
		054	1.6
		055	12.6
		056	1.8
		057	6.3
		058	12.1
		059	15.3
Warwick River (Continued)	020802060901	060	2.1
		062	16.5
		063	40.1
		066	7.6
Warwick River (Continued)	020802060901	067	34.1
		068	71.0
		078	5.1
		090	2.1

Table 2-2. Drainage Basin Location and Subwatershed Cross-Reference (Continued)

Subwatershed	HUC	Drainage Basin IDs¹	MS4 Area in each Subwatershed (Acres)
		091	6.9
		113	1.4
		117	0.5
		118	2.0
		119	2.5
		120	9.6
		121	0.6
		122	4.8
		124	2.3
		125	0.8
		126	0.5
		127	0.2
		128	0.5
		136	8.1
		141	2.3
		142	4.6

Notes:

¹Drainage basins shown in this table only reflect the MS4 drainage basins and corresponding outfalls. Industrial outfalls are discussed in the JBLE–Eustis SWPPP.

²Drainage basins 042 and 046 were determined to be comingled with industrial and non-industrial activities. Acreage included in this table only reflects non-industrial areas of those drainage basins.

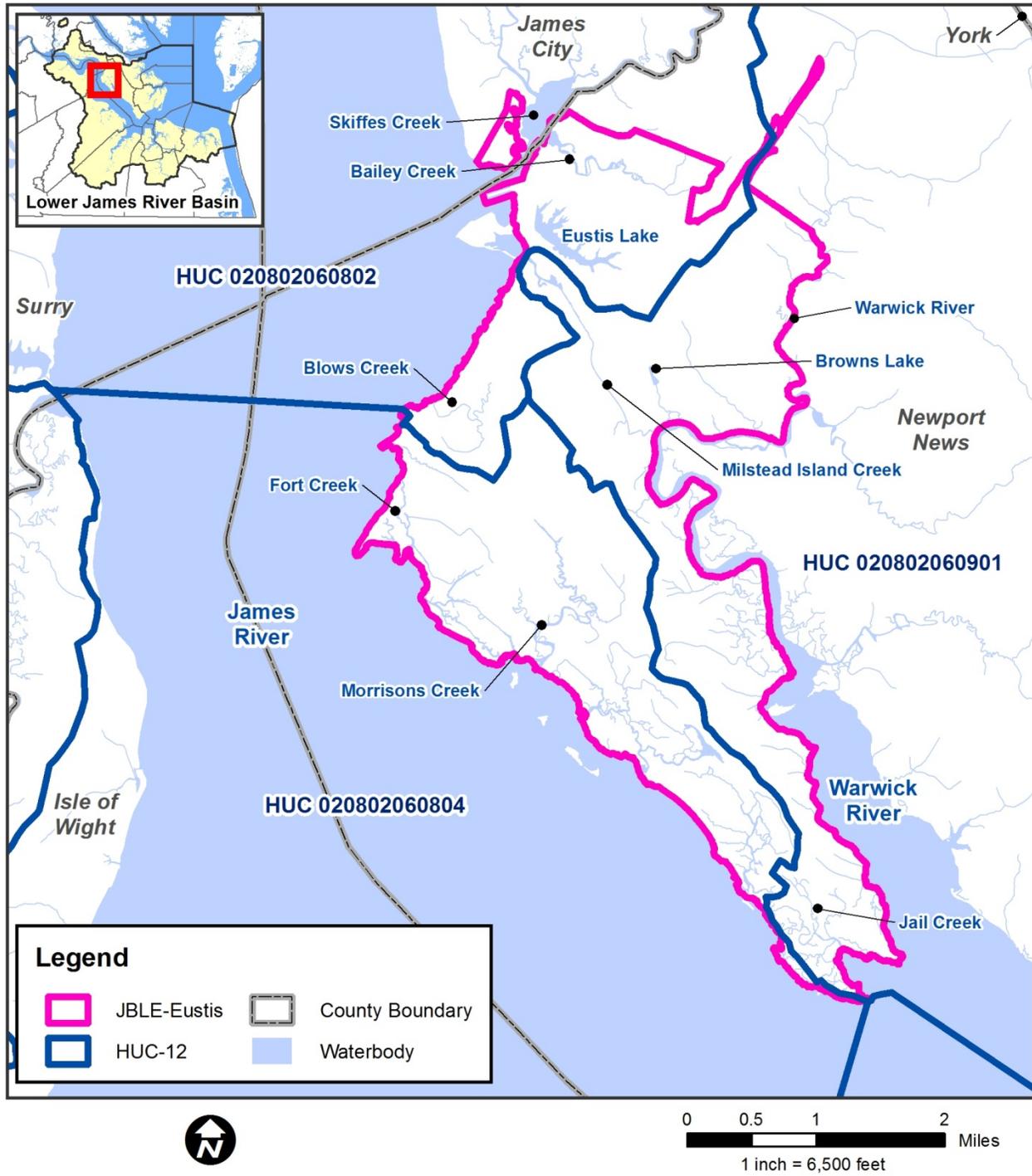


Figure 2-2. Subwatershed Locations, JBLE-Eustis

3.0 MINIMUM CONTROL MEASURES

Section 3.0 of the Program Plan presents each of the six MCMs. Subsections will discuss requirements for each MCM, measureable goals and BMPs that JBLE–Eustis is planning to implement to meet the requirements, a discussion of how the program will be assessed and updated, and a list of requirements for the installation’s annual report. MCMs are identified in the Stormwater Phase II Final Rule, which when implemented together, are intended to reduce pollutants discharged into receiving waterbodies.

The identified BMPs will establish the installation’s compliance targets for each MCM and will be the tools that JBLE–Eustis utilizes to implement each MCM. BMPs have been identified by the 733rd Civil Engineer Division / Environmental Element (733d CED/CEIE) Stormwater Program Manager and reviewed by other members of the installation Stormwater Pollution Prevention Team (SWPPT).

The subsections below summarize the MCM requirements, measureable goals and BMPs selected for implementation, process for assessing MCM program effectiveness, and annual reporting requirements.

3.1 MCM 1: Public Education and Outreach on Stormwater Impacts

3.1.1 Summary of Requirements

General Permit No. VAR040035 requires JBLE–Eustis to implement a public education and outreach program that targets personnel, contractors, and residents.

Section II.B.1.c outlines the requirements for the design of the MCM 1 program:

1. Identify, at a minimum, three high-priority water quality issues, that contribute to the discharge of stormwater (e.g., Chesapeake Bay nutrients, pet wastes and local bacteria TMDLs, high-quality receiving waters, and illicit discharges from commercial sites) and a rationale for the selection of the three high-priority water quality issues;
2. Identify and estimate the population size of the target audience or audience who is most likely to have significant impacts for each high-priority water quality issue;
3. Develop relevant messages and associated educational and outreach materials (e.g., various media such as printed materials, billboard and mass transit advertisements, signage at select locations, radio advertisements) for message distribution to the selected target audiences while considering the viewpoints and concerns of the target audiences including minorities, disadvantaged audiences, and minors;
4. Provide for public participation during public education and outreach program development;
5. Annually conduct sufficient education and outreach activities designed to reach an equivalent of 20% of each high-priority issues target audience. It shall not be considered noncompliance for failure to reach 20% of the target audience. However, it shall be a compliance issue if insufficient effort is made to annually reach a minimum of 20% of the target audience; and

6. Provide for the adjustment of target audiences and messages including educational materials and delivery mechanisms to reach target audiences in order to address any observed weaknesses or shortcomings.

3.1.2 Measureable Goals and BMPs Selected for Implementation

The initial program plan selected three high-priority water quality issues to be the focus of the education and outreach under MCM 1. During the annual review of the high-priority water quality issues by the Stormwater Program Manager, in conjunction with the Air Force Civil Engineer Center (AFCEC) Installation Support Team (IST), determined that spill reduction education and outreach had been effective to the point that the high-priority water quality issue could be updated to focus on a different issue. A review of spill reports received by the Fire Department showed approximately 85% reduction in spill reports at the Army Air Force Exchange Service (AAFES) Gas Station, one of the primary focuses for this issue. JBLE–Eustis will continue to monitor the spill reports and if an increase in spills is noticed, will increase education and awareness effort at the AAFES Gas Station. As a result of this review high-priority water quality issue two, curbing illegal dumping within MFH and the dormitories, has been included in this updated Program Plan. Each of the high-priority water quality issues are discussed below.

1. Controlling Pet Wastes at the JBLE-Eustis Dog Park, Military Family Housing (MFH), and at the Horse Stables

Rationale – JBLE–Eustis has been assigned WLAs for fecal coliforms for Skiffes Creek and the Warwick River under the *Fecal Coliform Total Maximum Daily Load Development for Warwick River*, which was approved in 2008. This TMDL in conjunction with Chesapeake Bay TMDL requirements have made fecal coliform a major concern for JBLE–Eustis. Reductions required as part of the Chesapeake Bay TMDL based on the installation’s general permit cycle are presented below (See Section 4.2 and Appendix H). The reduction goals enhance the need for JBLE–Eustis to manage nutrient loading to the installation. Pollutant percent reductions are summarized in Table 3-1.

**Table 3-1. Pollutant Percent Reduction Requirements by JBLE–Eustis
General Permit Cycle**

Permit Cycle	Timeframe	Cycle Percent Reduction	Cumulative Percent Reduction
1	2013-2018	5%	5%
2	2018-2023	35%	40%
3	2023-2028	60%	100%

As part of the development of the rationale, the installation has also assessed targeted areas to help with controlling fecal coliform discharge and nutrient load reductions to surrounding waterbodies. These targeted areas are further discussed below.

A community dog park was opened at JBLE–Eustis in May 2015. Access to the dog park is restricted and residents must submit an application, register pets, pay a registration fee, and sign a receipt acknowledging the rules of the dog park. The area is fenced and equipped with a cypher lock. The rules

include a requirement for owners to clean-up after their dogs. Signs are posted inside the dog park and a large trash can is provided for pet waste disposal.

The installation also operates horse stables for authorized personnel to utilize. Stable bedding and horse manure are collected by patrons and stored in a roll-off bin located on site and then disposed of by a contractor off-site. During periods of good weather, horses are allowed to utilize the areas designated as pasture lands and categorized as agricultural land use. Manure generated in these areas is not collected.

In addition to these areas, residents of MFH are allowed to have pets and it is reasonable to assume that residents with dogs periodically walk their dogs around the nearby neighborhoods. Residents are required to clean up after their dogs; however, pet waste disposal receptacles are not available along the walking paths.

Target Audience – The main target audience will be MFH residents as well as the Dog Park and Horse Stable users.

Estimated Audience Size – A total target audience population is approximately 2,600 people.

