



JBLE- Eustis, Virginia

VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM (VPDES) SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4) PERMIT

ANNUAL REPORT

For

**Virginia General Permit for Small Municipal Separate Storm Sewer
Systems VPDES Permit #VAR040035**

30 September 2023

733d Civil Engineer Squadron
Environmental Element CEIE
1407 Washington Blvd
Fort Eustis, VA



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List of Acronyms and Abbreviations

733 CES/CEIE	733 Civil Engineer Squadron/Environmental Element
AAFES	Army and Air Force Exchange Service
AEM	Advanced Environmental Management
BMP	Best Management Practice
CGP	Construction General Permit
EMAC	Environmental Management Awareness and Competency
EMP	Environmental Management Procedure
EMS	Environmental Management System
ESC	Erosion and Sediment Control
FOG	Fats, Oil and Grease
FSE	Food Service Establishment
FSS	Force Support Squadron
GIS	Geographic Information System
HRPDC	Hampton Roads Planning District Committee
IDDE	Illicit Discharge Detection and Elimination
ISO	International Organization of Standardization
JBLE–Eustis	Joint Base Langley Eustis – Eustis
MCM	Minimum Control Measure
MFH	Military Family Housing
MS4	Municipal Separate Storm Sewer System
NMP	Nutrient Management Plan
O&M	Operation and Maintenance
POC	Pollutants of Concern
PY	Permit Year
RFQ	Request for Quote
RLD	Responsible Land Disturber
SC	Special Condition
SWCB	State Water Control Board
SWM	Stormwater Management Plan
SWPPP	Stormwater Pollution Prevention Plan
TA	Training Area
TEACH	The Environmental Awareness Course Hub
TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
VAC	Virginia Administrative Code
VDEQ	Virginia Department of Environmental Quality
VESCL	Virginia Erosion and Sediment Control Law
VESCP	Virginia Erosion and Sediment Control Program
WOAC	Warrant Officers Advanced Course

Municipal Separate Storm Sewer System Registration Statement

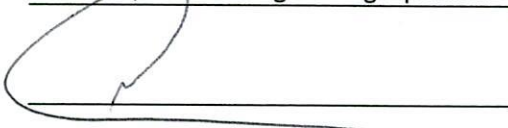
As required by Part III.K.2. of General Permit No. VAR040035, all reports required by state permits and other information requested by the board shall be signed by a principal executive office or ranking elected official as described in Part III.K.1.c., or a duly authorized representative.

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: Miguel L. Capellan Area Code and Telephone No.: (757) 878-3642

Official Title: Director, 733 Civil Engineering Squadron

Signature:  Date Signed: 9/26/23

Permit Number: VAR040035 MS4 Name: JBLE–Eustis

Section 1: Introduction

Joint Base Langley-Eustis C Fort Eustis (JBLE–Eustis), Virginia, holds a General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4), General Permit No. VAR040035, issued by the Commonwealth of Virginia Department of Environmental Quality (VDEQ) on 01 November 2018. In accordance with provisions outlined in this MS4 permit, JBLE–Eustis has continued implementing their comprehensive stormwater management program designed to prevent or reduce the discharge of sediment and other pollutants into the base's stormwater conveyance system. General Permit No. VAR040035 Part I.D.2.e. requires JBLE–Eustis to evaluate the MS4 program on an annual basis to assess program compliance, the appropriateness of the identified Best Management Practices (BMP), and progress towards achieving the identified measurable goals.

This report describes the progress and status of the JBLE–Eustis MS4 Program during Permit Year (PY) 5 from 01 July 2022 to 30 June 2023.

The remainder of this annual report is presented as follows:

- Section 2 – Provides an overview of the MS4 including its physical characteristics
- Section 3 – Presents a listing of the base's stormwater program guidance
- Section 4 – Discusses the minimum control measures (MCM) JBLE–Eustis is implementing under the MS4 permit
- Section 5 – Reviews the special conditions (SC) JBLE–Eustis is implementing under this MS4 permit

These sections are supported by the following attachments:

- Appendix A – PY5 Outreach
- Appendix B – Illicit Discharge Investigation Details
- Appendix C – Chesapeake Bay Total Maximum Daily Load (TMDL) Action Plan Implementation Status Memo
- Appendix D – Bacteria TMDL Action Plan Implementation Status Memo

Section 2: Storm Sewer System Information

Permit Holder

Commanding Officer, 633 Air Base Wing
JBLE–Eustis
Fort Eustis, Virginia

Facility Information

JBLE–Eustis
Fort Eustis, Virginia
MS4 General Permit No. VAR040035

Mailing Address

Director, 733 Civil Engineering Squadron
1407 Washington Blvd.
Fort Eustis, VA 23604

Population Served

The total population attached to the base is approximately 22,090, comprised of approximately 7,160 military personnel and 11,428 dependents, as well as approximately 3,500 civilian non-residents who commute to the base daily.

MS4 Service Area

JBLE–Eustis is located adjacent to the City of Newport News, Virginia which is part of the Norfolk, Hampton, and Newport News metropolitan area. The base 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 base include Jail Creek, Morrison's Creek, Island Creek, Bailey Creek, and Eustis Lake. The base 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 base, while the southern portion of the peninsula remains largely undeveloped. A golf course and an airfield are located near the center of the base.

The base does not rely on another government entity to satisfy MS4 permit obligations. In addition, no program approvals are required as specified in Part I.C.5. of the MS4 permit.

MS4 Conveyance System

JBLE–Eustis' stormwater conveyance system consists of sheet flow areas, swales, ditches, and pipes. The base has mapped the stormwater system as well as the structural Best management Practices (BMP) using Geographic Information System (GIS).

Part I.E.3.a(1) of MS4 Permit No. VAR040035 requires that JBLE–Eustis maintain a stormwater drainage system 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 hydrologic unit code. No new outfalls were identified during the MS4 stormwater drainage system mapping update by 733 Civil Engineer Squadron/Environmental Element (733 CES/CEIE) staff. In addition to the installation map, a stormwater information table is also utilized and regularly updated as needed.

Section 3: Water Quality Programs and Guidance

This section discusses the local and commonwealth water quality programs that are implemented by JBLE–Eustis or the commonwealth, respectively, within the base boundaries.

Local Programs and Guidance

JBLE–Eustis has developed and implements local programs and guidance in order to comply with the MS4 permit. These programs and guidance documents are listed below.

- JBLE–Eustis Environmental Policy Statement (7 February 2022)
- JBLE–Eustis Environmental Management Procedures (EMP) (updated annually)
- JBLE–Eustis Illicit Discharge Detection and Elimination Procedures (2022)
- JBLE–Eustis Structural BMP Inventory, Annual Inspection and Management Plan (Draft June 2023)
- JBLE–Eustis MS4 Program Plan (updated annually)

Commonwealth Programs

In addition to the local programs that the base is implementing, there are commonwealth programs established by Virginia Department of Environmental Quality (VDEQ), which are also being implemented. These programs are listed below.

- **Erosion and Sedimentation Program** – Because JBLE–Eustis is a federal facility; the base utilizes the Virginia Erosion and Sediment Control Regulations (9 Virginia Administrative Code [VAC] 25.840). The base utilizes EMP 4.4.6.2.2, Stormwater Management, to outline roles and responsibilities, as well as procedures related to erosion and sediment control.
- **Stormwater Permitting Program** – The VDEQ Water Division implements the stormwater permitting program to develop, plan, and implement commonwealth-wide stormwater control policies, strategies, and rules designed to protect the commonwealth surface waters from the impacts of stormwater pollutants and runoff.

