

# **U.S. NAVAL BASE GUAM**



## **MS4 Annual Report (Year 4)**

### **MS4 Permit No.: GUS040000**

**April 2023**

Prepared by:



N40192-21-D-1820

U.S. Naval Base Guam

Municipal Separate Storm Sewer System (MS4) Permit No.:

GUS040000 Reporting Period: February 1, 2022 – January 31, 2023

### **Certification Statement**

"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."

Sincerely,



E.E. Moon

Installation Environmental Program Director

By Direction of the Commanding Officer

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## **Section 1 INTRODUCTION**

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The following “U.S. Naval Base Guam (NBG) Year 4 MS4 Annual Report,” fulfills the annual reporting requirements of the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit No. GUS040000. According to the compliance schedule specified in Table 4, Part 5.5 of the permit, NBG must submit its MS4 annual reports on or before April 30th following each respective permit year. The report should account for all permit compliance activities of the previous permit year.

This report is submitted to:

NPDES Permit  
Section USEPA  
Region 9  
75 Hawthorne Street  
San Francisco, CA 94105

Guam EPA – Water Pollution Control Program  
P.O. Box 22439  
Barrigada, GU 96921

### **1.1 Compliance History**

The United States Environmental Protection Agency (USEPA) issued the NBG MS4 permit on December 20, 2018 and became effective on February 1, 2019. This permit authorized NBG to discharge stormwater and other non-prohibited discharges from all outfalls of NBG's MS4. This permit also requires NBG to effectively prohibit all type of non-storm water discharges into its MS4 unless such discharges are either authorized under a separate NPDES permit or listed as allowable non-stormwater discharge in Part 1.3.2 of the MS4 permit.

### **1.2 Permit and Installation Information**

The Department of the Navy NPDES permit GUS040000 applies to Naval Base Guam (NBG) owned and operated MS4 which includes the following existing facilities:

- NBG at Apra Harbor (NBGAH).
- Family housing / community support areas at Apra Heights
- Family housing / community support areas at Nimitz Hill
- NBG Munition Site (NBGMS)
- Naval Hospital and Guam High School

Appendix A provides an overview and relative locations of each existing facilities covered under the MS4 permit. Detailed map of NBG's storm water conveyance system will be continuously updated and incorporated into Storm Water Management Plan (SWMP) document.

### **1.3 Report Contents and Organization**

This report follows the organization and requirements outline of the MS4 permit. This will aid Program Managers, Regulators and other stakeholders in the performance of the review process and tracking of multiple compliance activities. Future permit year reports will follow the presentation and organization of the approved SWMP document.

This annual report includes details of NBG compliance efforts, from February 1, 2022 to January 31, 2023, to meet permit conditions; various best management practices, existing inspection, reporting, and record keeping requirements for program activities to meet minimum control measures; current good-housekeeping contracts that provide street sweeping and stormwater conveyance maintenance activities.

A description of SWMP and permit compliance related activities planned for the future year program implementation is also included in this report. *However, these planned activities are based on the MS4 permit minimum requirements and may be changed, updated or replaced depending on the specific required activities in the SWMP.* Past compliance activities are also provided, where applicable.

This 4<sup>th</sup> annual report does not provide comprehensive information regarding the MS4 program effectiveness evaluation. The effectiveness evaluation requires data derived from actual stormwater management program implementation and MS4 outfall sampling and analytical results. The NBG stormwater program effectiveness evaluation will be included in future MS4 annual reports.

### **1.4 Schedules, Deadlines and Permit Modification Request**

Requirement due dates (Appendix B) referenced in this report are based on the summary of deadlines describe in Table 4, Part 5.5 of the modified MS4 permit. NBG submitted a permit modification request to US EPA regarding permit implementation schedule citing difficulty in securing funding for emergent compliance program, logistic challenges in the acquisition of a MS4 SWMP development project and MS4 compliance program implementation.

On April 6, 2020, US EPA issued the final modified National Pollutant Discharge Elimination System (NPDES) permit for discharges from municipal separate storm sewer systems (MS4s) serving certain NBG facilities for one year. The discharges regulated by the permit consist primarily of stormwater runoff but could also include certain specified non-stormwater discharges. The effective date of the modified permit is May 1, 2020 and will expire on January 24, 2024 which is the same as the original permit issued in 2018.

### **1.5 NBG MS4 Program Contact Information**

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## **Section 2 MS4 MANAGEMENT PROGRAM**

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### **2.1 General Requirements**

The MS4 permit requires NBG to develop and implement a Stormwater Management Plan (SWMP) that outlines how the Installation will comply with the MS4 permit conditions. The SWMP document will aim to address the following requirements:

- Identify and implement Best Management Practices (BMPs) for all appropriate minimum control measures (MCMs) designed to reduce the discharge of pollutants from MS4 to the maximum extent possible (MEP), to protect water quality and to satisfy water quality requirements of the CWA and the Guam water quality standards.
- Identify measurable goals and milestones for BMPs, MCMs and other control measures.
- Provide planning and guidance documents to be used by military personnel, civilian staff, contractors, and members of the general public at NBG facilities who have the authority to access the base and outlying areas.
- Develop an implementation schedule and monitoring program to determine effectiveness of the control measures.
- Identify and assess existing policies for adequacy in the implementation of the MS4 permit conditions and SWMP document requirements.
- Develop and implement an enforcement response plan.