There are currently 881 total housing units within MFH, of which 809 are occupied. It is assumed that each unit is occupied by at least three people, for a total audience of approximately 2,600 residents. In addition, there are 42 registered users for the dog park; however, it is assumed that these registered users are on-base MFH residents. In addition, there are eight horses at the horse stables. Data was provided by Balfour Beatty and the installation Real Property office related to on installation populations.

2. Curbing illegal dumping within MFH and the dormitories

Rationale – The residents in MFH as well as soldiers living in the dormitories are fairly transient and there is frequent resident turnover. The frequency of resident turnover creates the potential for illegal dumping due to differing policies and procedures at different installations and short time periods between relocation notification and time of move. As such, there is a need to provide information related to illegal dumping (e.g., littering, car wash water, and disposal of household chemicals) and the proper ways to dispose of specific items.

In addition, fishing is allowed on installation in designated areas that can also result in excess debris, littering, and illegal dumping. There is a need to provide educational tools at boat docks or other recreational fishing areas regarding proper waste disposal, illegal dumping, as well as where to report observations of these activities.

Target Audience – The main target audience will be installation residents, including both MFH and the dormitories.

Estimated Audience Size – A total target audience population is approximately 5,000 people.

There are currently 881 total housing units within MFH, of which 809 are occupied as of 19 February 2016. It is assumed that each unit is occupied by at least three people, for a total audience of 2,643 residents. In addition, the population housed in the on-base dormitories is 2,364. Data was provided by Balfour Beatty and the installation's Real Property office related to on-base populations.

3. Address Training Area (TA) Erosion and Sediment Control

Rationale – A total of 29 military TAs comprise 3,519 acres of land at JBLE–Eustis, of which, the majority are forested. TA 1 is a shoreline training area adjacent to Skiffes Creek and has evidence of shoreline erosion. There is currently an on-going project to assess how to address the erosion.

In addition to TA 1, the Range Control Office has chosen a contractor to evaluate the drainage systems in TAs 17a, 17c, 22, 23, and 24. The contractor will utilize a field biologist along with additional supporting personnel who have expertise with wetlands delineation and Army training land analysis and management. A Sustainable Range Program (SRP) Geographic Information System (GIS) technician with a working knowledge of Spatial Data Standards for Facilities, Infrastructure, and Environment (SDSFIE) and SRP GIS standards will also be a part of the contractor’s team to perform the field work and analysis of the culverts and ditches within the specified training areas. The contractor will document current conditions and develop management recommendations to include costs to repair/remediate, environmental documentation required, and impact if not repaired.

Additional recreational usage is also anticipated in the next permit year, with the Force Support Division (FSD) inquiring about hosting a “mud run” in the training area. Additional usage by personnel not familiar with the range or erosion and sedimentation requirements need to be properly trained in order to manage erosion and sediment control as well as excess nutrient discharges.

Target Audience – JBLE Senior Leadership, 733rd Civil Engineer Division (733d CED), Range Control personnel, and FSD personnel.

Estimate Audience Size – A total target audience population is approximately 30 people.

JBLE–Eustis plans to utilize a combination of relevant messages and outreach materials to educate target audiences for each of the three high priority water quality issues. The following BMPs have been selected for implementation by the installation:

- **Utilization of websites and social media** – The installation utilizes both internal and external websites as well as social media (i.e., Facebook) to provide training and awareness to installation personnel and residents. JBLE–Eustis plans to continue to maintain both the internal and external websites and update them with current information about the three high-priority water quality issues that are discussed in Section 3.1.1. Links to the websites are available through the home page for JBLE–Eustis. In addition, 733d CED/CEIE personnel plan to continue to develop awareness messages related to the three high-priority water quality issues and distribute to PAO and Balfour Beatty for publication on their respective installation specific Facebook pages. 733d CED/CEIE will also post these messages on the installation environmental Facebook page.
- **Publication of newspaper articles** – JBLE-Eustis publishes articles in the installation newspaper, *the Warrior*. These articles are prepared by 733d CED/CEIE personnel and are related to the installation operations, impacts of the operations to stormwater, as well as steps that installation personnel and residents can take to help minimize the amount of pollutants being discharged to the stormwater drainage system via stormwater runoff. In addition to publishing the articles in *the Warrior*, they are also posted on the JBLE–Eustis website and the installation’s Facebook page.

- **Informational emails** – 733d CED personnel also utilize mass emails, including installation-wide, select organizations on installation, and specific job groups (e.g., Activity Environmental Coordinator [AEC]) in order to communicate messages to large targeted groups of installation personnel. Mass email messages will be used to communicate guidance on stormwater related topics that apply to the target audience. In addition, the MFH privatization company, Balfour Beatty, will also send stormwater related informational emails provided by 733d CED to residents.
- **Handouts/educational materials** – 733d CED/CEIE develops handouts and educational materials related to the three high-priority water quality conditions identified in this program plan and distributes them at locations where members of the target audience are anticipated to be (e.g., Earth Week/Day events, range control meetings, FSS sponsored events). Handouts can be pamphlets or other one page informational sheets that present information and also provide a means to contact the Stormwater Program Manager with any questions or comments. Additional education materials include posters that can be utilized during events such as Earth Week/Day or MFH resident meetings.
- **Public events** – 733d CED/CEIE participates in public events throughout the year, including Earth Week/Day. During Earth Week, the Stormwater Program Manager displays educational posters related to the high-priority water quality items at locations where events are being held and is available to answer questions.
- **Training programs** – All JBLE–Eustis personnel are required to participate in annual training that includes stormwater pollution prevention training. Military and civilian personnel that handle municipal solid wastes, recycling materials, hazardous and non-hazardous wastes, universal wastes, and hazardous substances that have the potential to contaminate the stormwater drainage system at JBLE–Eustis are also required to participate in specialized training developed and maintained by 733d CED/CEIE. There are two levels of training that are available to installation personnel:
 - Level 1 – Basic Environmental Management Awareness (BEMA) or Leadership Environmental Management Awareness and Competency (LEMAC) training
 - BEMA training is intended for all military and civilian non-supervisory and non-managerial personnel at JBLE–Eustis
 - LEMAC training is intended for all officers and non-commissioned officers and civilian leaders (managers and supervisors), as well as corporate officers and company owners at JBLE–Eustis
 - Level 2 – Advanced Environmental Management (AEM) training

Level 1 BEMA/LEMAC training is provided in an online format via the Environmental, Safety, and Occupational Health and Training Network (ESOHTN) website (<https://esohtn.com/>). This training is required for all military and civilian personnel within 30 days of arrival and is to be repeated annually. In addition to the Level 1 training courses, AEM training is required for AECs, Unit Environmental Coordinators (UEC), and Hazardous Waste Coordinators. The AEM training includes an initial training

course in a classroom setting followed by annual refresher training provided online through the ESOHTN website. 733d CED also provides awareness training for the United States Army Transportation Corps (USATC) School Warrant Officers Advanced Course (WOAC) on an as needed basis.

The 733d CED/CEIE also conducts additional training on relevant information to implementing the installation's MS4 Program Plan during annual stormwater training, which is available to all personnel at JBLE–Eustis. Annual training is provided electronically via the ESOHTN website and geared toward installation personnel working throughout the base that have the potential to respond to spills, handle waste management activities or hazardous materials and hazardous waste. Topics include:

- Waste management
- Spill response
- Aboveground storage tank (AST) inspections
- Hazardous material and hazardous waste handling

A dedicated training program for MFH residents has not been developed. Training activities utilized to reach MFH includes development of handouts at sponsored events (e.g., Earth Week activities), encouraging participation in sponsored events, Facebook posts, publication of information articles, and the Stormwater Program Manager attending MFH resident meetings periodically (e.g., semi-annually) to discuss stormwater related issues for JBLE–Eustis.

EMP 4.4.2, tab 2 provides a complete list of the JBLE-Eustis environmental management training programs. In order to continuously improve the available training, the Stormwater Program Manager completes facility environmental inspections as well as the implementation of the CFT as previously discussed in Section 1.6.1. A description of these activities is provided below.

- **Facility environmental inspections** – 733d CED/CEIE performs annual inspections of facilities in order to assess the industrial activities (i.e., comprehensive site compliance evaluation [CSCE]) and high priority municipal facilities within the MS4 area (e.g., Base Exchange [BX], Commissary, privately owned vehicle [POV] car wash) that conduct activities that may contribute pollutants to the stormwater drainage system (e.g., car washing, loading docks, outdoor storage). AECs also conduct quarterly inspections of their facilities. The inspections allow 733d CED/EIE personnel to highlight implementation of the stormwater management program at specific locations throughout the installation by updating the training and tailor it to show installation specific observations, both good and bad. The inspections will also be used to aid in supplemental education of the installation personnel regarding stormwater management practices, the JBLE–Eustis program and requirements, as well as any regulatory changes that affect the installation.
- **CFT implementation** – JBLE–Eustis operates a CFT that meets semiannually in February and August of each year. See Section 1.6.1 for details on this program.

JBLE–Eustis requests feedback from installation personnel and residents via the JBLE–Eustis intranet on stormwater related education and outreach initiatives on an annual basis. In addition, 733d CED/CEIE will also be sending annual surveys to residents on the installation via an online survey tool and with the help of Balfour Beatty related to the education and outreach initiatives that JBLE–Eustis has under taken

over the course of the permit year. This request for feedback enquires about pressing stormwater issues and how they feel that the 733d CED/CEIE should focus education and outreach efforts in the next year. Results are provided to the 733d CED/CEIE representative in order to help develop new opportunities that address comments and concerns received in the solicited feedback.

Table 3-2 presents the specific outreach goals, target audience, and outreach type (including BMPs presented above) and associated timeframe for each of the high priority water quality issues presented in Section 3.1.1.