Section 4: Minimum Control Measures

MCM 1: Public Education and Outreach

JBLE–Eustis has developed and implements a public education and outreach program with the objective to comply with Commonwealth and local requirements, to educate the base community regarding the impacts of stormwater discharges on the receiving waters, as well as measures that the community can take to reduce the introduction of pollutants to the stormwater drainage system.

JBLE–Eustis utilizes a combination of relevant messages and outreach materials to educate target audiences for each of the three high priority water quality issues, as well as other stormwater topics of interest, to the public using a minimum of two of the strategies listed on Part I.E.1.d, Table 1 - Strategies for Public Education and Outreach. Additional details are included in the JBLE–Eustis MS4 Program Plan. Based on an assessment of the program achievements for MCM 1 outlined in the table below, the base Public Education and Outreach Program is considered to be effective with achieving permit compliance.

MCM 1: Public Education and Outreach		
Permit Reference	Required Action(s)	PY5 Measurable Goal(s)
Part I.E.1.g (1)	Identify three high priority water quality issues	<ol style="list-style-type: none"> 1. Curb illegal fats, oils, and grease (FOG) disposal at food service establishments (FSE), including food trucks, to the stormwater drainage system 2. Curb illegal dumping within military family housing (MFH) and the dormitories. 3. Responsible pet ownership/picking up pet waste.
Part I.E.1.g (2)	A list of the strategies used to communicate each high-priority stormwater issue.	<ol style="list-style-type: none"> 1. Traditional written materials: Handouts during public events. 2. Alternative materials: Pet waste bags/holders 3. Signage: FOG Management in FSEs. 4. Social Media Campaigns (See Appendix A for more information) 5. Personnel training opportunities

JBLE – Eustis High Priority Water Quality Issues	
<p>High Priority Issue 1: Curb illegal fats, oils, and grease disposal at FSE, including food trucks, to the stormwater drainage system.</p> <p><i>Target Audience:</i> JBLE– Eustis FSE workers, food truck vendors.</p> <p><i>Goal:</i> Provide information regarding proper washing procedures to target audience.</p>	<ol style="list-style-type: none"> 1. The FSE Inventory identifies which FSEs had trained workers in FOG management, and which had not. It also identified the procedures Army Air Force Exchange Service (AAFES) has in place for food trucks doing business on the base. 2. FSEs must have two workers trained in FOG management using the training provided by Hampton Roads Planning District Committee (HRPDC) at www.hrfog.com. (Part I E.1.d Table 1 – Training Materials) 3. Food truck workers may take either the HRPDC FOG training or must have ServSafe training before entering into a contract with AAFES. 4. Signage is posted in kitchens regarding FOG BMPs and grease management. (Part I E.1.d Table 1 – Signage) 5. Recommendations for FOG management have been provided to entities performing food preparation related activities (Part I E.1.d Table 1 - Signage). 6. JBLE-Eustis’ Environmental Facebook page published a post informing the public on storm drain awareness and another post to properly dispose of FOG waste and not to pour it directly into kitchen sinks.
<p>High Priority Issue 2: Curb illegal dumping within MFH and the dormitories.</p> <p><i>Target Audience:</i> JBLE– Eustis MFH residents and dormitory residents.</p> <p><i>Goal:</i> Provide information regarding proper disposal procedures to target audience</p>	<p>Stormwater pollution prevention training was provided to base personnel (active duty, civilian, and contractor). Training activities include Environmental Management Awareness and Competency (EMAC) and Advanced Environmental Management (AEM).</p> <p>The EMAC course is provided in an online format through The Environmental Awareness Course Hub (TEACH) website (https://usaf.learningbuilder.com) and is required for all base personnel within 30 days of arrival and annually thereafter.</p> <p>Both the initial training and the annual the AEM refresher training is provided virtually via TEACH. 733 CES/EE also provided environmental awareness training, including stormwater pollution prevention training, for the US Army Transportation School, Advanced Marine Warrant Officers Advanced Course (WOAC).</p>
<p>High Priority Issue 3: Responsible Pet Ownership/Picking up Pet Waste</p> <p><i>Target Audience:</i> JBLE–Eustis resident primarily at Family Housing, and at the outdoor recreation area. MFH residents.</p> <p><i>Goal:</i> Provide information regarding responsible pet ownership and picking up after dogs.</p>	<p>733 CES/CEIE developed educational materials related to responsible pet ownership and picking up after dogs and distributed them at events/locations residents visited (e.g., Earth Week/Day, dog parks, MFH offices, Halloween events). Handouts provide a means for residents to contact the Stormwater Program Manager with any questions or concerns. Additional education materials include pet waste bags/ bag holders which are provided at many areas on the installation for pet owners to utilize. Education and outreach information is also conveyed through the base’s website and Facebook page. https://www.jble.af.mil/Units/Army/EustisEnvironmental https://www.facebook.com/forteustisenvironment</p> <p>Residents must also submit an application, register pets, pay a registration fee, and sign a receipt acknowledging rules of the community dog park, which require owners to clean-up after their pets. Signs are posted inside the dog park regarding pet waste management, and a large trash can is provided for pet waste disposal.</p> <p>733 CES/CEIE staff also conducted an activity at the General Stanford Elementary School to educate students about responsible pet waste management. (See Table 1)</p>

MCM 2: Public Involvement/Participation

The base has cultivated a public involvement and participation program with the objective to provide a place for the public to report potential illicit discharges, improper disposal, or spills to the MS4, complaints regarding land disturbing activities, or other potential stormwater pollution concerns, and provide input on JBLE-Eustis’ MS4 program plan. JBLE–Eustis has taken steps to implement the program BMPs as specified in Part I.E.2 of the MS4 permit. Based on an assessment of the program achievements for MCM 2 outlined in the table below, the base Public Involvement/Participation Program is considered to be effective with achieving permit compliance.

MCM 2: Public Involvement/Participation		
Permit Reference	Required Action(s)	PY5 Measurable Goal(s)
Part I.E.2.f (1)	A summary of any public input on the MS4 program received (including stormwater complaints) and how the permittee responded.	JBLE–Eustis posted documents related to the MS4 Program on the JBLE–Eustis Environmental website (https://www.jble.af.mil/Units/Army/Eustis-Enviromental/) for public review and comment. There were no comments received on the MS4 Program in PY5. Contact information for 733 CES/CEIE staff is also posted to the website if there are further comments or questions from the public.
Part I.E.2.f (2)	Maintain a website with the MS4 Program and stormwater pollution prevention.	The 733 CES/CEIE maintains a website that: <ol style="list-style-type: none"> 1. Provides information to the public, including the MS4 Permit, Program Plan, and Annual Reports. 2. Includes a mechanism for the public to report potential illicit discharges, improper disposal, or spills to the MS4, complaints regarding land disturbing activities, or other potential stormwater pollution concerns. 3. Includes methods for how the public can provide input on the permittee's MS4 program plan. The website is located at: https://www.jble.af.mil/Units/Army/Eustis-Enviromental/
Part I.E.2.f (3)	A description of the public involvement activities implemented by the permittee.	See Table 1 on the next page for details.
Part I.E.2.f (4)	A report of the metric as defined for each activity and an evaluation as to whether or not the activity is beneficial to improving water quality.	See Table 1 on the next page for details.
Part I.E.2.f (5)	The name of other MS4 permittees with whom the permittee collaborated in the public involvement opportunities.	JBLE-Eustis did not collaborate with other MS4 permittees during PY5.