### **2.2 Stormwater Management Plan Development Project**

The SWMP document was completed and submitted in accordance with the schedule and deadline provided in Appendix B.

NBG MS4 Program Managers will identify all SWMP-based compliance activity requirements and will develop a list of deliverables for future MS4 program implementation contract. An Independent Government Estimate (IGE) will be developed for each deliverable and a funding request will be submitted through channels.

#### **2.2.1 Adequate Legal Authority Requirement**

The Department of Navy (DON) environmental readiness program OPNAVISNT 5090.1E, the NBG Environmental Policy Statement (Appendix C), Executive Order 13514, and other DoD environmental policies such as the Low Impact Development (LID) are already in place in lieu of ordinances and other regulatory mechanisms required to implement an effective stormwater management program. As a non-traditional MS4, NBG's Installation Commanding Officer (ICO)

has the authority to issues additional polices and memoranda to implement the SWMP requirements and to require all base tenants to comply with general provisions of the MS4 permit.

NBG MS4 Program Managers will identify the SWMP-based compliance activity requirements and will review existing policies to verify if the Installation meet the "adequate legal authority" requirements to control pollutant discharges as specified in Section 2.3 of the permit.

A statement from the Installation's Legal Counsel certifying the adequacy of NBG's legal authority to implement permit requirements will be included as part of the SWMP document and in accordance with the schedule provided in Appendix B.

### **2.2.2 Enforcement Response Plan**

The Enforcement Response Plan (ERP) document describes a set of enforcement measures to which NBG is committed to in order to achieve and maintain compliance with the permit and the SWMP.

Due to the nature and operational structure of NBG, the most effective means for enforcement is escalation of unaddressed violations to the next higher authority. All violations and corrective measures will be tracked and recorded in a manner consistent with the procedures described in the ERP / SWMP and the MS4 permit requirements.

### **2.2.3 Fiscal Analysis**

Conventional annual fiscal analysis (Appendix D) is not applicable to NBG as it is unique from most traditional MS4s in that it owns the property and almost all the facilities. The Installation also provides funding for majority of work on grounds and facilities located within its boundaries. Program implementation funding will be requested based on the IGE for each compliance activity deliverables specified in the SWMP document and the MS4 asset maintenance cost.

Chapter 2 of the OPNAVINST 5090.1E provides implementing policy guidance identifying and programming resources for environmental shore compliance. NBG SWMP/ MS4 Program Managers are responsible for identifying requirements and request for necessary funding to comply with the MS4 permit and the SWMP requirements. Funding may come from one or all three appropriations (O&M, OPN, RDT&E) as describe in section 2-3.4 of OPNAVINST 5090.1E.

#### **MS4 Program Management Past Year Activities:**

- NBG / NFM identified permit-based compliance activity requirements and began consolidating for the 4<sup>th</sup> NBG MS4 Annual report.

#### **MS4 Program Management Future Year Activities:**

- Modified the Environmental Compliance IDIQ Contract, N40192-21-D-1820 to include NBG MS4 program implementation or solicit other forms of contract

mechanisms (i.e. stand-alone MS4 compliance contract).

- Identify SWMP-based compliance activity requirement and review existing Installation policy to determine adequacy to implement stormwater pollution control measure. Develop and implement additional stormwater pollution control policies if necessary.
- Review and identify SWMP-based list of requirements and contract deliverable for future Environmental Compliance or an alternative MS4 compliance contract.
- Develop a SWMP-based IGE for each contract deliverables and submit a request for funding for MS4 compliance program implementation based on the IGE.

## **Section 3 MINIMUM CONTROL MEASURES**

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The NBG MS4 permit requires the Installation to provide a SWMP that will describe the six (6) Minimum Control Measures (MCMs) and details on the development and implementation of these measures required to qualify the Installation for permit coverage. The six MCMs are:

- MCM 1 - Public Education and Outreach,
- MCM 2 - Public Involvement / Participation,
- MCM 3 - Illicit Discharge Detection and Elimination (IDDE),
- MCM 4 - Construction Stormwater Run-off Control,
- MCM 5 - Post-Construction Stormwater Management and,
- MCM 6 - Pollution Prevention / Good Housekeeping for Base Operation.