Table 3-2. JBLE–Eustis Education and Outreach Plan for PY4

High Priority Water Quality Issue	Target Audience	Estimated Target Audience Population	20% of Estimated Population	Outreach Type	Outreach Timeframe
Controlling pet waste in MFH, at the horse stables, and the dog park	MFH residents and users of the installation dog park and horse stables	2,600	520	<ol style="list-style-type: none"> 1. Informational posts to the JBLE–Eustis and Balfour Beatty MFH Facebook pages 2. Outdoor Recreation will provide handouts of the rules of the dog park 3. 733d CED/CEIE staff will visit the horse stables and dog park and speak with users of this facility about the stormwater program 	<ol style="list-style-type: none"> 1. Periodically throughout the permit year, but no less than semiannually 2. At the time that a new user registers for access to the dog park as well as annually to all registered users 3. Periodically throughout the permit year, but no less than semiannually

Table 3-2. JBLE–Eustis Education and Outreach Plan for PY4 (Continued)

High Priority Water Quality Issue	Target Audience	Estimated Target Audience Population	20% of Estimated Population	Outreach Type	Outreach Timeframe
Curbing illegal dumping within MFH and the dormitories	JBLE–Eustis residents, including those in MFH and the dormitories	5,000	1,000	<ol style="list-style-type: none"> 1. Publish articles in the Warrior newspaper related to illegal dumping (e.g., POV car washing in undesignated areas, littering, and disposal of household chemicals) 2. Informational posts to the JBLE–Eustis and Balfour Beatty MFH Facebook pages 3. Mass email to MFH residents regarding illegal dumping 	<ol style="list-style-type: none"> 1. Semiannually during the permit year (1 July – 30 June) 2. Periodically throughout the permit year, but no less than semiannually 3. Periodically throughout the permit year, but no less than semiannually

Table 3-2. JBLE–Eustis Education and Outreach Plan for PY4 (Continued)

High Priority Water Quality Issue	Target Audience	Estimated Target Audience Population	20% of Estimated Population	Outreach Type	Outreach Timeframe
Address TA erosion and sediment control	JBLE senior leadership, 733d CED, Range Control personnel, and FSD personnel	30	6	<ol style="list-style-type: none"> 1. 733d CED/CEIE to meet with Range Control personnel to discuss erosion and sediment control issues at the TA 2. Discuss at WG and CFT meetings, as well as ESOH Council briefings in order to develop outreach plans for TA users 	<ol style="list-style-type: none"> 1. Periodically throughout the permit year, specifically targeting times of high usage of the TA 2. Semiannually (February/August) at the scheduled CFT meeting and ESOH Council briefing

3.1.3 MS4 Annual Education and Outreach Program Effectiveness Review Plan

Review Process

JBLE–Eustis will review the education and outreach program effectiveness for MCM 1. Items to be reviewed include:

- Educational materials distributed during the current permit year
- Delivery mechanisms utilized during the current permit year
- Effectiveness at reaching the target audience for each high priority water quality issue identified in the MS4 Program Plan to be addressed during the permit year

These items will be reviewed to determine:

- The appropriateness of the high priority water quality issues, including the need to change them for the next permit year
- The appropriateness of the previously identified target audiences for each high priority water quality issue
- The effectiveness of the outreach messages as well as the method used to deliver the messages for each of the issues to the target audience

Program Assessment

An assessment of the program’s effectiveness is documented in the Annual Report corresponding to each permit year. Annual reports are included with the Program Plan in Appendix C.

Program Plan Updates Based on the Program Assessment

An assessment of the MCM 1 Program (see PY3 Annual Report in Appendix C) noted the following items:

1. Spill reduction education and outreach activities have been successful, with an 85% reduction in spill reports from the AAFES Gas Station to the Fire Department. As a result of this determination, the high-priority water quality issue was replaced for PY4.
2. TA education and outreach was previously focused exclusively on range personnel; however, new information leads 733d CED/CEIE to believe that additional transient military personnel as well as FSS personnel, including recreational users for events sponsored by FSS, were not being reached. It was determined that the outreach materials would also focus on education of these additional TA users.

3.1.4 MS4 Annual Reporting

JBLE–Eustis will include the following information in each annual report submitted to VDEQ:

1. A list of the education and outreach activities conducted during the permit year (1 July – 30 June) for each of the three high priority water quality issues. The list will also include an

- estimated number of people and estimated percentage of the total target audience(s) that were reached for each activity.
2. A list of the education and outreach activities that will be conducted during the next reporting period for each high-priority water quality issue. The list will also include estimates of the number of people and percentage of the target audience(s) that will be reached by each activity.
 3. Documentation to confirm that each activity occurred as stated in the annual report will be maintained by the 733d CED/CEIE Stormwater Program Manager and will be provided with the MS4 Annual Report submitted to VDEQ. Documentation will include the following:
 - a. Date of the activity
 - b. Location/event
 - c. Target audience and approximate size of the audience
 - d. Message delivered as part of the activity

3.2 MCM 2: Public Involvement / Participation

3.2.1 Summary of Requirements

General Permit No. VAR040035 Section II.B.2 requires JBLE–Eustis to:

1. Maintain and update the MS4 Program Plan. The plan is to be updated at least once per year to coincide with the development of the annual report.
2. JBLE–Eustis must post the MS4 Program Plan on its website at least once per year and within 30 days of the submittal of the annual report to VDEQ.
3. The installation is required to post copies of each annual report on its website within 30 days of submittal to VDEQ as well as retain copies of each annual report on the website for the duration of the permit.
4. During the reapplication process for the permit, JBLE–Eustis must notify the installation population and allow for public comment prior to the submittal of the permit renewal application. The installation must also address how the comments received were considered in the development of the MS4 Program Plan.
5. The installation is required to participate in a minimum of four public activities annually via either promotion, sponsorship, or other involvement. Examples of public events that JBLE–Eustis may participate in include, but are not limited to, stream cleanups; hazardous waste cleanup days; and meeting with advisory committees (e.g., CFT) operating within the boundaries of JBLE–Eustis.

Guidance related to public activities for JBLE–Eustis is provided in Section II.B.2.b of the installation’s MS4 permit. It states that the activities should be aimed at increasing public participation to reduce stormwater pollutant loads, improve water quality, and support local restoration and cleanup initiatives.

3.2.2 Measurable Goals and BMPs Selected for Implementation

Maintaining and Updating the MS4 Program Plan – JBLE–Eustis plans to update the MS4 Program Plan on an annual basis. The updated MS4 Program Plan is posted on the 733d CED/CEIE website (<http://www.jble.af.mil/About-Us/JBLE-Enviromental-Information>). 733d CED/CEIE personnel have designated a separate section of the webpage to call out documents that are available for public comment. A mass email, as well as notification on the installation and environmental Facebook pages will be utilized to announce that the updated MS4 Program Plan has been posted to the website for public review and comment. The email will also provide a link to the website and a phone number to call with questions or comments regarding the MS4 Program Plan.

Developing and Posting the MS4 Program Annual Report – The installation will develop an MS4 Program Annual Report for each permit year of MS4 General Permit No. VAR040035. The annual report will be posted on the 733d CED/CEIE website (<http://www.jble.af.mil/About-Us/JBLE-Enviromental-Information>) within 30 days of the submittal to VDEQ. A mass email, as well as notification on the installation and environmental Facebook pages, will be utilized to announce that the MS4 Program Annual Report has been posted to the website for public review and comment. The email and posts will also provide a link to the website and a phone number to call with questions or comments regarding the annual report.

The submittal deadline each year for the annual report for the previous permit year (1 July – 30 June) is the following 1 October. In addition to posting copies of the annual report for public dissemination, the 733d CED/CEIE Stormwater Program Manager will maintain copies of the annual report on the installation maintained website for the duration of the permit term.

Renewal of the MS4 General Permit – Submittal of the registration statement for the renewal of MS4 General Permit No. VAR040035 is currently scheduled to occur in PY5. During the development of the application, 733d CED/CEIE personnel will post the application statement to the website previously discussed in this section and utilize mass emails and Facebook posts to announce that it has been posted for public review and comment. Installation personnel and residents will be allowed 90 days of public comment prior to the submittal of the application to VDEQ.

Public Participation – JBLE–Eustis participates in public outreach and participation activities throughout the year. These activities include:

1. Communication with installation personnel and residents via internal and external websites, the installation community cable channel, *the Warrior* newspaper, as well as regular interactions with various community groups (e.g., the Department of Game and Inland Fisheries, the York County Extension Office, and the Newport News Recycling office).
2. The installation will also be participating in at least four local events through either promotion, sponsorship, or other involvement on an annual basis. The activities selected for participation will focus on the reduction of stormwater pollutants being discharged to the receiving water, improvement of water quality, and to support local restoration and

clean-up initiatives. At a minimum, the installation will promote the following events during PY4:

1. Clean the Bay Day
 2. America Recycles Day
 3. Earth Day/Week
 4. Annual installation spring clean-up
 5. Illicit discharge reporting hotline
 6. Stormwater pollution prevention education via social media applications
3. Participation in the Air Force’s Community Partnership Initiative, or Public-Public; Public-Private (P4) Partnership Initiative. The P4 Partnership Initiative seeks to identify and develop opportunities to share resources, increase efficiency, and improve effectiveness of operational, educational, and recreational programs. The JBLE–Eustis P4 Partnership is currently focused on the Virginia peninsula and includes a partnership with the City of Newport News to pick up and dispose of yard waste from JBLE–Eustis.

These events will be promoted through posts on the installation and environmental Facebook pages, as well as with articles in the newspaper, MFH mass community emails, flyers, and announcements on marquees located on the installation.

3.2.3 MS4 Annual Public Involvement / Participation Program Effectiveness

Review Process

JBLE–Eustis will review the public participation program effectiveness for MCM 2. Items to be reviewed include:

- MS4 Program Plan and Annual Report development, including review of comments received from the public
- Ability to post copies of the MS4 Program Plan and Annual Reports within 30 days of submittal to the VDEQ
- Effectiveness of promotion and publication methods prompting for public review and comment
- Effectiveness at promoting at least four local events/activities aimed at increasing public participation in the JBLE–Eustis Stormwater Program

These items will be reviewed to determine:

- The appropriateness of the updated MS4 Program Plan and most recent annual report
- The appropriateness of the local events selected for promotion and participation
- The effectiveness of the event promotion/participation at increasing public participation with the JBLE–Eustis Stormwater Program

Program Assessment

An assessment of the program’s effectiveness is documented in the Annual Report corresponding to each permit year. Annual reports are included with the Program Plan in Appendix C.

Program Plan Updates Based on the Program Assessment

An assessment of the MCM 2 Program (see PY3 Annual Report in Appendix C) noted the following items:

1. The 633d Air Base Wing Public Affairs Office (PAO) provides support for informing the installation population about upcoming events and should be included in future efforts to inform the JBLE–Eustis population of upcoming events.
2. Mass emails were determined to not be effective as the sole method for announcing the posting of documents for public comment. The updated Program Plan includes Facebook post notifications as an additional means to inform the installation population that the Annual Reports are available for review and comment.
3. JBLE–Eustis previously participated in the Virginia Regional Environmental Management System (V-REMS) partnership that allows for collaboration with federal, state, and local organizations in order to address regional community and environmental issues. The V-REMS site previously maintained by VDEQ is no longer active and appears to not currently be operational. JBLE–Eustis personnel plan to monitor the program website and enquire about the continuation of the program. It has been removed from the PY4 Program Plan.
4. Feedback provided by VDEQ related to documentation of public involvement includes a request for documentation of events and public attendance. Examples of VDEQ approved means to show public attendance and participation includes photographs and sign-in sheets for meetings.

3.2.4 MS4 Annual Reporting

JBLE–Eustis will include the following information in each annual report submitted to VDEQ:

1. The link to the website where the MS4 Program Plan and Annual Reports are posted.
2. A list of the public participation events that JBLE–Eustis promoted, sponsored, or participated in during the permit year (1 July – 30 June). The list will include the date of the event as well as a brief description of the event.