Table 1: JBLE–Eustis Public Involvement Opportunities PY5

Date	Event	Audience/ Participants	Number Attending	Materials/Goodies Distributed	Location	Metric	Other	Outreach Type	Improves Water Quality?
28-Oct	Trunk or Treat	Military families, Civilians	250	Reusable bottles, reusable lunch boxes, reusable straws, reusable storage bags, pet waste holders, brochures	128th Aviation Brigade School House	Have meaningful communications with >100 civilians, soldiers, and families about pollution prevention	Messages: Scoop the Poop, pollution prevention, FOG	Educational	Yes - meaningful conversations about pollution prevention can alter water polluting behaviors
7-Feb	N/A	Active-Duty personnel, Military families	30	Pet waste doggie bags	Military Family Housing Office	Have meaningful communications with >100 civilians, soldiers, and families about pollution prevention	Display and giveaway at popular area for residents	Educational	Yes - prevents stormwater from carrying bacteria into the river
29-Mar	Environmental Restoration Advisory Board Solicitation	Anyone in the military or civilian community	N/A	N/A	Fort Eustis launches broad outreach effort in support of environmental cleanup operations > Joint Base Langley-Eustis > Article Display (af.mil)	Have meaningful communications with >100 civilians, soldiers, and families about pollution prevention	Online solicitation to assess interest in establishing a Restoration Advisory Board (RAB)	Restoration	Yes - Provides community ownership for environmental restoration projects
20-Apr	Clean the Bay Day	Active-Duty Personnel, Civilians	25	Reusable bottles, reusable lunch boxes, reusable straws, reusable storage bags, pet waste holders, brochures	Post-wide, around dumpster areas, BMPs, along James River	At least 20 volunteers can participate in a clean-up event	Volunteers picked up 440 pounds of trash	Restoration	Yes - prevents stormwater from carrying trash and debris into the river
21-Apr	Earth Day Social	Military families, Civilians	154	Pet waste holders, FOG drain catch, coloring books, FOG chip clips	Military Family Housing	Have meaningful communications with >100 civilians, soldiers, and families about pollution prevention	Informational Displays, crafts, plantings	Educational	Yes - meaningful conversations about pollution prevention can alter water polluting behaviors
18-May	Third Grade School Presentations	Third graders and teachers	91	Pencils, stickers	General Stanford Elementary	Have meaningful communications with >100 civilians, soldiers, and families about pollution prevention	Conversations: Scoop the Poop, pollution prevention, FOG, stormwater	Educational	Yes - meaningful conversations about pollution prevention can alter water polluting behaviors

MCM 3: Illicit Discharge Detection and Elimination

The base has developed, implements, and enforces a program to detect and eliminate illicit discharges into the MS4. The JBLE-Eustis Illicit Discharge Detection and Elimination Procedures contains the most up-to-date requirements and is posted on the website. JBLE–Eustis has taken steps to implement the IDDE program BMPs as specified in Part I.E.3 of the MS4 permit. Based on an assessment of the program achievements for MCM 3 outlined in the table below, the base IDDE Program is considered to be effective with achieving permit compliance.

MCM 3: Illicit Discharge Detection and Elimination		
Permit Reference	Required Action(s)	PY5 Measurable Goal(s)
Part I.E.3.e (1)	Confirmation statement that the MS4 map and information table have been updated to reflect any changes to the MS4 occurring on or before 30 June of the reporting year by 1 October.	JBLE-Eustis has updated the MS4 map to reflect all changes prior to the end of the PY (30 June 2023) as required by Part I.E.3.a (4).
Part I.E.3.e (2)	The total number of outfalls screened during the reporting period as part of the dry weather screening program.	<ol style="list-style-type: none"> 1. Fifty (50) of the 83 non-industrial outfalls were inspected during PY5. Details regarding the inspection findings are included on the outfall inspection forms and in the Dry Weather Outfall Monitoring Report. 2. Copies of the outfall inspection records are maintained by 733 CES/CEIE and will be made available upon request. 3. JBLE-Eustis IDDE Procedures were evaluated to determine if updates to the MS4 outfalls were needed.
Part I.E.3.e (3)	A list of illicit discharges to the MS4 including spills reaching the MS4.	<ol style="list-style-type: none"> 1. See Table 2 on the next page for additional details. 2. JBLE–Eustis personnel utilized the Eustis IDDE Procedures to investigate potential illicit discharges. 3. Reports of all spills or unauthorized releases, whether it enters the MS4 or not, in accordance with JBLE–Eustis EMP 4.4.7, Spill Prevention and Response, as well as a log the incident in the spill database are maintained by the 733 CES/CEIE Spill Program Manager. Detailed descriptions of each of the illicit discharge investigations are included in Attachment 2.

Table 2: Illicit Discharges to the MS4 on JBLE–Eustis PY5

Date of Spill	Source	Discovery Method	Resolution Method	Follow-up Activities	Date of Closure
2/07/2023	2 gallons of vegetable oil	Pile driver accident.	The oil released into the James River was contained with oil absorbent booms and oil absorbent pads.	The material was disposed of in a sealed 55-gallon drum.	Information entered in Air Force spill database, EASIER, on 2/07 and then updated on 2/13.
3/19/2023	21 gallons of sewage on ground surface with an estimated 4 gallons entering a nearby storm drain	FOG blockage of a gravity sewer line caused sewage to backup into a MFH resident’s home and onto the street outside the home.	The ground surface sewage was recovered with a vacuum truck. Investigation of the associated outfall indicated that the sewage entering the storm drain had no impact on surface water bodies.	Increase FOG awareness through outreach campaigns.	Information entered in Air Force spill database, EASIER, on 3/20 and then updated on 3/27.
8/04/23	Estimated 3 gallons of diesel fuel during offloading	Observed during fueling efforts.	The oil on the ground was contained using a spill kit on site	None.	Information entered in Air Force spill database, EASIER, on 8/05 and then later updated the same day.

MCM 4: Construction Site Stormwater Runoff Control

The base complies with the Virginia Stormwater Management Program in order to maintain compliance with the Construction Site Runoff Controls. These controls are designed to assist with the development, implementation and enforcement of an Erosion and Sediment Control (ESC) Program to reduce the pollutants related to land-disturbing activities including clearing, grading, or excavation that results in a land disturbance equal to or greater than 10,000 acres. The base has taken steps to implement the program BMPs as specified in Part I.E.4 of the MS4 permit. Based on an assessment of the program achievements for MCM 4 outlined in the table below, the base is considered to be effective with achieving permit compliance.