### **3.1 Public Education and Outreach**

Pursuant to Section 3.1 of the MS4 general permit requirements, NBG will focus on the development and implementation of a base-wide public education and outreach awareness program designed to inform base personnel's, tenants, school children, contractors, and the visiting community about the impacts that stormwater discharges could have on local waterbodies. The program will involve development and distribution of informational materials and conducting outreach activities aimed at enhancement of awareness and providing knowledge to NBG's target audiences about their activities that may have potential adverse effect(s) to water quality so that they can avoid these activities and thereby improve overall water quality.

Knowledge of the program will garner greater public support, as well as a more willingness to change their attitudes and comply with the BMPs set forth in the program.

#### **3.1.1 Electronic Media Outreach**

Electronic media outreach activity was performed during this reporting period. Detailed outreach procedure description is included in the SWMP document. The Installation utilizes one or a combination of the following NBG and Joint Region Marianas (JRM) webpages as an additional platform for reaching out to key audiences:

- <https://www.cnic.navy.mil/Guam/>
- [http://www.cnic.navy.mil/regions/jrm/installations/navbase\\_guam/](http://www.cnic.navy.mil/regions/jrm/installations/navbase_guam/)
- <https://www.facebook.com/USNavalBaseGuam/>
- <https://www.facebook.com/jrmguam/>
- <https://jrm.cnic.navy.mil/installations/NAVBASE-Guam/About/Departments/Envir>

These webpages are accessible to the public making them accessible to tenants that may have trouble accessing websites that are restricted by the Navy for operational security (OPSEC)

reasons.

Pertinent MS4 documents such as educational materials aimed at residents and commercial tenants, such as good housekeeping practices, disposal of household hazardous wastes, and NBG policies addressing stormwater pollution prevention are posted on these websites.

**Past Year Activities:**

- Posted approved SWMP and educational materials on one of NBGs websites.

**Future Year Activities:**

- Continue to post the most recent MS4 Annual report, the SWMP document, and any other pertinent information to MS4 on one or combination of NBG and JRM websites.
- Create stormwater quality page on NBG Websites
- Post MS4 public participation activities and MS4 educational materials on NBG's social media pages (i.e. Facebook)
- Track public comments and reactions to posted materials. Evaluate public input and update program if necessary
- Distribute informational materials via electronic mail, Facebook pages and NBG / JRM websites.
- Identify additional approach and materials that can be circulated by electronical means.
- Incorporate MS4 environmental awareness information into the Welcome to Guam In-brief for new military personnel.
- Continue to update the base websites with new stormwater management information semi-annually.

**3.1.2 Stormwater Pollution Prevention Training**

NBG has an existing Spill Prevention Control and Countermeasure (SPCC), Stormwater Management Program (SWMP) and Stormwater Pollution Prevention (SWP2) annual training and refresher program in compliance with the Multi-Sector General Permit (MSGP) and Municipal Storm Sewer System (MS4) requirements. The Installation's SPCC, SWMP and SWP2 training programs are being implemented as part of the Environmental Compliance IDIQ Contract, N40192-21-D-1820. Trainings are conducted at least annually to all personnel working in industrial / commercial facilities within the NBG MS4 permit area (Appendix E).

The NBG BOS contractor also offers orientation program to their newly acquired personnel. Part of the orientation is to provide basic summary of NBG's environmental policies including

stormwater pollution prevention. However, the BOS contractor new hire orientation activities are not currently being tracked and not part of the contractor's deliverables. The number of sessions and the quantity of attendees are currently not recorded for the purpose of complying with the MCM1. This program could be enhanced and tracked to meet the MS4 MCM1 requirements and each session can be used as a venue for MS4 informational material distribution.

#### Past Year Activities:

- NBG implemented existing annual SPCC, MS4, and SWP2 training programs to educate base personnel, tenants, and contractors regarding stormwater pollution prevention.
- The following quantities were taken from the Environmental Compliance IDIQ Contract, N40192-21-D-1820 Annual SPCC, MS4, and MSGP Training report. Trainings provided to facilities and personnel outside the NBG MS4 permit area are excluded from Table 1 below:

**Table 1: CY2022 NBG Stormwater Training**

Facility / Building No.:	Date	Number of Attendees
DLA Bldg. 631 Disposition Facility	11/21/2022	9
Transportation Maintenance Shop Bldg. 372	11/15/2022, 11/16/2022, 11/17/2022	56
Material Handling, Bldg. 372	11/15/2022, 11/16/2022, 11/17/2022	56
Transportation, Filling Station, Bldg. 374	11/15/2022, 11/16/2022, 11/17/2022	56
(CampCovington)	12/16/2022	31
(Bldg. 3000-3008)	12/01/2022, 12/16/2022	12
Port Operations, Bldg. 3169	11/15/2022, 11/16/2022, 11/17/2022	72
Marina Facilities, Bldg. 5406	12/21/2022	4
PACSEA Bldg.	*	*
Navy Berthing Facilities	11/15/2022, 11/16/2022, 11/17/2022	56
4430	11/28/2022 12/05/2022	11
AHWWTP, Bldg. 1794 1604	8/18/2022, 8/24/2022, 11/15/2022	35
Utilities and Machine Shop, Bldg. 1793	11/15/2022, 11/17/2022,	56
US Navy Sanitary Landfill	11/15/2022, 11/17/2022	17
Naval Hospital Compound	*	*
U.S. Navy Water Treatment Plant	9/06/2022	9
U.S. Navy Laboratory	8/26/2022	4
<b>Total Number of Personnel Trained:</b>		<b>484</b>