3. Documentation to confirm that each local event occurred as stated in the annual report will be maintained by the 733d CED/CEIE Stormwater Program Manager and will be provided with the MS4 Annual Report submitted to VDEQ. Documentation will include the following:
 - a. Date of the event
 - b. Location of the event
 - c. Approximate number of people that participated in the event
 - d. Brief description of the event
4. Submit an application for continued coverage under MS4 General Permit 90 days prior to the expiration of the current permit. The current permit expiration date is 30 June 2018. Ninety (90) days prior to this date is Saturday, 1 April 2018. The submittal of the application for continued coverage is required to be submitted to the VDEQ no later than this date; however, due to the date falling outside of normal business hours, JBLE–Eustis will submit the application no later than Friday, 30 March 2018.

In addition, JBLE–Eustis is required to allow time for the public to review and comment of the proposed MS4 Program Plan that is to be submitted as part of the application package. The installation has specified a 60-day window to allow for public review and comment. JBLE–Eustis will also detail how comments that were received were considered with regards to the proposed MS4 Program Plan.

3.3 MCM 3: Illicit Discharge Detection and Elimination

3.3.1 Summary of Requirements

General Permit No. VAR040035 Section II.B.3 requires JBLE–Eustis to “develop, implement, and update, when appropriate, written procedures to detect, identify, and address unauthorized non-stormwater discharges, including illegal dumping, to the small MS4”. In order to facilitate the development and implementation of IDDE procedures, JBLE–Eustis is also required to:

- Maintain an accurate stormwater system drainage map and information table that shows, at a minimum, the following:
 - Location of all MS4 outfalls;
 - Name and location of all waters receiving discharges from the MS4 outfalls and the associated HUC;
 - A table that includes:
 - The unique identifier;
 - Estimated MS4 acreage served;
 - Name of the receiving surface water and indication of whether it is listed as impaired in the *Virginia 2010 303(d)/305(b) Water Quality Assessment Integrated Report*; and,

- The name of any applicable TMDL(s).
 - Within 48 months of permit coverage, complete and submit an updated stormwater system drainage map and information table as an appendix to the annual report.
- Prohibit through ordinance or other legal mechanism, non-stormwater discharges into the stormwater drainage system;
- Promote, publicize, and otherwise facilitate public reporting of illicit discharges into or from MS4s, including conducting inspections to incidents that have been reported, as well as follow-up inspections to ensure that corrective measures have been implemented effectively; and,
- Include all procedures developed for implementation of the IDDE with the MS4 Program Plan.

3.3.2 Measureable Goals and BMPs Selected for Implementation

In order to achieve compliance with the requirements specified in Section II.B.3 of the permit, JBLE–Eustis plans to implement the following BMPs:

Continuous updates to the installation maps – The installation stormwater drainage system maps are maintained by 733rd Civil Engineer Division/GeoBase (733d CED/GIO) in GIS format. Updated stormwater drainage system data from contract projects are routed to 733d CED/GIO for inclusion in the installation’s geodatabase. Hardcopy maps are available upon request and electronic versions of the stormwater drainage system map can be viewed by authorized personnel on the JBLE–Eustis server.

As of June 2016, JBLE–Eustis was conducting a comprehensive update of the stormwater system GIS data. The project includes inventory and location of stormwater system features as well as an update of their attributes within the installation’s geodatabase. The mapping update is scheduled to be completed in the spring of 2017 and will improve the accuracy of the stormwater drainage system map. Updated maps will be included with the IDDE Procedure Manual (Appendix D) as they become available.

Maintain information tables with MS4 data – Section 2.2 of the MS4 Program Plan presents two subwatershed information tables that include items specified in Section II.B.3 of the permit and listed in Section 3.3.1. The installation will periodically review those tables, no less than annually during the MS4 Program Plan review and make necessary changes.

Maintain an installation-wide policy signed by the JBLE Commander – Section II.B.3.b requires the installation to “effectively prohibit, through ordinance or other legal mechanism, non-stormwater discharges into the stormwater drainage system to the extent allowable under federal, state, or local law, regulation, or ordinance.” A policy statement signed by the installation commander acts as an enforceable ordinance for JBLE–Eustis. As such, JBLE–Eustis has developed a draft installation level policy prohibiting illicit discharges. The policy will be routed through installation management and signed by the installation commander. Once finalized, it will be posted to the installation and environmental websites and distributed via a Facebook post and mass email to installation personnel and residents in order to remind people of the ordinance and how it will be enforced. The draft policy document is included in Appendix D.

Maintain and enforce the IDDE EMP (EMP 4.4.6.2.2.3) – 733d CED/CEIE will maintain and update EMP 4.4.6.2.2.3, *IDDE Procedures*, which is used as an enforcement tool for the IDDE Procedure Manual. The EMP will be an additional tool to enforce the installation-wide policy signed by the JBLE Commander. The EMP will be posted to the installation environmental website and distributed via email to installation personnel.

Encourage illicit discharge reporting within the community – 733d CED/CEIE is encouraging installation personnel and residents to report illicit discharges and/or illegal dumping activities by working with the MFH management company (Balfour Beatty) in order to distribute information about the IDDE program and how to report. Methods to be used include newspaper articles, Facebook posts, mass emails, and posts to the JBLE–Eustis Environmental website.

Maintain and implement IDDE procedures – JBLE–Eustis will continue to maintain and implement the *Illicit Discharge Detection and Elimination Procedure Manual* included as Appendix D of this Program Plan. Procedures outlined in Appendix D include:

- **Community reporting** – The installation currently utilizes the JBLE–Eustis Fire and Emergency Services telephone number (757-878-1008 or 4281 [Defense Switched Network or DSN] or 911) is used as the primary hotline for reporting illicit discharges. This hotline is manned 24 hours per day, seven days per week. This number will be advertised as part of the community outreach effort to educate the installation regarding illicit discharges. Additional numbers that will be presented for installation personnel and residents to contact include the 733d CED/CEIE staff (757-878-4123) and/or Housing Management staff (757-369-8344).
- **Dry weather field screening** – 733d CED/CEIE identified 85 MS4 outfalls and two (2) comingled (i.e., industrial and MS4 activities) outfalls that discharge to various receiving water bodies. See Tables 2-1 and 2-2 for a complete list of MS4 outfalls, associated subwatersheds, HUCs, and associated receiving streams. MS4 Permit No. VAR040035 requires a minimum of 50 outfalls be screened each year during dry weather. The IDDE Procedure has outlined the dry weather screening process, including an inspection schedule for each permit year. JBLE–Eustis will use this process to implement required dry weather screening.
- **Illicit discharge investigation** – Illicit discharge investigations are the responsibility of 733d CED/CEIE staff. Investigations may be performed by installation personnel staff or by outside consultants hired by the installation; however, all investigation results will be reviewed by 733d CED/CEIE staff. The IDDE Procedure has outlined the illicit discharge investigation process. JBLE–Eustis will use this process to implement required illicit discharge investigation procedures.
- **Illicit discharge elimination** – Illicit discharges are generally the result of either structural issues or operational deficiencies. The mechanism for eliminating a discharge will depend on the discharge type. Initiating and verifying the elimination of an illicit discharge is the responsibility of 733d CED/CEIE. 733d CED/CEIE staff will provide educational materials and advocate for funding when needed to eliminate illicit discharges. Depending on the location and type of discharges, specific elimination actions may be conducted by other

organizations including AECs and UECs, Housing Management staff (Balfour Beatty), the installation maintenance contractor (Global Management Services [GMS]), the installation wastewater privatization contractor (Old Dominion Utility Services [ODUS]), or other outside contractors hired by the JBLE–Eustis. Regardless of the entities involved in eliminating an illicit discharge, 733d CED/CEIE will be responsible for following-up on the corrective actions to verify the illicit discharge has been resolved. JBLE–Eustis will use this process to implement required illicit discharge elimination procedures.

733d CED/CEIE personnel will refer to the IDDE procedures to continue to ensure compliance with the installation’s MS4 permit.

3.3.3 MS4 IDDE Program Effectiveness

Review Process

JBLE–Eustis will review the IDDE program effectiveness for MCM 3. Items to be reviewed include:

- JBLE–Eustis stormwater mapping completeness and accuracy
- Information presented in Table 2-1 of the MS4 Program Plan. This table includes items specified in Section II.B.3 of the permit and listed in Section 3.3.1. The GIS and available records will be reviewed annually and updated as needed.
- Effectiveness of promotion and publication methods regarding illicit discharge detection and reporting
- Knowledge and enforcement of the *IDDE Procedure Manual* included in Appendix D of this Program Plan

These items will be reviewed to determine:

- If GIS maps have been updated to reflect changes to the system, including changes due to new construction projects, renovations, and other investigations that resulted in a change to the stormwater system connectivity.
- The correctness of the information related to the MS4 outfalls, receiving watersheds, and other requirements as described in Section II.B.3 of the permit.
- The effectiveness of the promotion of the *IDDE Procedure Manual* to the public, advertising how to report suspected illicit discharges, and knowledge of the IDDE installation-wide ordinance. Effectiveness of promotion may include:
 - Reviewing logs to the IDDE reporting hotline, 733d CED/CEIE, or the MFH number
 - Assessing the methods utilized to promote the IDDE program (e.g., mass emails, Facebook posts, etc.)
 - Sending/posting a survey for installation personnel and residents to take regarding knowledge of the IDDE program
 - Integration of inspection resolution results into public outreach
- Review, at least annually, of priority areas, the field collection/detection process, the inspection process, and enforcement actions

- Review the outfall inspection logs to ensure completeness as well as any documentation available for the upstream investigation for any suspected illicit discharges. Records review of these documents for the past year will also include a review of the number of illicit discharge sources identified and confirmation that the sources have either been eliminated or, for larger issues that may require construction, are in the process of being eliminated with temporary measures in place while permanent elimination is underway.
- Identifications of new or reclassified (e.g., industrial to non-industrial) outfalls
- Need to seek coverage for non-stormwater discharges under separate Virginia Pollutant Discharge Elimination System (VPDES) permits
- Review the outfall inspection logs to ensure completeness as well as any documentation available for the upstream investigation for any suspected illicit discharges. Records review of these documents for the past year will also include a review of the number of illicit discharge sources identified and confirmation that the sources have either been eliminated or, for larger issues that may require construction, are in the process of being eliminated with temporary measures in place while permanent elimination is underway.

Program Assessment

An assessment of the program's effectiveness is documented in the Annual Report corresponding to each permit year. Annual reports are included with the Program Plan in Appendix C.