MCM 4: Construction Site Stormwater Runoff Control		
Permit Reference	Required Action(s)	Measurable Goal(s)
Part I.E.4.d (2)	Total number of inspections conducted.	The total number of internal Construction General Permit (CGP) inspections conducted in PY5 is 81.
Part I.E.4.d (3)	The total number and type of enforcement actions implemented and the type of enforcement actions.	<ol style="list-style-type: none"> 1. A VDEQ inspection of the Aviation Complex was performed on 30 March 23 which resulted a warning letter to the contractor to update the narrative of the on-site Stormwater Pollution Prevention Plan (SWPPP) to include a description of the nature of the construction activity; a description of impaired waters, TMDL, pollutants of concern, exceptional water and any additional control measures, as well as identification of Balfour Beatty phase 3 work. The warning letter also required the contractor to include the following in the SWPPP: the site plan; ESC Plan; Stormwater Management Plan (SWM) Plan; site specific SWPPP; an up to date Responsible Land Disturber (RLD) certification; amendments to design, construction, operation, and maintenance; SWPPP inspections and site changes; record of grading activities; documentation of controls being changed or modified; stabilization activities; and documentation of prohibited discharges. 2. The inspection also noted that ESC controls were from Phase 1 work were still in place while Phase 3 work was underway. Additionally, it was noted that the gravel filters, sand filter strips, and concrete washout were not being adequately maintained. 3. Following the inspection, the contractor responded immediately. DEQ re-inspected and approved the site and updates to the SWPPP on 11 May 2023.

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

The base has developed, implements, and enforces a program to address stormwater runoff related to new development and redevelopment projects throughout the service area, including a combination of structural and non-structural BMPs. In addition, JBLE–Eustis is required to ensure that the structural BMPs are functional through long term operation and maintenance (O&M) practices. The base has taken steps to implement the program BMPs as specified in Part I.E.5 of the MS4 permit. Based on an assessment of the program achievements for MCM 5 outlined in the table below, the base is considered to be effective with achieving permit compliance.

MCM 5: Post-Construction Stormwater Management in New Development and Development on Prior Developed Lands		
Permit Reference	Required Action(s)	PY5 Measurable Goal(s)
Part I.E.5.i (2)	Total number of inspections conducted on stormwater management facilities owned or operated by JBLE-Eustis.	<ol style="list-style-type: none"> 1. Qualified personnel inventoried and completed annual inspection of 122 BMPs on base in comparison to the 114 BMPs inspected in previous permit years. 2. The additional BMPs were added to the inventory following new construction, plan reviews, and field investigation. The eight (8) additional BMPs inspected in PY5 included: <ul style="list-style-type: none"> • Permeable Pavement (WR_PP_126) near Bldg. 2708 – New construction • Bioretention Basin (WR_BB_127) near Bldg. 2708 – New construction • Sand filters (WR_FP_128, WR_FP_129, and WR_FP_130) near Bldg. 2708 – New construction • Bioretention Basin (JR_BB_134) off Harrison Rd. – Plan review • Bioretention Basin (JR_BB_135) behind Bldg. 2025 – Plan review • Vegetated Swale (EL_VS_137) west of Bldg. 855 – Field investigation

MCM 5: Post-Construction Stormwater Management in New Development and Development on Prior Developed Lands (Continued)		
Permit Reference	Required Action(s)	PY5 Measurable Goal(s)
Part I.E.5.i (3)	A description of the significant maintenance, repair, or retrofit activities performed on the stormwater management facilities.	<p>A small list summarizing BMP maintenance completed in PY5 across the installation is provided below.</p> <ul style="list-style-type: none"> • Removing undesirable vegetation (e.g., trees, phragmites, cattails) • Removing trash • Unclogging inlet and outlet devices/pipes • Re-establishing grass cover • Stabilizing existing erosion • Mowing grass • Adding mulch and removing grass • Correcting displaced rip rap • Remove sediment and debris at inlets and filter strip • Remove woody vegetation from within 10’ of structures and the toes of embankments • Reseed bare areas on embankment • Remove excess sediment causing major clog in outlet pipe and repair erosion around outlet
Part I.E.5.i (4)	Confirmation statement that all BMP data was entered into the Virginia Construction Stormwater General Permit database when a CGP was required.	<ol style="list-style-type: none"> 1. On 22 July 2022, base personnel reached out to VDEQ to obtain permission to utilize the CGP Database. At that time, personnel were made aware by VDEQ that only VDEQ may enter information into this database because VDEQ is the VSMP Authority for the base. 2. Personnel can confirm that all appropriate information relating to the CGP has been provided throughout PY5 to VDEQ for CGP database submission.
Part I.E.5.i (5)	Provide confirmation of VDEQ BMP Warehouse Submission.	The electronically reported BMPs (i.e., structural BMPs and other non-structural BMPs [street sweeping]) were submitted to the VDEQ for inclusion in the BMP Warehouse in accordance with Part I.E.5.g in September 2023.

MCM 6: Pollution Prevention / Good Housekeeping for Municipal Operations

The base has developed and implements a program to address pollution prevention and good housekeeping procedures, including a training program for base personnel and the JBLE–Eustis community. JBLE–Eustis has taken steps to implement the program BMPs as specified in Part I.E.6 of the MS4 permit. Based on an assessment of the program achievements for MCM 6 outlined in the table below, the base is considered to be effective with achieving permit compliance.

Stormwater pollution prevention training was provided to base personnel (i.e., active duty, civilian, and contractor). Training activities include EMAC and AEM training.

1. The EMAC course is provided in an online format through the TEACH website (<https://usaf.learningbuilder.com>) and is required for all base personnel within 30 days of arrival and annually thereafter.
2. The initial AEM training and annual refresher AEM training is provided online via TEACH.

The Environmental Element provided environmental awareness training, including stormwater pollution prevention training, for the US Army Transportation School, Advanced Marine WOAC. Training was made available via the TEACH website during PY5.

Newcomer’s orientation is given to enlisted and newly assigned officers and contained sections pertaining to Environmental Management System (EMS), stormwater, and associated required trainings.

Additional relevant environmental courses were available to personnel on TEACH. These courses cover the following environmental topics: water; wastewater; spill response; and petroleum, oils and lubricant management.

MCM 6: Pollution Prevention / Good Housekeeping for Municipal Operations		
Permit Reference	Required Action(s)	PY5 Measurable Goal(s)
Part 1.E.6.q (1)	A summary of any operational procedures developed or modified: Implementation of EMS and Implementation of Environmental Management Procedures (EMP).	<ol style="list-style-type: none"> 1. JBLE–Eustis utilizes an EMS that conforms to International Organization of Standardization (ISO) 14001:2004, to manage environmental program requirements. 2. All base environmental and management requirements are codified in JBLE–Eustis EMP. 3. EMPs have been developed and are used to implement the Environmental Program. These EMPs are reviewed and updated (as required) on an annual basis. EMPs that are related to the Stormwater Management Program include: <ol style="list-style-type: none"> a. EMP 4.4.2 Environmental Awareness & Competency Training b. EMP 4.4.6.2 Wastewater-Stormwater Management c. EMP 4.4.6.5 Pollution Prevention d. EMP 4.4.6.6 Installation Hazardous Materials Program – IHMP e. EMP 4.4.6.7 Solid Waste and Recycling Management f. EMP 4.4.6.12 Integrated Pest Management g. EMP 4.4.6.14 Storage Tank Management – AST and UST h. EMP 4.4.6.16 Contracting JBLE-Eustis Environmental Special Conditions i. EMP 4.4.7 Spill Prevention and Response j. EMP 4.5.2 Activity Inspections 4. EMPs are posted on the JBLE–Eustis Environmental website (https://www.jble.af.mil/About-Us/Units/Army/Eustis-Enviromental/EMPs/).
Part 1.E.6.q (2)	A summary of any new SWPPPs developed in accordance Part I.E.6.c during the reporting period.	High priority non-industrial facilities included in the SWPPP include the Pines Golf Course Maintenance Facility, AAFES Gas Station, and the AAFES Car Wash. SWPPPs were updated in the last permit year. No new SWPPPs were developed and no existing high priority SWPPPs were updated during PY5. SWPPPs will be reviewed and updated as necessary by the end of calendar year 2023 as per Permit Section Part 1.E.6.e of the Permit.
Part 1.E.6.q (3)	A summary of any SWPPPs modified or the rationale of any delisted high priority sites.	No SWPPPs were delisted; the high priority SWPPPs are in compliance with the permit and the goals of the JBLE–Eustis MS4 Program.