Source: Environmental Compliance IDIW N40192-21-D-1820

Notes: Some facility names are redacted for OPSEC reason

\* Annual training not conducted

#### **Future Year Activities:**

- Continue implementation of existing SPCC, MS4, and SWP2 training programs and identify additional facilities / personnel that requires training under the MS4 program.
- Modify / improve existing SPCC and SWP2 training materials to include MS4 permit and SWMP requirements.
- Modify / improve the Government and Contractor new-hire orientation and personnel indoctrination programs to include MS4 permit and SWMP requirements. Document the number of orientations provided during each compliance year.
- Modify existing Environmental Compliance contract or provide an alternate contract mechanism to include MS4 training program.
- Evaluate effectiveness of the SPCC and SWP2 training programs. Previous evaluations were performed in accordance with MSGP requirements.

#### **3.1.3 Informational Materials**

Informational materials have been created and is geared towards the general population that works and lives on the base with the intent of providing general stormwater knowledge and pollution awareness.

The Installation will continue to work with offices of Personnel Management (OPM) and NBG Housing to include MS4 topics and informational materials distribution during the mandatory indoctrination briefing for NBG new arrivals (military and civilian). Newcomers will be informed of the illicit discharge reporting procedures and will be encouraged to participate in a MS4 related activities (storm drain clean-up and labelling).

Environmental Compliance IDIQ and other contractors will also be tasked to distribute MS4 informational materials and to review and update their environmental presentation materials during the Contractor's new-hire orientation.

#### **Past Year Activities:**

- Distribution of MS4 informational materials was not conducted this reporting period but are on the Joint Region Marianas (JRM) webpage.

#### **Future Year Activities:**

- NBG will distribute sufficient copies of educational materials to a minimum of 20% of the target audiences and track this distribution each compliance year. Tracking of distribution, at a minimum, should include topic and quantity distributed to target audiences.



- Develop educational materials such as posters, designed specifically for school children and posting at school premises. Track quantity and variety of material posted.
- Continue to distribute copies of stormwater educational materials to construction site operators and track this distribution each compliance year.
- Continue production of informational materials and develop new ones that target specific sectors such as housing tenants and school children.
- Identify additional venues and events (e.g. World Earth Day) for the distribution of informational materials. Identify additional means of materials dissemination.
- Create new educational materials if needed and update existing informational materials based on effectiveness assessment.
- NBG will produce a spot to run on the “The Joint Military News Network (JMNN) and JRM YouTube Channel. A link will be posted on NBG/JRM Webpages.
- Modify existing Environmental Compliance contract or provide an alternate contract mechanism to include MS4 distribution and tracking of MS4 informational materials.

#### **3.1.4 Survey**

The design of a statistically valid survey is part of the SWMP development contract and is not required during this reporting period. Surveys to assess changes in public awareness and behavior resulting from implementation of the public outreach program within four (4) years from the effective date of the permit (EDOP). Overall program implementation will be conducted in accordance with the schedules and deadlines outlined in Appendix B.

##### **Past Year Activities:**

- Design and development of a statistically valid survey is included in the SWMP document, however, survey program to assess changes in public awareness and behavior resulting from the implementation of the public outreach program is pending.

##### **Future Year Activities:**

- NBG may conduct baseline survey to gauge existing level of public awareness and behavior prior to active implementation of NBG’s MS4 public education and outreach program.
- NBG shall conduct follow-up survey within two (2) years of public education and outreach program implementation to assess changes in public awareness using the SWMP statistically valid survey procedure.

- Modify existing Environmental Compliance contract to include MS4 survey program.

### **3.2 Public Participation / Involvement**

NBG will develop steps and procedures that will allow and encourage public participation in the overall compliance with the MS4 permit requirements. NBG will implement additional compliance measures that will encourage base tenant's participation in the development and implementation of this BMP, solicits tenants reporting of suspected illicit discharges and promotes active involvement in increasing stormwater pollution control awareness.

Proposed and interim BMPs for this MCM are describe below:

#### **3.2.1 Public Review of NBG SWMP**

NBG recognizes the importance in allowing the public to play an active role in the development and implementation of the SWMP. An active and involved community will help develop a large public support base for the program including a broader base of expertise and allow for shorter implementation schedules due to fewer obstacles in the form of public challenges.