Program Plan Updates Based on the Program Assessment

An assessment of the MCM 3 Program (See PY3 Annual Report in Appendix C) noted the following items:

1. An information table was not previously available to track receiving watersheds, MS4 outfalls, and impairments. Development of a table and inclusion with future Program Plans is necessary to allow for ease of continuous updates during stormwater system reviews. This information has been provided as Tables 2-1 and 2-2 of this plan.
2. The *IDDE Procedure Manual* developed during PY3 has outlined a specific schedule for outfall inspections that the Stormwater Program Manager will utilize. In addition, this manual includes template tracking documents that will allow for ease of reporting and development of future annual reports.
3. Reviews of installation policies and EMPs by the Stormwater Program Manager indicated that illicit discharge prohibition was not explicit. It was determined that a policy and EMP be developed that explicitly states the installation IDDE policy and provides additional enforcement mechanisms for 733d CED/CEIE.
4. Promotion of an IDDE hotline has not been completely rolled out to installation personnel and residents. 733d CED/CEIE personnel need to work with the PAO to publish the IDDE hotline reporting information to installation personnel and residents. In addition, a means of tracking incoming reports and partnering with Balfour Beatty is needed to have a more complete list of illicit discharges reported across the installation.

3.3.4 MS4 Annual Reporting Requirements

JBLE–Eustis will include the following information in each annual report submitted to VDEQ:

1. A list of any notifications of physical interconnections that the installation provides to any other MS4s.
2. A list that includes the number of outfalls that were screened during the reporting period (1 July – 30 June), dry weather screening results at each outfall, and details for any follow-up activities that were necessitated by the screening of the outfalls.
3. A brief summary of each investigation that is conducted by 733d CED/CEIE personnel for suspected illicit discharges. The summary for each investigation will include the following:
 - a. Date the suspected illicit discharge was observed, reported, or both
 - b. How the investigation was determined to be resolved, including any follow-up actions that were required
 - c. Resolution of the investigation and the closure date

3.4 **MCM 4: Construction Site Stormwater Runoff Control**

3.4.1 Summary of Requirements

General Permit No. VAR040035 Section II.B.4 discusses the requirements for the JBLE–Eustis Construction Site Stormwater Runoff Control Program as prescribed in MCM 4. The purpose of this MCM is to develop, implement, and enforce a program in order to reduce the pollutants (e.g., total suspended solids [TSS], total phosphorus [TP], and total nitrogen [TN]) related to “land-disturbing activities including clearing, grading, or excavation that results in a land disturbance equal to or greater than 2,500 square feet and less than one acre in all areas of jurisdictions designated as subject to the Chesapeake Bay Preservation Area Designation and Management Regulations ([9VAC25-830](#)) adopted pursuant to the Chesapeake Bay Preservation Act.”

The installation, as stated in Section II.B.4.a of the permit, is required to address discharges entering the MS4 from the following land-disturbing activities:

1. Land-disturbing activities as defined in §10.1-560 of the Code of Virginia that result in the disturbance of 10,000 square feet or greater (*Land disturbing activities conducted at JBLE–Eustis meet the definition as prescribed in §10.1-560 of the Code of Virginia.*);
2. Land-disturbing activities in Tidewater jurisdictions, as defined in §10.1-2101 of the Code of Virginia, that disturb 2,500 square feet or greater and are located in areas designated as Resource Protection Areas (RPA), Resource Management Areas (RMA), or Intensely Developed Areas (IDA), pursuant to the Chesapeake Bay Preservation Area Designation and Management Regulations adopted pursuant to the Chesapeake Bay Preservation Act. (*JBLE–Eustis is located in a Chesapeake Bay Preservation Area within the Tidewater jurisdiction.*);

3. Land-disturbing activities disturbing less than the minimum land disturbance identified in subdivision (1) or (2) above for which a local ordinance requires that an erosion and sediment control plan be developed. (*There are no ordinances or installation policies that require erosion and sediment control plan development for activities covering less than the specified areas in items 1 and 2*); and,
4. Land-disturbing activities on individual residential lots or sections of residential developments being developed by different property owners and where the total land disturbance of the residential development is 10,000 square feet or greater. (*MFH property is owned by JBLE–Eustis and leased by Balfour Beatty, whom manages the property, for a 50 year term. JBLE–Eustis reviews all proposed land-disturbing activities within the installation’s boundary, therefore any development is managed by a uniform entity.*)

The installation is located entirely in the Tidewater jurisdiction and therefore, item 2 listed above is applicable to JBLE–Eustis. Items 3 and 4 are listed in the general permit; however, they are not applicable to JBLE–Eustis at this time.

JBLE–Eustis’ Construction Site Stormwater Runoff Control Program must also specifically include the following items:

- A description of the legal authorities utilized to ensure compliance with the MCM
- Written plan review procedures, including all documents required during plan review
- Written inspection procedures as well as all associated documents utilized during the inspection
- Roles and responsibilities for JBLE–Eustis implementing the MCM
- Written procedures for compliance and enforcement, including a progressive compliance and enforcement strategy, if needed

The JBLE–Eustis *Standards and Specifications for Erosion and Sediment Control*, included in Appendix E of this Program Plan, outlines the installation erosion and sediment control program and addresses the items listed above.

3.4.2 Measureable Goals and BMPs Selected for Implementation

Measureable goals have been identified and are included below:

JBLE–Eustis will continue to follow the policies and procedures described in the Virginia Erosion and Sediment Control Regulations and the *Virginia Erosion and Sediment Control Handbook*, which can be found at the VDEQ Erosion and Sediment Control website

<http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/Publications/ESCHandbook.aspx>;

- 733d CED/CEIE and AFCEC IST personnel will maintain the required certifications for plan review and inspection as part of the installation’s Erosion and Sediment (E&SC) Program;

- Personnel certified as program administrators must attend a one day course conducted by the VDEQ;
 - Personnel certified as an inspector must attend a two day course conducted by the VDEQ that reviews the roles and responsibilities of the E&SC inspector during construction;
 - Personnel certified as plan reviewers must attend a three day course to aid in the determination of prospective projects being in compliance with the Virginia Erosion and Sediment Control Law (VESCL);
 - Personnel wishing to be certified as a combined administrator for an E&SC program must attend all three courses;
 - Provisional certifications are applicable for two years from the date of the completion of the first required training course; however, if individuals do not complete the certification exam in that window, they will no longer be considered certified; and,
 - Provisional certifications are only available once per individual.
- JBLE–Eustis will implement and abide by the *Standards and Specifications for Erosion and Sediment Control* dated May 2016 and provided in Appendix E of this MS4 Program Plan. This most recent version of the plan will be included with the Program Plan;
 - 733d CED/CEIE will verify site-specific SWPPPs are developed for land-disturbing activities that require them;
 - Land disturbance sites that disturb one (1) or more acres over the life of the project;
 - Land disturbance sites that are part of a larger common plan of development or sale that will disturb one (1) or more acres over the life of the project;
 - 733d CED/CEIE will utilize ETL 14-1, *Construction and Operation and Maintenance Guidance for Storm Water Systems*, published on 7 August 2014. ETL 14-1 can be found at the Whole Building Design Guide website (https://www.wbdg.org/ccb/browse_doc.php?d=9693) in the documents library under Air Force Criteria. The installation also maintains an electronic copy for reference. This ETL provides procedures and practices that can be implemented in order to minimize stormwater pollution from Air Force construction activities, guidance for construction inspectors regarding temporary sediment and erosion controls, O&M guidance for stormwater infrastructure, and permanent stormwater control measures (SCMs). This document has been incorporated by reference into the MS4 Program Plan. See Section 5.1 for a complete list of documents incorporated by reference; and,
 - 733d CED/CEIE will set up a hotline for installation personnel and residents to call and report observations and complaints related to land-disturbing activities.

In order to achieve compliance with the requirements specified in Section II.B.4 of the permit, JBLE–Eustis plans to implement the following BMPs:

- Implementation of installation-specific standards and specifications from *Standards and Specifications for Erosion and Sediment Control* dated May 2016 and provided in Appendix E
- Maintaining a list of land-disturbing activities that includes tracking the progress of the projects and maintaining inspection records
- Completing land-disturbing activity inspections immediately following the initial installation of E&SC measures, at least once during every two-week period, within 48-hours of any runoff-producing storm event, and upon completion of the project
- Inclusion of erosion and sediment (E&SC) control issues in required training for installation personnel

3.4.3 MS4 Construction Site Stormwater Runoff Control Program Effectiveness

Review Process

JBLE–Eustis will review the Construction Stormwater Program effectiveness for MCM 4. Items to be reviewed include:

- Implementation of the *Standards and Specifications for Erosion and Sediment Control*
- Tracking of on-going land-disturbing activities at JBLE–Eustis
- Completion of land-disturbing activity E&SC inspections
- Maintaining required certifications for inspectors and plan reviewers
- Available training related to E&SC procedures on the installation

These items will be reviewed to determine:

- If the land-disturbing activities are being inspected according to the *Standards and Specifications for Erosion and Sediment Control*.
- The effectiveness of the promotion and utilization of the stormwater hotline, advertising how to report observations related to construction site stormwater control. Effectiveness of promotion may include:
 - Reviewing logs to the reporting hotline setup by the 733d CED/CEIE
 - Assessing the methods utilized to promote the hotline and encourage reporting (e.g., mass emails, Facebook posts, etc.)
 - Distribution of an online survey to installation personnel and residents regarding the availability of the stormwater reporting hotline; including how they heard about the hotline.
- The completeness of the construction site inspection records. Records review of these documents for the past year will also include a review of the number of findings and the follow-up to ensure that issues had been resolved.

Program Assessment

An assessment of the program's effectiveness is documented in the Annual Report corresponding to each permit year. Annual reports are included with the Program Plan in Appendix C.

Program Plan Updates Based on the Program Assessment

An assessment of the MCM 4 Program (see PY3 Annual Report in Appendix C) noted the following items:

1. Regulated land disturbing activities, including the number of acres disturbed, total number of oversight inspections, and any findings/enforcement actions are still being tracked by the Stormwater Program Manager.
2. Development of the JBLE–Eustis *Standards and Specifications for Erosion and Sediment Control* (Appendix E) has provided better definition of responsibilities related to various construction projects and erosion and sediment control requirements. The plan should continue to be rolled out to 733d CED personnel and contracting office staff for construction projects to make them aware of the document.
3. Review of 733d CED/CEIE personnel indicated that provisional certifications are nearing expiration. Discussion has indicated that more than one person should have the inspector and plan reviewer certifications. In addition, it has been determined that those with provisional certifications should seek to complete the certification process during PY4.
4. Currently there are no records of calls related to erosion and sediment control; however, it was noted that there is not a formal tracking system for logging calls that are received. 733d CED/CEIE plans to maintain a tracking spreadsheet (included in Appendix E) of this Program Plan that logs calls related to stormwater issues that are received.

3.4.4 MS4 Annual Reporting Requirements

733d CED/CEIE will track regulated land-disturbing activities and include the following information in each annual report submitted to VDEQ:

1. The total number of regulated land-disturbing activities;
2. The total number of acres disturbed;
3. The total number of inspections conducted; and
4. A summary of the enforcement actions taken, including the total number and type of enforcement actions taken during the reporting period.