CM 6: Pollution Prevention / Good Housekeeping for Municipal Operations		
Permit Reference	Required Action(s)	PY5 Measurable Goal(s)
Part 1.E.6.q (4)	A summary of any new Nutrient Management Plans (NMP) to include: Location and total acreage, date of the approved NMP.	No new NMPs were developed during PY5.
Part 1.E.6.q (5)	A list of the training events conducted, including the following information: (a) The date of the training event; (b) The number of employees who attended the training event; and (c) The objective of the training event.	See Table 3 for details related to training events.

Table 3: PY5 Training JBLE – Eustis

Training Type	Presenter	Date(s) of Event	Number of Participants	Environmental Area Covered
Newcomers Briefing	Rob Gucwa	5-Jul-22	13	EMS, Training, CR & SW
Newcomers Briefing	Joanna Bateman	19-Jul-22	48	EMS, Training, CR & SW
Newcomers Briefing		Jul (Virtual Training)	36	EMS, Training, CR & SW
Newcomers Briefing	Ken Dunn	2-Aug-22	21	EMS, Training, CR & SW
Newcomers Briefing	Tim Christensen	16-Aug-22	42	EMS, Training, CR & SW
Newcomers Briefing	Ken Dunn	30-Aug-22	39	EMS, Training, CR & SW
Newcomers Briefing		Aug (Virtual Training)	60	EMS, Training, CR & SW
Newcomers Briefing	Suzanne Dyba	13-Sep-22	36	EMS, Training, CR & SW

Newcomers Briefing	Joanna Bateman	27-Sep-22	24	EMS, Training, CR & SW
Newcomers Briefing	Ken Dunn	11-Oct-22	14	EMS, Training, CR & SW
Newcomers Briefing	Joanna Bateman	25-Oct-22	46	EMS, Training, CR & SW
Newcomers Briefing	Don Calder	8-Nov-22	11	EMS, Training, CR & SW
Newcomers Briefing	Rob Gucwa	22-Nov-22	44	EMS, Training, CR & SW
832nd Safety Standdown Training	Scott Moler	22-Nov-22	100	Hazmat, Hazwaste, Env Training Requirements
Newcomers Briefing	Joanna Bateman	6-Dec-22	42	EMS, Training, CR & SW
Newcomers Briefing	Rob Gucwa	10-Jan-23	44	EMS, Training, CR & SW
Newcomers Briefing	Tim Christensen	24-Jan-23	43	EMS, Training, CR & SW
Newcomers Briefing	Chris Mcdaid	14-Feb-23	62	EMS, Training, CR & SW
Newcomers Briefing	James Hayes	28-Feb-23	35	EMS, Training, CR & SW
Newcomers Briefing	Suzanne Dyba	14-Mar-23	42	EMS, Training, CR & SW
Newcomers Briefing	Rob Gucwa	28-Mar-23	26	EMS, Training, CR & SW
Newcomers Brief	Carr	11-Apr-23	22	EMS, Training, CR & SW
Earth Day Events	Argarin	18-Apr-23	14	Outreach
Earth Day Events	Argarin	19-Apr-23	24	Outreach
Earth Day Events	Argarin	20-Apr-23	20	Outreach
Earth Day Events	Argarin	21-Apr-23	80	Outreach
Newcomers Brief	Carr	25-Apr-23	39	EMS, Training, CR & SW
Newcomers Brief	McDaid	9-May-23	18	EMS, Training, CR & SW
Newcomers Brief	Hayes	23-May-23	27	EMS, Training, CR & SW

Newcomers Brief	Dyba	6-Jun-23	25	EMS, Training, CR & SW
Newcomers Brief	Carr	27-Jun-23	42	EMS, Training, CR & SW
EMAC	Virtual	7/1/22-6/30/23	1676	Good Housekeeping, Pollution Prevention, IDDE
IDDE Specific Training	Virtual	7/1/22-6/30/24	49	Pollution Prevention/IDDE
Good Housekeeping Training	Virtual	7/1/22-6/30/25	67	Good Housekeeping, Pollution Prevention, IDDE
AEM Initial/Refresher	Virtual	7/1/22-6/30/26	179	EMS, Training, CR & SW

Section 5: Special Conditions

SC1: TMDL Special Conditions Compliance for the Chesapeake Bay TMDL

JBLE–Eustis’ Phase II Chesapeake Bay TMDL Action Plan was developed and submitted November 2019. The Action Plan presented a discussion of the compliance requirements for JBLE–Eustis.

The Action Plan presents the JBLE–Eustis estimated load contribution, required load reductions and pollutant reduction credits. The plan also reported progress made toward meeting the 40% cumulative pollutant reduction requirement for the first and second MS4 permit cycles.

The Chesapeake Bay TMDL Action Plan Implementation Status Memo summarizes the actions taken during PY5 and is included as Appendix C. Implementation will continue in the next permit year under the new permit.

SC2: TMDL Special Conditions Compliance other than the Chesapeake Bay TMDL

Part II.B. of the JBLE–Eustis MS4 permit, Permit No. VAR040035, requires the base to maintain an updated MS4 Program Plan that includes a specific TMDL Action Plan for pollutants allocated to the MS4 in an approved TMDL.

As part of maintaining its MS4 Program Plan, JBLE–Eustis has developed the Bacteria TMDL Action Plan to address bacteria impairment in those water bodies. Implementation continued in PY5.

The Bacteria TMDL Action Plan Implementation Status Memo summarizes the actions taken during PY5 and is included as Appendix D. Implementation will continue in the next permit year under the new permit.

Appendix A:
JBLE–Eustis PY5 Outreach

JBLE-Eustis FY23 Social Media Outreach

Social Media Topic (Facebook Posts)	Posting Date	Reach	Reactions/ Impressions
A Clog-Free Season	22-Nov-22	44	60
Bailey Creek Restoration	9-Dec-22	40	58
Don't Pour Grease Down the Drain	15-Feb-23	21	34
VPPSA Household Chemical Collections	1-Mar-23	32	47
Environmental Restoration Advisory Board Solicitation	30-Mar-23	22	41
Sign up for Earth Week Events	30-Mar-23	32	41
Earth Week Photos	23-May-23	N/A	N/A
Environmental Restoration Advisory Board Solicitation	25-May-23	19	25
Pick up after your pet	6-Jun-23	22	29
Outdoor Things to Do to help the Environment - ASkHrGreen.Org	8-Jun-23	N/A	N/A
Don't Pour Grease down the Drain	21-Jun-23	N/A	N/A
Native Pollinator Awareness	21-Jun-23	N/A	N/A

**Appendix B:
Illicit Discharge Investigation Details**

JB Langley-Eustis-SPILL-3846 (Closed)

[Print View](#) |
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 [Create IOI](#)

Tab Icon Key:

- Additional information required. [Hover](#) to see what required information is incomplete.
 - All required information is complete.
 - You cannot edit information at this time due to where the event is in the workflow process.
- No information is required.