NBG made available a copy of the SWMP document on these following webpages this reporting period:

- <https://www.cnic.navy.mil/Guam>
- <https://jrm.cnic.navy.mil/installations/NAVBASE-Guam/About/Departments/Envir>

#### **Past Year Activities:**

- Not applicable / required during this reporting period. NBG made available the MS4 SWMP for public review and comment for 30 days on the Commander Navy Installation Command Notification (CNIC) website in July 2021. No comments or feedbacks were received from the community.

#### **Future Year Activities:**

- NBG Environmental will work with CNIC to continue to post the SWMP document and annual report along with contact information for public review and comment on the website listed below:
  - <https://www.cnic.navy.mil/Guam/>
  - [http://www.cnic.navy.mil/regions/jrm/installations/navbase\\_guam/](http://www.cnic.navy.mil/regions/jrm/installations/navbase_guam/)
  - <https://jrm.cnic.navy.mil/installations/NAVBASE-Guam/About/Departments/Envir>
- Provide point of contact for receiving proposed changes and revisions of the MS4 SWMP.

### **3.2.2 Public Participation Campaign**

NBG personnel have been participating in various community clean-up events, working with members of the community to clean up trash, green waste, and debris to help keep pollutants from entering the receiving waters.

NBG plans to coordinate and improve existing programs by working with Community Relation (COMREL) personnel of various NBG tenants / units in promoting public awareness about the impacts of trash and illicit discharges on storm water runoff quality. COMREL activities may include but not limited to trash pick-up, beach clean-ups, and storm drain marking.

#### **Past Year Activities:**

- Navy Security Forces team conducted a beach clean-up at Dadi Beach on May 27, 2022 in preparation of the beach reopening. A total of 4 security forces personnel volunteered for the clean-up.
- Twenty (20) NBG/NFM personnel's provided support and logistics to over 300 Southern High School ROTC children during the Guam International Coastal Cleanup at Apaca Point (War in the Pacific Park) on September 10, 2022.

#### **Future Year Activities:**

- Provide mechanism for various NBG sectors / units to perform COMREL activities such as streets and beach clean-ups within or outside NBG's permitted area.
- NBG will participate in local environmental related community outreach events by active presentation or setting up information Kiosk. Identify and establish a list of possible partnership with local organization to widen opportunities for public outreach.
- Participate in World Earth Day and / or other similar events.
- Develop inventory of storm drain marking activities by establishing partnership with COMREL personnel of various NBG tenants to promote stormwater pollution awareness and discourage illicit discharges.
- Provide a mechanism for NBG tenants to participate in the design and development of NBG stormwater slogan and logo.
- Coordinate with DoDEA and facilitate a slogan / logo design contest for elementary and high school students.

### **3.3 Illicit Discharge Detection and Elimination (IDDE)**

NBG will identify and eliminate sources of illicit discharges by investigating and eliminating non-stormwater discharges, including illegal dumping. This program will include developing

BMPs and establishing measurable goals to eliminate illicit discharges into its MS4 in accordance with the general permit requirements. The following are interim BMPs that outlines NBG's procedures in addressing illicit discharges.

### **3.3.1 NBG MS4 Map**

NBG will develop an accurate and up-to-date Geographic Information System (GIS)-based storm sewer system map of the MS4 permitted areas of NBG. These maps will include and identify all key elements of NBG MS4 stormwater inlets, outfalls, and BMP locations as wells as commercial and industrial facilities. Field inspectors and laboratory sampling personnel will reference these elements during field screening and sampling.

#### **Past Year Activities:**

- Updated the MS4 conveyance system mapping (Field Map) on September 9, 2022.

#### **Future Year Activities:**

- Continue to update MS4 field map when necessary. The map should include the following locations: BMP locations, industrial / commercial facilities, stormwater inlets and outfalls. Consolidate updates during the annual SWMP review.

### **3.3.2 Identification of Priority Outfall**

Based on the information collected from the MS4 mapping activities, NBG will generate an inventory of all outfalls within the permit area. NBG will conduct an evaluation and develop a list of priority area identified as having a higher potential of illicit discharges / connections and illegal dumping based on the following criteria:

- Areas with older infrastructure
- Industrial, commercial or mixed-use areas
- Location's history of previous illicit discharges / connections
- Location's history of sewer overflows
- Areas upstream of sensitive waterbodies and locations that may discharge pollutants of significant quantities to the waters of the U.S.

#### **Past Year Activities:**

- Not applicable / required during this reporting period. A list of seven priority outfalls for the MS4 program was submitted and approved by Guam Environmental Protection Agency (GEPA).

### **Future Year Activities:**

- Work with Guam EPA to select an alternate Priority Outfall for Outfall AP12. A natural spring located upgradient from the housing area flows continuously throughout the year and drains into outfall AP12.
- Review and update the priority outfall list when necessary to reflect changes in the MS4.
- Consolidate update requirements in the annual SWMP review.