3.5 MCM 5: Post-Construction Stormwater Management in New Development and Development on Prior Developed Lands

3.5.1 Summary of Requirements

General Permit No. VAR040035 Section II.B.5 discusses the requirements for the JBLE–Eustis Post-Construction Stormwater Management Program as prescribed in MCM 5. The purpose of this MCM is to develop, implement, and enforce a program in new development and development on prior developed lands, specifically:

1. New development and development on prior developed lands that are defined as large construction activities or small construction activities in 4 VAC 50-60-10;
2. New development and development on prior developed lands that disturb greater than or equal to 2,500 square feet, but less than one acre, located in a Chesapeake Bay Preservation Area designated by a local government located in Tidewater, Virginia, as defined in §10.1-2101 of the Code of Virginia (*JBLE–Eustis is located in a Chesapeake Bay Preservation Area within the Tidewater jurisdiction*); and
3. New development and development on prior developed lands where an applicable state regulation or local ordinance has designated a more stringent regulatory size threshold than identified in items (1) and (2) above. (*Not applicable to JBLE–Eustis.*)

JBLE–Eustis’ Post-Construction Stormwater Management Program must also specifically include the following items:

- A description of the legal authorities utilized to ensure compliance with the MCM
- Written procedures for stormwater best management practices (e.g., wet detention pond, bioretention cell, etc.) design and installation
- Written inspection procedures as well as all associated documents utilized during the inspection, including inspection of privately owned facilities (i.e., MFH)
- Outline of the roles and responsibilities for JBLE–Eustis implementing the MCM

3.5.2 Measureable Goals and BMPs Selected for Implementation

Measureable goals have been identified and BMPs to be implemented and are included below:

- Enforcement of installation policies or procedures that enable the installation to address post-construction runoff from new or re-development projects in compliance with the Virginia Stormwater Management Act (VSMA).
 - Legal authorities:
 - MS4 Permit No. VAR040035
 - JBLE–Eustis, 733d CED via regulations, policies, and procedures noted below

- Regulations, Policies, and/or Procedures:
 - **4 VAC 50-60, VDEQ Stormwater Management Permit Regulations** – These stormwater regulations specify minimum technical criteria and administrative procedures for stormwater management programs that JBLE–Eustis has adopted in order to achieve the effective control of precipitation from land development projects.
 - **Air Force Policy Directive (AFPD) 32-10, Installations and Facilities** – AFPD 32-10 establishes policy for Air Force Installations and Facilities to employ a sustainable asset management approach.
 - **AFPD 32-70, Environmental Quality (20 July 1994)** – AFPD 32-70 applies to all Air Force personnel and is designed to help achieve and maintain environmental quality. Item 2 of the directive stipulates that the Air Force will conduct its activities according to national environmental policy. In addition the directive says that “All Air Force employees, including military, civilian, and contractor personnel, are accountable for the environmental consequences of their actions.” The directive also establishes authorities and responsibilities for high level positions from the Assistant Secretary of the Air Force to Commanders for major commands.
 - **AFI 32-1067, Water and Fuel Systems (4 February 2015)** – Air Force Instruction (AFI) 32-1067 implements AFPDs 32-10 and 32-70 and provides guidelines for managing water and wastewater systems at Air Force bases. Chapter 5 of AFI 32-1067 presents information and requirements for stormwater systems located in the United States. Section 5.2.3 describes how installation may be classified as MS4s.
 - **JBLE-I 32-101, Environmental Management (28 January 2014)** – Joint Base Langley-Eustis Instruction (JBLE-I) 32-101 applies to all personnel performing functions and conducting operations on JBLE-Eustis and is aimed at preserving, protecting, conserving, and restoring the quality of the Fort Eustis environment. Section 4.4.6.2 requires the installation to comply with applicable federal, state and local stormwater regulations through execution of required stormwater permits. Section 4.4.6.2.2 requires all operations and actions be planned and executed in a manner to protect surface water. JBLE-I 32-101 can be viewed at: <http://www.jble.af.mil/About-Us/JBLE-Environmental-Information>
 - **EMP 4.4.6.2.2, Stormwater Management** – This EMP establishes the procedures to implement JBLE-I 32-101 for the control and abatement of stormwater pollution.
 - **EMP 4.4.6.16, Contracting** – This EMP establishes the procedures for managing environmental aspects of contracts for construction goods and services. The EMP outlines roles and responsibilities and procedures related

to contractors, including those performing construction activities on the installation.

- Implementation of ETL 14-1, *Construction and Operations and Maintenance Guidance for Storm Water Systems*. This ETL provides procedures and practices that can be implemented in order to minimize stormwater pollution generated on Air Force bases by providing O&M guidance for stormwater infrastructure and permanent stormwater drainage and treatment infrastructure.
 - The ETL can be found here: http://wbdg.org/ccb/AF/AFETL/etl_14_1.pdf
 - Attachments to the ETL include practical tools to aid in the operation and maintenance (O&M) of individual SCMs and include checklists that the installation will implement to aid in documenting inspections and maintenance activities.
- Completion of SCM inspections in accordance with ETL 14-1 and the manufacturer’s and/or engineer of record’s recommendations, but no less than annually.
 - Records of the inspections are to be maintained and utilized for completion of required O&M for the SCMs. The 733rd Civil Engineer Division/Operations (733d CED/CEO) flight will amend the existing operations contract or award new contracts in order to perform required maintenance.
 - Privately owned/maintained SCMs located on JBLE–Eustis, specifically MFH, which is maintained by Balfour Beatty (the MFH privatization contractor), will be inspected by the contractor. The contractor will conduct inspections no less than annually and provide records of inspection and maintenance to the 733d CED/CEIE Stormwater Program Manager for inclusion with the installation’s SCM records.
- Track all installation and privately-owned SCMs that discharge to the MS4. The tracking document will be maintained by 733d CED/CEIE on the installation network server and include the following:
 - The SCM type;
 - A general description of the facility’s location, including address or latitude and longitude;
 - The area treated by the SCM (i.e., total, pervious, and impervious);
 - The date the SCM was brought online (MM/YYYY). If the date is not known, a date of 30 June, 2005 will be used as the date brought online for all previously existing SCMs;
 - The sixth order HUC for the watershed in which the SCM is located;
 - The name of any impaired water segments within each HUC listed in the 2010 305(b)/303(d) Water Quality Assessment Integrated Report to which the SCM discharges;
 - Whether the SCM is operator-owned or privately-owned;

- Whether a maintenance agreement exists if the SCM is privately-owned; and,
- The date of the most recent inspection of the SCM. In addition, the installation will also track and report the total number of inspections completed and, when applicable, the number of enforcement actions taken to ensure long-term maintenance.
- Continuation of the use of the SWPPT in order to implement the MCM.
 - The SWPPT consists of 733d CED Engineering Flight, Operations Flight, Fire and Emergency Services Flight, Installation Management Flight, 733d CED/CEIE; AECs for high priority facilities, PAO, and the Judge Advocate Office. The team will meet at least once annually to discuss the MS4 program and review the goals outlined in the program plan.
 - The SWPPT responsibilities are outlined in EMP 4.4.6.2.2, *Stormwater Management*. They will include:
 - Implementation of the MS4 Program Plan requirements
 - Defining and agreeing upon updated goals for the MS4 Program
 - Being aware of updates to the MS4 requirements and determining if changes must be made to maintain compliance
 - Maintaining a clear line of communication with installation leadership, including utilization of the CFTs

3.5.3 MS4 Post-Construction Stormwater Management Program Effectiveness

Review Process

JBLE–Eustis will review the Post-Construction Stormwater Management Program effectiveness for MCM 5. Items to be reviewed include:

- Implementation of ETL 14-1, *Construction and Operation and Maintenance Guidance for Storm Water Systems*
- Tracking of existing and planned SCMs
- Completion of SCM inspections
- Effectiveness of the SWPPT

These items will be reviewed to determine:

- If the SCMs are being inspected as recommended by ETL 14-1, including a minimum of annual inspections for each SCM.
- Accuracy of the tracking document for the existing and planned SCMs, including:
 - Noting the last time the file was updated
 - Reviewing documents associated with construction projects to determine if planned SCMs are noted in the spreadsheet

- Completeness of inspections of existing SCMs based on manufacturer or the engineer on record recommendations, or ETL 14-1.
 - Reviewing inspection logs and forms maintained by 733d CED/CEIE and Balfour Beatty
 - Review the inspection records to ensure completeness. Records review of these documents for the past year will also include a review of the number of findings and the follow-up to ensure that issues had been resolved.

Program Assessment

An assessment of the program’s effectiveness is documented in the Annual Report corresponding to each permit year. Annual reports are included with the Program Plan in Appendix C.

Program Plan Updates Based on the Program Assessment

An assessment of the MCM 5 Program (see PY3 Annual Report in Appendix C) noted the following items:

1. ETL 14-1 was not previously referenced for inspection of SCMs. The stormwater program manager is providing links to the ETL location and referring 733d CED personnel to the document for guidance. Promotion of ETL 14-1 must continue throughout PY4.
2. The SCM tracking spreadsheet is maintained on the installation network and maintained by the 733d CED/CEIE Stormwater Program Manager. The tracking spreadsheet will continue to be utilized and updated throughout PY4.
3. The SWPPT has been focusing on industrial issues and complying with the new industrial VPDES permit that was issued in 2015. The SWPPT must also include discussion of MS4 related issues. In addition, the Stormwater Program Manager should encourage MS4 focused members of the SWPPT (e.g., AAFES) to attend meetings and discuss MS4 related issues.

3.5.4 MS4 Annual Reporting Requirements

JBLE–Eustis will track activities related to MCM 5 and include the following information in each annual report submitted to VDEQ:

1. An updated electronic database or spreadsheet of all the SCMs brought online during each reporting year.
2. An updated electronic database or spreadsheet of all known operator-owned and privately-owned SCMs that discharges to the MS4. See Section 3.5.3 for specifics on what the electronic files must include.
3. A report with the total number of SCM inspections that were completed during the reporting year, as well as the number of enforcement actions taken to ensure long-term maintenance, when applicable.