[Summary](#) |
 [Materials](#) |
 [Release Details](#) |
 [External Communications](#) |
 [Attachments](#) |
 [Related Events](#) |
 [Corrective Actions](#) |
 [Notifications](#) |
 [History/Updates](#)

Installation Details					
Installation:	JB Langley-Eustis	Service/Command:	ACC	State:	VA
Sub Location:	Eustis	Branch:	East Branch	EPA Region:	3
		ISS:	JBLE		

Points of Contact				
Type	Name	Email	Phone	
Author	DYBA, SUZANNE E CIV USAF AFMC 733 MSG/CES/CE1E	suzanne.dyba@us.af.mil		

Spill Details	
Fiscal Year:	2022
Classification:	Non-Reviewable
Closed Date:	08/05/2022 8:19:53
Reported to HAF?:	
Report to HAF Determination Date:	
Read/Received Date:	
Estimated Clean-up Date:	08/04/2022
Updated in EASIER:	08/05/2022
Entered in EASIER:	08/05/2022
Spill/Release Date:	08/04/2022 14:30
Was the release cleaned up within 24 hours?:	Yes
Did process owner have sufficient clean-up capabilities?:	Yes
Class:	CLASS III: Area > 10 lineal ft in any plane dimension, or > 50 sq ft, or of a continuous nature.
Overall Root Cause:	(E) Personnel - Execution
Specific Root Cause:	(E3) Personnel understood requirement, but forgot to act / Inattention to detail
Equipment/Facility Involved:	Train
Equipment Type:	Other (Add Description Below)
Aircraft Type	N/A
FES Incident Number	N/A
Cause of Release	Accidental Discharge due to Human Error

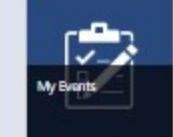
Location Map
[Reset Map](#)



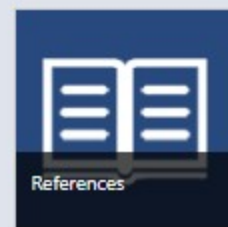
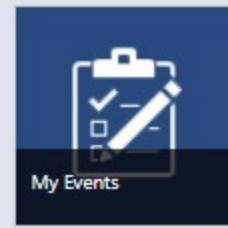
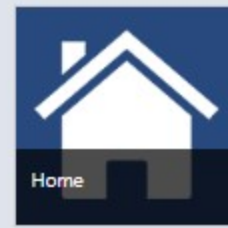
Description:
 In accordance with training schedule the locomotive was out with the class conducting training exercise when the PAPCO fuel truck arrived at 1327. The Railway Operations Supervisor radioed the locomotive crew and requested they determine a location to meet the fuel truck. First suggestion was Wilson Road Crossing, after a quick survey of the site it was determined unsuitable due to it being near a wetland. The next suitable site for a truck to park alongside the train was Training Area 29.

The train and truck were staged next to each other with only a 10 foot gap to minimize possible leakage from the hose. The fuel truck began pumping at 1356. Locomotive operator SSG Pyeatt asked the fuel truck driver James Kite where his drip pan was. He made a comment that he didn't bother with the drip pan on such small jobs. When the fuel truck first arrived the driver was going to pump the fuel into the train with a nozzle that fit the filler port on the locomotive; essentially clamping the hose onto the train. The nozzle didn't work properly so the driver switched it for a strait pipe. After changing to the strait pipe fuel would still not pump out of the truck. The driver walked around his truck saying the tank was not pressurizing properly. When he checked in the cab of the truck he came out saying it was set up for tank 3 and he had no product in tank 3. After making an adjustment to the truck for Tank 2, the fuel flowed properly. The objective was to pump 1500 gallons of diesel into locomotive 4624. The driver started to fill the locomotive and the Railway Operations Supervisor returned to the shop to prepare the other locomotive to take any leftover. When he got back to the shop he notified MITD Locomotive hand receipt holder Brett Goertmoeller via telephone his locomotives was receiving fuel. At 1430 SSG Pyeatt called Contract Manager Mr. William Pettaway to inform him that some fuel had leaked out of the starboard side fuel tank vent. She confirmed the leak was not actively flowing and approximately a few gallons was on the ground. The Railway Operations Supervisor immediately responded with the spill kit to the site. The fuel spill was on the opposite side from where the fuel was being pumped into the train. There is a fuel port on each side of the train and when taking fuel the opposite side is vented to prevent back flow. He called the Fire Department at 1436 to report the spill. The Fire Department dispatched a truck and informed CES environmental. Range Control was informed.

The Fire Department took statement. The Fuel truck driver explained the truck pumps 20 gallons per minute. When the gauge began to near full he slowed the flow of fuel to a trickle. The pressure slowing down caused a short back flow, or burp, through the vent on the starboard side of the locomotive fuel tank.



JB Langley-Eustis-SPILL-4322 (Closed)



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Tab Icon Key:
 Additional information required. Hover to see what required information is incomplete.
 All required information is complete.
 You cannot edit information at this time due to where the event is in the workflow process.
 No information is required.

- Summary
- Materials
- Release Details
- External Communications
- Attachments
- Related Events
- Corrective Actions
- Notifications
- History/Updates

Installation Details				
Installation:	JB Langley-Eustis	Service/Command:	ACC	State: VA
Sub Location:	Eustis	Branch:	East Branch	EPA Region: 3
		ISS:	JBLE	

Points of Contact			
Type	Name	Email	Phone
Author	DYBA, SUZANNE E CIV USAF AFMC 733 MSG/CES/CEIE	suzanne.dyba@us.af.mil	


Spill Details	
Fiscal Year:	2023
Classification:	Reviewable
Closed Date:	02/13/2023 7:08:53
Reported to HAF?:	Yes
Report to HAF Determination Date:	02/10/2023
Read/Received Date:	02/07/2023
Estimated Clean-up Date:	02/07/2023
Updated in EASIER:	02/13/2023
Entered in EASIER:	02/07/2023
Spill/Release Date:	02/07/2023 9:00
Was the release cleaned up within 24 hours?:	Yes
Did process owner have sufficient clean-up capabilities?:	Yes
Class:	CLASS II: Area < 10 lineal ft in any plane dimension, or < 50 sq ft and not a continuous nature.
Overall Root Cause:	(R) Resources
Specific Root Cause:	(R1) Deficient item, or equipment properly identified, but not funded
Equipment/Facility Involved:	Contractor-owned pile driver
Equipment Type:	Other (Add Description Below)
Aircraft Type:	N/A
FES Incident Number:	N/A
Cause of Release:	Accidental Discharge due to Equipment Failure
Description:	

Construction at 3rd Port facility. A pile driver broke as it was engaged and released about 2 gallons of vegetable oil, which it was using as an environmentally-appropriate hydraulic fluid because it was working around a waterway. The oil released into the James River and dispersed causing a sheen, but was in a contained area. The spill was immediately cleaned up with oil absorbant booms and oil absorbant pads. The material was disposed of in a sealed 55-gallon drum.