### **3.3.3 Dry Weather Field Screening**

NBG has developed a dry weather field screening / Outfall Reconnaissance Inventory (ORI) program to ensure that priority outfalls are visited at least annually for dry weather field screening. Samples will be collected and analyzed when flow or ponded runoff is observed and there has been at least seventy-two (72) hours of dry weather. Sample collected will be tested for indicators listed on Table 2 below. Samples will be submitted to offsite laboratories with DMRQA program for analyses with the exception for pH which can be measured in-situ by trained personnel.

**Table 2: Dry Weather Field Screening Benchmark**

Indicator	Benchmark
Ammonia	> 50 mg/L
Conductivity	> 2000 uS/cm
Surfactants	> 0.25 mg/L
pH	< 6 or > 9 s.u.
Enterococcus (GeometricMean)	35 MPN/100 mL

In addition, a minimum of 20% of the total outfalls will also be subjected to dry weather screening on an annual basis. This is to ensure that all non-priority outfalls will be screened at least once during the permit term.

### **Past Year Activities:**

- Twenty major outfalls were selected for the dry weather screening inspection to detect illicit, inappropriate or non-documented non-stormwater discharges. Dry weather field screening was conducted at seven (7) priority outfalls and fourteen (14) non-priority outfalls. No illicit discharges were observed during dry weather field screening (Appendix F).

### **Future Year Activities:**

- Perform dry weather field screening and outfall reconnaissance inventory inspections at 120 locations base on the SWMP schedule.
- Work with Guam EPA to select an alternate Priority Outfall site for priority outfall AP12 and non-priority outfall monitoring locations Trans1, AP8, XR1, ST6, OsPa1, Ecov1, and Inn1. MS4 outfalls are either not accessible or pose a safety hazard to sampling personnel due to its locations.
- Provide training to weather field screening personnel.
- Perform corrective actions and / or propose preventative measures when necessary, for dry weather field screening /ORI findings.

#### **3.3.4 Illicit Discharge Public Reporting**

The Illicit Discharge Reporting program development is part of the SWMP document contract. Implementation of this program is not due to begin during this reporting period.

NBG have an existing hazardous substance and sewer spill reporting and response program as part of the BOS Contract and Hazardous Waste IDIQ Contracts. A 24-hour emergency phone numbers are available for the following responsible contractors to respond:

- *Hazardous Substance Spill Response* - N40192-20-R-1800
- *Sewage Spill Response* - N40192-21-D-1820

In addition to the BOS and HW IDIQ contractors spill response procedures, NBG has a standing instruction for oil and hazardous substance spill contingency and response that provide a flowchart for spill reporting and clean-up including points of contact and contact numbers:

- NAVBASEGUAMINST 5090.3 Series

These spill response programs and instructions may be enhanced to include reporting of illicit discharges to the Installation's MS4 conveyance system.

NBG recently completed the update of its Spill Prevention, Control and Countermeasure (SPCC) Plan and the accompanying Facility Response Plan. These plans help ensure that oil storage facilities are equipped with proper spill prevention and spill response tools, and a standing procedure for reporting spills is maintained. These plans help prevent petroleum-based pollutants in reaching NBG's storm sewer system.

NBG plans to build around and refine these programs to meet MS4 permit requirements. NBG will encourage base tenants to report the presence of illicit discharges, or water quality impacts associated with discharges from the MS4 including accidental spills.

#### **Past Year Activities:**

- NBG implemented existing reporting program for hazardous substances and sewage spills response. These programs help prevent pollutants from coming into contact with the stormwater conveyance system.

#### **Future Year Activities:**

- Update existing Hazardous Substance Spill Response and Sewage Spill Response procedures for the new Environmental Compliance contract.
- Develop a stand-alone procedure for MS4 illicit discharge reporting and/or;
- Expand existing spill reporting programs and procedures to include storm sewer illicit discharge reporting.
- Evaluate effectiveness of the existing spill reporting programs and instructions in preventing pollutants from reaching the MS4 conveyance system.

### **3.3.5 IDDE Source Investigation and Elimination**

The NBG IDDE source investigation and elimination program development is part of the SWMP document. This program outlines the procedures for detection of illicit discharges, conducting investigation for confirmed illicit discharges as well as the implementation of corrective actions to eliminate such discharges.

NBG currently implements a reporting program for non-stormwater discharges and spills as mentioned in Section 3.3.4 of this report. NBG plans to build around and implement this program in combination with the dry weather field screening/ORI BMP to meet the IDDE requirements of the permit.

The spill response procedures and instructions mentioned in the previous section requires the BOS contractor to mitigate and remove spilled media and prevent these contaminants from reaching the storm conveyance system. The following are quantities of shore-based spill and sewer overflow responses and mitigation performed during this reporting period:

***Table 3: Summary of NBG CY2022 Spill Response Activities***

Type of Response	Permit Area / Quantity				
	NBG Apra Harbor	Apra View / Palms	Nimitz Hill	NBG MS	Naval Hospital
HW/HS Spill	21	0	0	2	0
Sewer Spill	3	0	0	0	0

\*Sources: Hazardous Substance Spill Response - N40192-20-R-1800  
Note: NBG MS – Naval Base Guam Munition Storage

These shore-based spills and sewer overflow responses and clean-ups are proven method in

water pollution prevention by not allowing contaminants to reach NBG's MS4 system and nearby navigable waters.