3.6 MCM 6: Pollution Prevention / Good Housekeeping for Municipal Operations

3.6.1 Summary of Requirements

General Permit No. VAR040035 Section II.B.6 requires JBLE–Eustis to implement a Pollution Prevention/Good Housekeeping Program. In order to facilitate the development and implementation of this program, JBLE–Eustis is also required to:

- Develop and implement written procedures designed to minimize or prevent pollutant discharge from daily operations (e.g., road, street, and parking lot maintenance); equipment maintenance; and the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers. The written procedures must be designed to:
 - Prevent illicit discharges;
 - Ensure the proper disposal of waste materials, including landscape wastes;
 - Prevent the discharge of municipal vehicle wash water into the MS4 without authorization under a separate VPDES permit;
 - Require implementation of BMPs when discharging water pumped from utility construction and maintenance activities;
 - Minimize the pollutants in stormwater runoff from bulk storage areas (e.g., salt storage and topsoil stockpiles);
 - Prevent pollutant discharge into the MS4 from leaking POVs and equipment; and,
 - Ensure that the application of materials, including fertilizers and pesticides, is conducted in accordance with the manufacturer’s recommendations.
- SWPPP Development:
 - Identify all municipal high-priority facilities (i.e., composting facilities, equipment storage and maintenance facilities, materials storage yards, pesticide storage facilities, public work yards, recycling facilities, salt storage facilities, solid waste handling and transfer facilities, and vehicle storage and maintenance yards);
 - Identify which of the municipal high-priority facilities have a high potential of discharging pollutants. Refer to Section II.B.6.b (2) of the General Permit for a list of applicable criteria and develop and implement a SWPPP for each identified facility. Each SWPPP is required to include:
 - A site description that includes a map identifying all outfalls, direction of flows, existing source controls, and receiving water bodies;
 - A discussion and checklist of potential pollutants and pollutant sources;
 - A discussion of all potential non-stormwater discharges;
 - Written procedures designed to reduce and prevent pollutant discharge;

- An inspection and maintenance schedule for site-specific source controls. The date of each inspection and associated findings and follow-up shall be logged in each SWPPP;
 - The contents of each SWPPP shall be evaluated and modified as necessary to accurately reflect any discharge, release, or spill from the high priority facility reported in accordance with Section III.G of the permit.
 - A copy of each SWPPP is to be kept at each facility and kept updated and utilized as part of staff training required in Section II.B.6.d of the permit.
- Turf and Landscape Nutrient Management Plan (NMP) Implementation:
 - Implement a turf and landscape NMP developed by a certified turf and landscape nutrient management planner in accordance with §10.1-104.2 of the Code of Virginia for all lands owned or operated by the installation where nutrients are applied to a contiguous area greater than one acre.
 - Annually track the following:
 - The total acreage of lands where turf and landscape NMPs are required; and
 - The acreage of lands upon which turf and landscape NMPs have been implemented.
 - No application of deicing agents containing urea or other forms of nitrogen or phosphorus to parking lots, roadways, sidewalks, or other paved surfaces.
 - JBLE–Eustis will conduct employee training as presented below:
 - Biennial training to applicable employees (e.g., military and civilian personnel working in shops that perform maintenance activities or have the potential to handle petroleum, oil, and lubricants [POL] or other materials) in good housekeeping and pollution prevention practices that are to be employed:
 - During road, street, and parking lot maintenance
 - In and around maintenance and public works facilities
 - In and around recreational facilities
 - Ensure that employees, including contractors, who apply pesticides and herbicides, are properly trained or certified in accordance with the Virginia Pesticides Control Act.
 - Ensure that employees, including contractors, serving as plan reviewers, inspectors, program administrators, and construction site operators obtain the appropriate certifications as required under the VESCL and its attendant regulations.
 - Appropriate emergency response employees shall have training in spill responses on an annual basis.

- The installation shall keep documentation of each training event including the date, number of employees in attendance, and the objective of the training event for a period of three years after each training event.
- JBLE–Eustis requires that municipal contractors use appropriate control measures and procedures for stormwater discharges to the MS4 system. Oversight procedures are included in Appendix E.

3.6.2 Measureable Goals and BMPs Selected for Implementation

Measureable goals have been identified and BMPs to be implemented are included below:

- Implement the following procedures in order to minimize the use of pollutants that may enter the stormwater drainage system:
 - **Cleanup of Paved Surfaces (Street Sweeping)** – Street sweepers are utilized by JBLE–Eustis to remove debris and solids accumulation from streets and parking lots throughout the installation. The installation operation contractor, GMS, performs street sweeping throughout the installation. The current street sweeping schedule includes regular sweeping once every one to two weeks based on the agreed upon schedule included in GMS’ contract. Water is carried on the street sweeper and applied during street sweeping activities in order to control dust.
 - **Cleanup of Shops, Work Areas, and Storage Areas** – Routine cleanup is scheduled for shops, work areas, and storage areas in order to minimize hazardous conditions to the installation employees and/or environment. Work areas are maintained in accordance with the Air Force Occupation Safety and Health (AFOSH) requirements. Personnel are provided appropriate training related to good housekeeping and safety procedures.
 - **POV Washing** – JBLE–Eustis operates a POV car wash that residents are encouraged to use to wash vehicles. Balfour Beatty prohibits washing cars in roadways and resident’s driveways and encourages reporting to their hotline (**757-369-8335**). Government owned vehicle (GOV) washing are currently performed as designated areas and are covered under a separate industrial VPDES permit (Permit No. VA0025216) and will not be discussed further in the MS4 Program Plan.
 - **Internal Assessments** – EMP 4.5.2.3, *Internal Inspection Conducted by Activities*, requires that all activities (e.g., food service establishments, loading docks, golf course and other maintenance areas) conduct inspection of their facilities for compliance with all environmental media areas on a quarterly basis. In addition, it requires annual assessments of facilities for good housekeeping and pollution prevention compliance. Internal assessments are required to be completed no later than 1 December of each year. Results from the assessments are compiled and used to brief senior installation management at semi-annual ESOH Council meetings.

- Update the list of high priority non-industrial facilities located in Appendix F and determine if they have a high potential for discharging pollutants and develop required SWPPPs. SWPPPs will be maintained by the 733d CED/CEIE Stormwater Program Manager and each facility will have copies available on-site.
- Implement turf and landscape NMPs for all lands owned or operated by the installation where nutrients are applied to a contiguous area greater than one acre. Areas that require and have NMPs being implemented are presented in Table 3-3. Associated NMPs are maintained by the 733d CED/CEIE Stormwater Program Manager in the 733d CED/CEIE office and provided in Appendix G of this Program Plan.

Table 3-3. Turf and Landscape NMP Tracking

Location	Total Acreage where NMP is Required and being Implemented
Military Family Housing	75.1
Pines Golf Course	98.5
FSD Athletic Fields	11.2

- Implement the annual training plan presented below:
 - EMP 4.4.2, *Environmental Awareness and Competency Training* requires JBLE–Eustis personnel to take BEMA, LEMAC, and AEM training as appropriate based on personnel assignments within 30 days of arrival at the installation. Refresher training is required on an annual basis.
 - AEM training is provided to AECs, UECs, and Hazardous Waste Coordinators (HWC) by 733d CED/CEIE staff. Training occurs on a biennial basis, typically in March and October of each year.
 - 733d CED/CEIE also provides training to the WOAC course on an as needed basis.
 - The installation Integrated Contingency Plan (ICP) and Spill Prevention Control and Countermeasures (SPCC) Plan, incorporated into this plan by reference, are included in additional training that is available to installation personnel.
 - JBLE–Eustis personnel that may be involved in spill response are required to maintain the required training specified in AFI 10-2501 and the installation ICP. Yearly refresher courses are provided by 733d CED/CEIE when required.
 - Installation personnel that may be handling POL are required to be trained in the maintenance of equipment in order to prevent discharges. Training courses related to discharge procedure protocols, applicable pollution control regulations, general facility operations, and contents of the installation SPCC Plan are maintained by 733d CED/CEIE and provided to personnel via the ESOHTN website.
 - Training records (e.g., Air Force [AF] Form 55 – *Employee Safety and Health Record*) are used by 733d CED/CEIE to record participation in training courses.

3.6.3 MS4 Pollution Prevention / Good Housekeeping Program Effectiveness

Review Process

JBLE–Eustis will review the Pollution Prevention / Good Housekeeping Program effectiveness for MCM 6. Items to be reviewed include:

- Implementation of installation EMPs as well as procedures presented in Section 3.6.2
- Tracking of lands requiring NMPs
- Implementation of NMPs previously developed
- Adherence to the staff training schedule presented in Section 3.6.2
- Tracking of NMPs, required training, and SWPPPs
- Completion of Pollution Prevention (P2)/BMP implementation inspections

These items will be reviewed to determine:

- If installation personnel are abiding by EMPs and procedures previously outlined in Section 3.6.2. This includes an assessment of street sweeping activities, POV washing enforcement, and completion of internal assessments by units.
- Accuracy of the tracking document for the lands that require NMPs, including:
 - A list of all lands owned or operated by the installation where nutrients are applied to a contiguous area greater than one acre;
 - The total acreage of each location where an NMP is required; and,
 - The total acreage of each location where an existing NMP is being implemented.
- Completion of the training plan discussed in Section 3.6.2.
 - Review training logs (e.g., AF Form 55) and sign-in sheets and ensuring that documentation of training is being maintained as required in Section II.B.6.d.(9).

Program Assessment

An assessment of the program's effectiveness is documented in the Annual Report corresponding to each permit year. Annual reports are included with the Program Plan in Appendix C.

Program Plan Updates Based on the Program Assessment

An assessment of the MCM 6 Program (see PY3 Annual Report in Appendix C) noted the following items:

1. NMPs were developed for three areas during PY3: Pines Golf Course, MFH, and the Athletic Fields. Virginia Department of Conservation and Recreation (DCR) reviewed and approved the Pines Golf Course NMP (only NMP for JBLE–Eustis requiring DCR approval) and provided a letter of approval that is kept with the NMP. Plans were provided to each location. Training specific to each plan was developed and provided to personnel responsible to personnel for application of nutrients in PY3. Continuous review of the plans and meetings

- between 733d CED/CEIE and those subject to the NMP requirements need to be fostered throughout the next PY as the NMP implementation gets under way.
2. Street sweeping is providing nutrient removal and being effective for the installation. There are no plans to change this activity.
 3. EMPs are reviewed annually. Discussions amongst the SWPPT indicated that EMPs should be updated to allow for individual MCMs to have “sub” EMPs that can be referenced during annual stormwater training.
 4. High-priority facilities requiring SWPPPs were reviewed by the Stormwater Program Manager following an EPA inspection in October 2015. An updated list has been included with the MS4 Program Plan and is located in Appendix F. Two locations were previously included with the installation Industrial SWPPP based on an analysis of the activities being conducted. Excerpts for those locations have been included in Appendix F. A schedule has been provided for other locations that requiring a SWPPP. SWPPPs are to be developed prior to the end of PY4 for these additional facilities.
 5. 733d CED/CEIE personnel acknowledged that facility operations can change quickly and be repurposed. An annual review is to be completed of facilities by the SWPPT and updates to the table and SWPPPs made as needed.

3.6.4 MS4 Annual Reporting Requirements

JBLE–Eustis will track activities related to MCM 6 and include the following information in each annual report submitted to VDEQ:

1. A summary report on the development and implementation of the daily operational procedures.
2. A summary report on the development and implementation of the turf and landscape NMPs that includes:
 - a. The total acreage of lands where turf and landscape NMPs are required; and,
 - b. The total acreage of lands where turf and landscape NMPs are being implemented.
3. A summary report on the required training, including a list of training events, the training date, the number of employees that attended training and the objective of the training.