Location Map
[Reset Map](#)
Latitude: 37.1675668924129
Longitude: -76.6067409597435



JB Langley-Eustis-SPILL-4440 (Closed)

 Print View

[Summary](#) [Materials](#) [Release Details](#) [External Communications](#) [Attachments](#) [Related Events](#) [Corrective Actions](#) [Notifications](#) [History/Updates](#)

Installation Details

Installation:	JB Langley-Eustis	Service/Command:	ACC	State:	VA
Sub Location:	Eustis	Branch:	East Branch	EPA Region:	3
		ISS:	JBLE		

Spill Details

Fiscal Year:	2023
Classification:	Reviewable
Closed Date:	03/27/2023 11:06:22
Reported to HAF?:	Yes
Report to HAF Determination Date:	03/22/2023
Read/Received Date:	03/22/2023
Estimated Clean-up Date:	03/19/2023
Updated in EASIER:	03/27/2023
Entered in EASIER:	03/20/2023
Spill/Release Date:	03/19/2023 16:20
Was the release cleaned up within 24 hours?:	Yes
Did process owner have sufficient clean-up capabilities?:	Yes
Class:	CLASS III: Area > 10 lineal ft in any plane dimension, or > 50 sq ft, or of a continuous nature.

Overall Root Cause: (T) Training & Awareness
Specific Root Cause: (T3) Personnel trained but did not fully understand requirement

Equipment/Facility Involved: Gravity main sewer line

Equipment Type: Pipeline

Aircraft Type: N/A

FES Incident Number: N/A

Cause of Release: Accidental Discharge due to Human Error

Description:

On 19 Mar 23 at 1620 at JBLE (Eustis), a fat, oil, and grease (FOG) blockage of a gravity sewer line, before the lift station, resulted in a sewage backup. Sewage entered a home in the housing area. While housing personnel investigated the issue, they opened an exterior clean-out pipe to determine the sewage source. Opening the clean-out resulted in the release of approximately twenty five gallons of sewage. Twenty-one gallons of sewage released to the ground surface, which was recovered with a vacuum truck. It is estimated that four gallons entered a nearby storm drain. No evidence of sewage was observed at the associated outfall. Currently there are no impacts to surface water bodies. No enforcement actions are expected.

Points of Contact

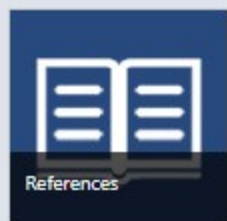
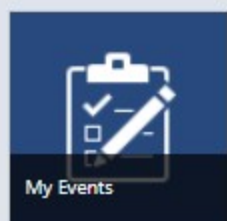
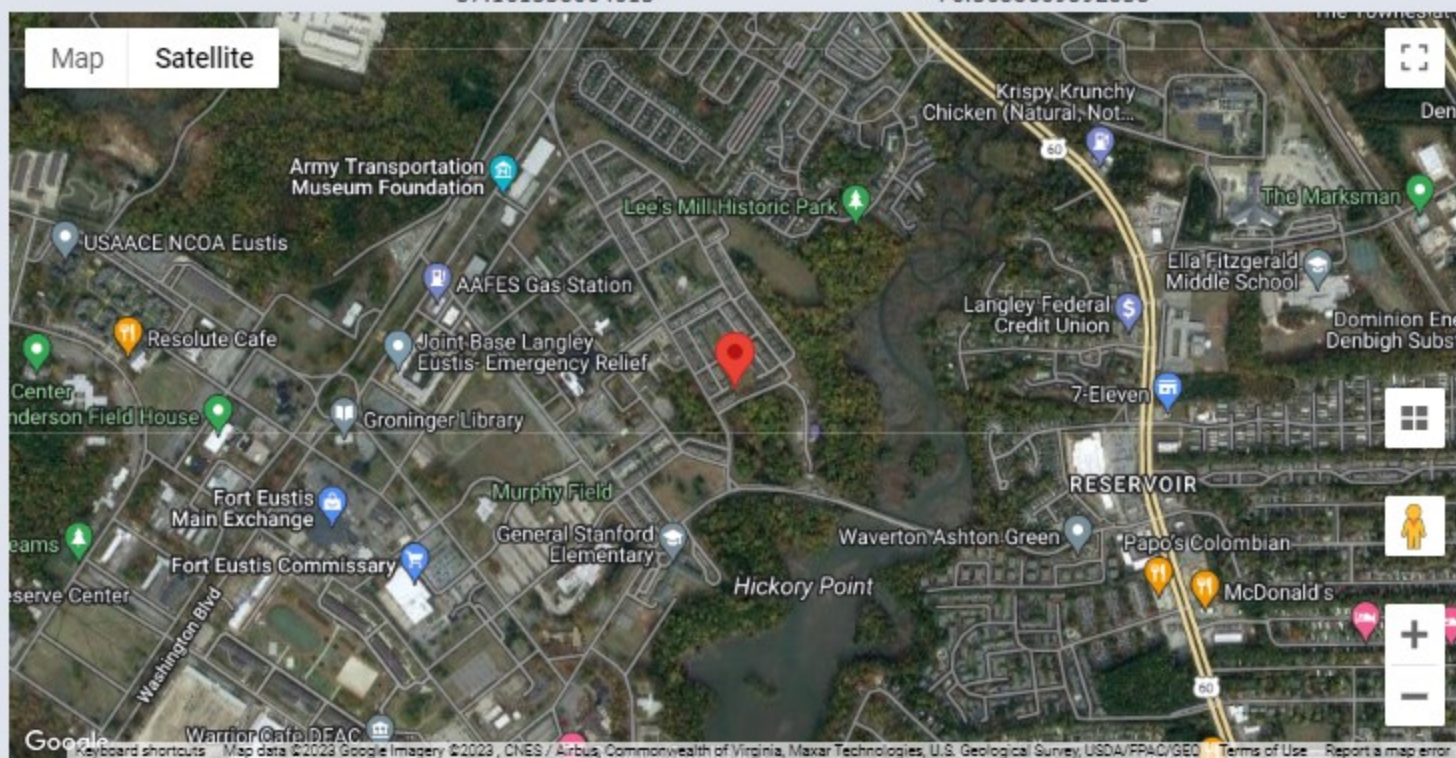
Type	Name	Email	Phone
Author	GUCWA, ROBERT J CIV USAF ACC 733 MSG/CEIEC	robert.gucwa.1@us.af.mil	
Additional	HAYES, JAMES B CIV USAF ACC 733 MSG/CEIE		
Additional	POWELL, KAMBETH K CIV USAF AFMC LANGLEY AFCEC/CZO	Kambeth.powell@us.af.mil	

Location Map

 Reset Map

Latitude:
37.161338064013

Longitude:
-76.5688669892838



Appendix C:
Chesapeake Bay TMDL Action Plan Implementation Status Memo

JBLE – Eustis
Compliance Summary Statement
TMDL Special Conditions
Permit Reporting Year 5 - July 1, 2022 - June 30, 2023

A. A list of BMPs implemented during the reporting period but not reported to the DEQ BMP Warehouse in accordance with Part I E 5 g and the estimated reduction of pollutants of concern achieved by each and reported in pounds per year

Street Sweeping

The base performs mechanical broom street sweeping on primary roads, secondary roads, and parking lots on a regular basis. Street sweeping credits are calculated based on the methodology described in Recommendations of the Expert Panel to Define Removal Rates for Street and Storm Drain Cleaning Practices (Donner et al., 2016). Data on frequency and linear miles of sweeping was provided by the base and is used to calculate load reduction credits. A summary of annual street sweeping miles swept during 01 July 2022 through 30 June 2023, along with associated credits, is presented in Table 1.