NBG and NFM has implemented an inter-departmental review program for the development and redevelopment of facilities. This review process comes standard to all projects and includes the review and approval of sewer line connections, thus ensuring separation of sewer line from the MS4 system.

**Past Year Activities:**

- Thirty-eight (38) Illicit Discharges were recorded on NBG's permitted areas. Many of these discharges were due to leaking valves, improper connection/runoff of wash sink grey water, leaking water lines, vehicle wash water, dumpster water, clogged toilet line, etc. In these cases, proper BMPs were implemented, discharges were eliminated, or were temporarily mitigated until funding becomes available to resolve them (Appendix G).
- February 24, 2022: Sewer line break along a dirt road across from the Fleet Logistic Center Yokosuka, Guam Field office. Approximately 100 gallons of sewage was released onto the road. On February 25, 2022, the sewer line break was secured, and the affected area disinfected with sodium hypochlorite solution. Contaminated soil was removed and brought to AHWWT for storage in a drying bed until it can be properly disposed of at the landfill.
- March 1, 2022: Approximately 0.5 gallons of sewage spill entered Apra Harbor. The spill was due to operator error (USCG Myrtle Hazard) due to the overboard discharge valve not being properly secured during discharge to the Victor Wharf CHT. Pumping activity was ceased immediately when spill was observed. Material of the spill was strictly grey water. Once secured, USCG Myrtle Hazard personnel did an operation check on the process and determined that the overboard discharge valve was not fully secured. Valve was oriented to a closed position to allow discharge into the CHT with no further spillage.
- March 2, 2022: Approximately 40 gallons of sewage spill occurred at Kilo Wharf. Twenty (20) gallons of the spill entered navigable waters while the remaining twenty (20) gallons was contained in the CHT riser. The sewage spill was due to a cracked riser cap and a riser valve that was not properly secured prior to sewage being pumped from the Abraham Lincoln vessel into the collection holding tank (CHT) risers on Kilo Wharf. The CHT riser valve was secured, was placed in the shut position and the cracked cap replaced. Sewage water in berm was pumped out with a pump truck and the area disinfected with sodium hypochlorite solution.
- Revision 2 of the NAVFACSYSCOM for the Public Works Utilities Criteria (PWUC) was adopted by PWUC to ensure that cross connections between sewer lines and MS4 systems are prevented.
- Implemented existing spill response and clean-up program for hazardous substances and sewage spills response.



- Implemented inter-departmental sewer connections review and approval process.

#### **Future Year Activities:**

- Modify / expand existing spill reporting program to include illicit discharge reporting for MS4.
- Continue implementation of inter-departmental review process for the development and redevelopment of NBG facilities.
- Evaluate effectiveness of the existing spill response procedures and instructions preventing pollutants from reaching the MS4 conveyance system.

### **3.4 Construction Site Runoff Control**

The MS4 permit requires NBG to develop a Construction Site Storm Water Runoff Control program that will address how NBG will reduce pollutants in storm water runoff from construction activities that result from a land disturbance of greater than or equal to one acre. This program aims to:

- Standardized BMP implementation and erosion and sediments control requirements.
- Develop and maintain inventory of NBG's construction sites.
- Standardize construction plan review and approval process and promote incorporation of BMPs as part of the early planning stage of the project design.
- Establish routine construction site inspection procedures.
- Identify training requirements.
- Promotes construction operator's awareness and encourage public involvement.

#### **3.4.1 Construction Stormwater Management Policy**

NBG has adopted the 2014 NPDES Comprehensive Construction Stormwater Pollution Prevention Plan for the Guam Military Relocation DPRI Construction Program. A memorandum was issued by the NBG Public Works Director (PWD) to the Director of the Facilities Engineering and Acquisition Division (FEAD) to ensure that the construction requirements of the MS4 permit are met and will require contractors to select, install, implement and maintain stormwater control measures (Appendix H).

NBG will apply this program to all construction projects within the permitted area, which include both public and private maintenance contract and construction projects with total land disturbance of 1 acre or more.

**Past Year Activities:**

- Not applicable / required during this reporting period. FEAD adopted the 2014 DPRI Comprehensive SWPPP issued by the Installation Commanding Officer.

**Future Year Activities:**

- Continue to implement construction site SWPPP review process and stormwater runoff control measures in accordance with the 2014 DPRI CSWPPP.
- Provide a presentation and conduct an awareness training with FEAD personnel (ET's and CME's)
- Conduct regular meeting / communication with FEAD regarding regular inspections of storm water runoff control measures at construction sites.