4.0 SPECIAL CONDITIONS

4.1 SC1: TMDL Special Conditions Compliance Other than the Chesapeake Bay TMDL

Section I.B.1 of the JBLE–Eustis MS4 permit (VAR040035) requires the installation to maintain an updated MS4 Program Plan that includes a specific TMDL Action Plan for pollutants allocated to the MS4 in an approved TMDL. On 28 April 2009, the VDEQ State Water Control Board (SWCB) approved TMDLs to address fecal coliform bacteria impairment in the Warwick River (James River) and Skiffes Creek. Both the Warwick and James Rivers impaired segment (waterbody ID# VAT-G11E) and Skiffes Creek impaired segment (waterbody ID# VAT-G11E) are considered Condemned Shellfish Areas that do not support the Virginia Department of Health (VDH) fecal coliform standards for shellfish harvesting. These waterbodies receive runoff from JBLE–Eustis and the TMDLs for these waterbodies include WLA assignments to JBLE–Eustis.

On 30 November 2015, VDEQ notified JBLE–Eustis that, as part of maintaining its MS4 Program Plan, the installation is required to develop Action Plans for the James River, Warwick River, and Skiffes Creeks to address bacteria impairment in those waterbodies. Specifically, the MS4 operator must update the MS4 Program Plan to incorporate approvable TMDL Action Plans that identify the BMPs and other interim milestone activities. Based on the 28 April 2009 SWCB approval date, the TMDL Action Plans for James River, Warwick River and Skiffes Creek must be completed by the end of PY3 (30 June 2016).

JBLE–Eustis is required to implement an approved TMDL Action Plan for bacteria impairment that was developed during PY3. Implementation will begin in PY4. The Fecal Coliform TMDL Action Plan is provided in Appendix H of this Program Plan.

4.2 SC2: TMDL Special Conditions Compliance for the Chesapeake Bay TMDL

In 2010 the EPA established the Chesapeake Bay TMDL to address excess nitrogen, phosphorus, and total suspended solids (pollutants of concern or POCs) in the bay (EPA, 2010). The Chesapeake Bay watershed encompasses over 64,000 square miles across the District of Columbia and large sections of Delaware, Maryland, New York, Pennsylvania, West Virginia, and Virginia. JBLE–Eustis sits within the Chesapeake Bay Watershed.

In the Phase I and Phase II Chesapeake Bay Watershed Implementation Plan (WIP) for the Chesapeake Bay TMDL, the Commonwealth of Virginia committed to a phased approach to reducing nutrients and suspended solids discharging from MS4s. Section I.C of the JBLE–Eustis MS4 Permit No. VAR040035 requires the installation to prepare a Chesapeake Bay TMDL Action Plan that demonstrates future plans to meet the required nutrient and suspended solids reductions. JBLE–Eustis' Chesapeake Bay TMDL Action Plan was submitted for review and approval in PY2 and updated in PY3. The Action Plan presents a discussion of the compliance requirements for JBLE–Eustis and is included in Appendix I of this Program Plan.

The Action Plan is an annual report on the progress made by the installation to discuss its efforts to meet the Chesapeake Bay TMDL pollutant reduction requirements, specifically the Level 2 (L2) scoping run as

specified in the 2010 Phase I WIP (VDEQ, 2010). The Action Plan presents the JBLE–Eustis estimated load contribution, required load reductions, and pollutant reduction credits. The plan also reports progress made toward meeting the 5% pollutant reduction requirement for the first permit cycle. The methodology used to calculate the pollutant loads and credits is based on VDEQ Guidance Memo No. 15-2005 (Guidance Document) (VDEQ, 2015).

The Action Plan was developed and submitted with the annual report for PY2 and revised in PY3. The Action Plan will continue to be implemented in PY4.

5.0 ADDITIONAL MS4 PROGRAM REFERENCE MATERIALS

5.1 Documents Incorporated by Reference

Documents that are identified in Table 5-1 are considered a part of the JBLE–Eustis MS4 Program Plan. These documents provide policy, procedures, and guidance for implementation of BMPs required to meet measurable goals associated with specific MCMs.

Table 5-1. Documents Incorporated by Reference

Document Name	Date	Location
JBLE–Eustis EMPs	Updated Annually	733d CED/CEIE office and network drive
ETL 14-1	7 April 2014	733d CED/CEIE office and network drive
JBLE–Eustis SPCC Plan	July 2015	733d CED/CEIE office and network drive
JBLE–Eustis ICP	January 2016	733d CED/CEIE office and network drive
JBLE-Eustis MS4 Annual Reports	Annual	Appendix C
IDDE Procedure	19 August 2016	Appendix D
Standards and Specifications for Erosion and Sediment Control	23 May 2016	Appendix E
MS4 High Priority Facility Determination and associated SWPPPs	30 June 2016	Appendix F
NMPs (Golf Course, Athletic Fields, and MFH)	13 April 2016 (Pines Golf Course & Athletic Fields)	733d CED/CEIE office and network drive
	23 May 2016 (MFH)	
Fecal Coliform TMDL Action Plan	1 August 2016	Appendix H
Chesapeake Bay TMDL Action Plan	7 April 2016	Appendix I
Training Plan and Records	Updated Annually	733d CED/CEIE office and network drive
SCM Inventory Tracking Spreadsheet	Updated As Needed (no less than annually)	733d CED/CEIE network drive
SCM Inspection Reports	Completed Annually	733d CED/CEIE office and network drive
BEMA/LEMAC/AEM Training Materials	Updated Annually	733d CED/CEIE office, network drive, and ESOHTN website
JBLE–Eustis Environmental Website	Continuously Updated	http://www.jble.af.mil/About-Us/JBLE-Environmental-Information

Table 5-1. Documents Incorporated by Reference (Continued)**5.2 Additional MS4 Program Reference Materials**

Additional reference materials that are available to JBLE–Eustis for implementation of the MS4 Program, but are not considered a part of the MS4 Program Plan include:

1. Virginia Stormwater Management Handbook
2. VESCL and Virginia Erosion and Sediment Control (VESC) Handbook

6.0 REFERENCES

- Air Force Center for Environmental Excellence / Environmental Quality Directorate (AFCEE/EQ). 1997. *Installation Stormwater Program Management Guide: A Reference for Implementing and Managing U.S. Air Force Stormwater Programs*. Brooks Air Force Base (AFB), TX: Headquarters AFCEE/EQ.
- EPA. 2005a. EPA 833-F-00-001, Fact Sheet 1.0 - Stormwater Phase II Final Rule, An Overview. Washington, DC: EPA.
- EPA. 2005b. EPA 833-F-00-002, Fact Sheet 2.0 – Stormwater Phase II Final Rule, Small MS4 Stormwater Program Overview. Washington, DC: EPA.
- EPA. 2010. Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus and Sediment. Washington, DC: EPA.
- EPA. 2012. Stormwater Phase II Final Rule, Fact Sheet 2.1 – Who’s Covered? Designation and Waivers of Regulated Small MS4s. Washington, DC: EPA.
- Headquarters Air Force Civil Engineer Support Agency / Community and Environment Scrutiny Committee (HQ AFCESA/CESC). 2003. Engineering Technical Letter (ETL) 03-1, *Stormwater Construction Standards*. Tyndall AFB, FL: HQ AFCESA.
- JBLE–Eustis. 2013. General Permit for Discharges to Stormwater from Small Municipal Separate Storm Sewer Systems General Permit No. VAR040035 Annual Update. JBLE–Eustis, VA: 733d CED.
- JBLE–Eustis. 2014. JBLE-I 32-101, *Environment Management*. JBLE–Eustis, VA: 733d CED.
- JBLE–Eustis. 2015. *Final Spill Control and Countermeasure Plan*. Prepared by O’Brien & Gere. JBLE–Eustis, VA: 733d CED.
- JBLE–Eustis. 2016a. *Final Integrated Contingency Plan*. Prepared by O’Brien & Gere. JBLE–Eustis, VA: 733d CED.
- JBLE–Eustis. 2016b. *Stormwater Pollution Prevention Plan – Final*. Originally prepared by CURES, LLC for JBLE–Eustis, Virginia and U.S. Army Corps of Engineers.
- Secretary of the Air Force. 1994. AFDPO 32-70, *Environmental Quality*. Washington, DC: AFDPO.
- Secretary of the Air Force. 2003. AFI 32-7041, *Water Quality Compliance*. Washington, DC: AFDPO.
- Secretary of the Air Force. 2009. AFI 32-1053, *Integrated Pest Management Program*. Washington, DC: AFDPO.
- Secretary of the Air Force. 2010. AFI 10-2501, *Air Force Emergency Management (EM) Program Planning Operations*. Washington, DC: AFDPO.
- Secretary of the Air Force. 2014. ETL 14-1, Construction and Operation and Maintenance Guidance for Storm Water Systems. Washington, DC: AFDPO.

Under Secretary of Defense for Acquisition and Technology. 1998. DoD Instruction 4715.4, *Pollution Prevention*, Administrative Reissuance Incorporating Change 1, July 6, 1998 (Original publication: 18 June 1996). Washington, DC: DoD.

U.S. Census. 2000. TIGER Shapefiles, Urban Area Census 2000. Accessed 12 October 2015 from <https://www.census.gov/geo/maps-data/data/tiger-line.html>.

VDEQ. 2010. *Chesapeake Bay TMDL Phase I Watershed Implementation Plan*. Richmond, VA: VDEQ.

VDEQ. 2013. *MS4 General Permit No. VAR040035*. Virginia Beach, VA: VDEQ, Tidewater Regional Office.

VDEQ. 2015. Guidance Memo No. 15-2005, *Chesapeake Bay TMDL Action Plan Guidance*. Richmond, VA: VDEQ.

Virginia Code Commission. 2013. *State Water Control Law*. § 62.1-44.15:51-66. Richmond, VA: Virginia Code Commission.

APPENDIX A
MS4 General Permit No. VAR040035

APPENDIX B
Overview Maps

APPENDIX C
MS4 Program Annual Reports

PY1 Annual Report
(1 July 2013 – 30 June 2014)

PY2 Annual Report
(1 July 2014 – 30 June 2015)

**PY3 Annual Report
(1 July 2015 – 30 June 2016)**

APPENDIX D
IDDE Procedure Manual

Provided electronically on CD

APPENDIX E
Standards and Specifications for Erosion and Sediment Control

Provided electronically on CD

APPENDIX F
High Priority Facility Stormwater Pollution Prevention Plans

APPENDIX G
Nutrient Management Plans
Provided electronically on CD

APPENDIX H
Fecal Coliform TMDL Action Plan

Provided electronically on CD

APPENDIX I
Chesapeake Bay TMDL Action Plan

Provided electronically on CD