Table 1. Summary of Annual Street Sweeping Credits

Acres Swept	Credits (lbs/yr)		
	Nitrogen	Phosphorus	Total Suspended Solids
293.8	0.0	0.0	5,450.7

Note and Acronym:

lbs/yr – Pounds per year

Street sweeping credits are calculated based on the methodology described in *Recommendations of the Expert Panel to Define Removal Rates for Street and Storm Drain Cleaning Practices* (Donner et al., 2016)

Storm Drain Cleaning

The base removes debris from outfalls on an annual basis. The base follows the Standard Operating Procedure provided in Appendix B to keep track of the mass of debris that is removed and to ensure the debris is disposed properly to avoid washing back into the watershed. The percent composition of the debris was estimated using the methods described by Law, DiBlasi and Ghosh (2008), where sediment, organic matter, and trash accounted for 39.0%, 52.1%, and 8.9% of the debris respectively. The method used to calculate credits for the storm drain cleaning BMP is described in Appendix V.G of the Guidance Document (VDEQ, 2021). A summary of the Storm Drain Cleaning BMP credits is provided in Table 2.

Table 2. Summary of Storm Drain Cleaning

Wet Weight (lbs/yr)	Dry Weight (lbs/yr)		Nutrients Removed (lbs/yr)					
			Sediment		Organic Matter		Total	
Debris Collected	Sediment	Organic Material	TN	TP	TN	TP	TN	TP
15,400.0	4,204.2	1,604.7	11.4	2.5	17.8	1.9	29.2	4.4

Acronyms:

lbs/yr – Pounds per year

TN – Total nitrogen

TP – Total phosphorus

Land Use Change

The base is restoring various parcels of turf into native forb and grassland habitats. Approximately 15.33 acres of restoration are currently underway at seven locations, with 5.5 acres located within the MS4 as shown in Table 3. The goal at all locations is to promote early successional habitats made of native species, with no fertilization and minimal maintenance. Periodic maintenance involves removing invasive species and reseeding native species. The land use change credited at all locations is thus based on the turf to mixed-open land use, and the credit reductions were calculated per Appendix V.H of the Guidance Document (VDEQ, 2021). A summary of land use change credits is presented in Table 3.

Table 3. Summary of Land Use Change Credits

Pollutant	Turf to Mixed Open Area (acres)	Credit (lbs/yr)
Nitrogen	5.5	32.4
Phosphorus	5.5	6.2
Total Suspended Solids	5.5	0.0

Acronym:

lbs/yr – Pounds per year

B. If the permittee acquired credits during the reporting period to meet all or a portion of the required reductions in Part II A 3, A 4, or A 5, a statement that credits were acquired.

JBLE – Eustis did not acquire credits during the reporting period to meet the required reductions.

C. The progress, using the final design efficiency of the BMPs, toward meeting the required cumulative reductions for total nitrogen, total phosphorus, and total suspended solids

Section I.C of the MS4 Permit requires the base to meet the Chesapeake Bay TMDL requirements by reducing nitrogen, phosphorus, and total suspended solid loads by 40% of the Chesapeake Bay L2 scoping reductions by the end of the second permit cycle (30 June 2023). The base's load contribution, required load reductions, and pollutant credits outlined in this Action Plan were calculated using the methodology described in VDEQ's Guidance Document (VDEQ, 2021). A summary of the required load reductions is presented in Table 4, and the second permit cycle pollutant credits are presented in Table 5.

Table 4. Summary of Permit Cycles 2 and 3 Reduction Requirements

Pollutant	Required Load Reduction by 2023 (lbs/yr)	Required Load Reduction by 2028 (lbs/yr)
Nitrogen	163	408
Phosphorus	36	91
Total Suspended Solids	16,045	40,114

Acronym:

lbs/yr – Pounds per year

Table 5. Summary of Second Permit Cycle Reduction Requirements and Credits

Pollutant	Second Permit Cycle Cumulative Percent Reduction Requirement	Required Load Reduction by 2023 (lbs/yr)	Credits from Existing BMPs (lbs/yr)	Second Permit Cycle Target Met?	Third Permit Cycle Target Met?
Nitrogen	40%	163	206	Yes	No
Phosphorus	40%	36	45	Yes	No
Total Suspended Solids	40%	16,045	21,022	Yes	No

Acronym:

lbs/yr – Pounds per year

This data reflects that the installation meets the second permit cycle reduction goals for nitrogen, phosphorus, and TSS.

D. A list of BMPs that are planned to be implemented during the next reporting period.

- Staff is implementing a careful review of all recent BMP as-built plans to determine if any excess design TMDL credits are unaccounted for.
- All street sweeping is performed by an agency under contract. The new five-year contract which is currently out for bid stipulates the use of vacuum - assisted sweeping technology.
- An outfall retrofit design for four outfalls has just been completed, and the construction of the project will reduce erosion and reconnect the outfalls with the floodplain in a stable and sustainable way.
- The Virginia Institute of Marine Science (VIMS) is currently preparing a shoreline management plan which will aid the installation in prioritizing planning efforts to stabilize shoreline. In addition, the Chesapeake Bay Foundation (CBF) is scheduled to visit and assess shoreline areas to plan and collaborate on projects that will benefit the installation's sustainability and shoreline preservation goals.
- A retrofit of Lake Eustis will update the old BMP to the current standards as specified in the Virginia BMP Clearinghouse. Other retrofit opportunities will be explored, such as rooftop disconnect, bioswales, bioretention basins, and wetland creation.

**Appendix D:
Bacteria TMDL Action Plan Implementation Status Memo**

JBLE – Eustis
Compliance Summary Statement TMDL Special Conditions
Warwick River and Skiffes Creek Bacteria TMDL Action Plan Implementation
Progress for JBLE–Eustis
Permit Reporting Year 5 - July 1, 2022 - June 30, 2023

JBLE–Eustis has taken several actions to reduce bacteria and address various sources on the installation. Completed or ongoing actions taken by JBLE–Eustis include the following:

- Livestock and pet sources continue to be controlled through BMPs at the horse stables, pet waste stations in residential areas, and a pet waste station at the community dog park.
- The base manages wetlands surrounding airfields that would attract wildlife and present bird/animal aircraft strike hazard (BASH) safety concerns. Management of wetlands can reduce habitat for waterfowl and other wildlife that have the potential to contribute bacteria to the Warwick River. Active bird and animal population management including BASH.
- Livestock and pet sources are controlled through BMPs at the horse stables, 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.
- Pet waste stations are available in residential areas, and a pet waste station at the community dog park.
- Pet waste bag dispensers are made available to residents throughout the year and distributed at environmental awareness events where residents are briefed on the impact of pet waste on stormwater and water quality. Pet waste bags and bag holders are distributed at events and are available for residents free of charge at the Military Family Housing (MFH) office.
- Illicit discharges and sewer line leaks into the MS4 are being monitored through the IDDE program.

The installation is currently exploring the removal of the remaining septic fields by extending the sanitary sewer infrastructure to the southern areas of the base. The project will eliminate the operational heavy septic system by connecting these areas to the existing collection system, reducing long-term preventative maintenance, potential environmental issues, and ultimate failure associated with a drain field system.