**3.4.2 Construction Site Inventory**

NBG has an existing electronic tracking system that includes a list of all active private and public construction sites. The tracking system for site that are at least an acre in total disturbed land is currently in use. Final format of the construction site tracker will be developed based on the specific description of the SWMP document.

There are currently three (3) construction site projects that disturbs lands greater than 1 acre in total area. Three of these projects' broke ground prior to the issuance of NBG MS4 permit. All pertinent construction site project information is provided in Appendix I.

**Past Year Activities:**

- Apra Medical / Dental Clinic construction project was completed at the end of 2022; however, post construction inspection is currently on hold until final as-built drawings are received. The Apra Medical and Dental clinic is a 55,000 square foot outpatient clinic that will serve military service personnel and their families.
- P-491 project was completed at the end of 2022; however, post construction inspection is on hold until final as-built drawings are received. The project includes the construction of a consolidated operations facility, maintenance facility, and multipurpose / training facility.
- Lima Wharf repair is currently on-going. Project entails repairing and modernization of Lima Wharf and associated facilities.

**Future Year Activities:**

- FEAD will maintain an electronic (eprojects) construction sites inventory of sites > 1 acre or more total land disturbance.

- Document and report the number of active and new construction site projects operating under erosion and sedimentation control requirements of the 2014 DPRI CSWPPP.

### **3.4.3 Construction Plan Review Procedure**

Development of the NBG construction plan review procedure is part of the SWMP document.

There are currently three (3) construction site projects that disturbs lands greater than 1 acre in total area. One of the three construction projects broke ground prior to the MS4 permit issuance. Construction plan review process were conducted consistent with the Construction General Permit (CGP) requirements. The review process documentation may not be consistent with all 2014 DPRI CSWPPP requirements. All pertinent construction plan review information is provided in Appendix F. Project progress will continue to be documented and will be included in the next reporting period annual report.

#### **Past Year Activities:**

- Performed EV and Utilities stormwater compliance inspections on three (3) construction projects within NBG with >1 acre of total land disturbance.

#### **Future Year Activities:**

- NBG will continue to implement construction plan and SWPPP review process for development / redevelopment project with 1 acre or more total land disturbance in accordance with the 2014 DPRI CSWPPP / NBG MS4 SWMP.
- Continue implementation of inter-departmental review process to ensure compliance with site runoff control and Section 401 certification requirements as describe in the special condition section of the MS4 permit.
- Distribute the 2014 DPRI CSWPPP and the NBG MS4 Permit to FEAD construction plan reviewers when necessary.

### **3.4.4 Construction Site Inspection**

There are currently three (3) construction site projects that disturbs lands greater than 1 acre in total are. One of these projects (Apra Medical / Dental Clinic) broke ground prior to the MS4 permit issuance. Initial inspection conducted were consistent with CGP requirements, however, it may not be consistent with the MS4 permit / 2014 DPRI CWSPPP requirements. A summary of CY 2022 construction site inspections is provided in Table 4 below:

**Table 4: Summary of Construction Site Inspections**

Project Site	Inspection Date CY2022			
	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter
Apra Medical / Dental Clinic**	***	***	8/17/2022	Project completed
Lima Wharf Repair*	***	***	9/14/2022	11/29/2022
P-491**	***	***	9/15/2022	11/15/2022

Notes: \* On-going DPRI projects  
 \*\* Construction project completed  
 \*\*\* Inspection not conducted.

#### **Past Year Activities:**

- A total of five (5) quarterly Construction Site inspections were conducted in CY2022. Findings and non-conformances were forwarded to NBG and ROICC for corrective action and enforcement.

#### **Future Year Activities:**

- Conduct construction site BMP inspections for qualified active construction sites in accordance with MS4 Permit and DPRI CSWPPP requirements. Provide an inspection summary report including findings and non-conformances.
- NBG will continue to collect stormwater runoff control measure inspection data from applicable project sites and update the construction site inventory/ inspection tracker when new data becomes available.
- Develop a regular scheduled meeting / engagement between NBG MS4 Program Management team, FEAD and MCBCB CMEs / ETs.
- Evaluate effectiveness of the construction site inspections program in preventing construction related pollutants from reaching the MS4 conveyance system.

#### **3.4.5 Permittee Staff Training**

NBG will implement a training program for its staff whose primary duties are related to the implementing the construction stormwater program. Training program will include information regarding BMPs, pollution prevention, and other stormwater related information.

#### **Past Year Activities:**

- No training events conducted in 2022.

#### **Future Year Activities:**

- NBG will coordinate with FEAD and MCBCB CME Supervisor to ensure CMEs and ETs are provided training required to perform stormwater runoff control measures inspection and review.
- Survey FEAD for construction site stormwater runoff control measure inspection and SWPPP review training and,
- Assist CME Supervisors identify training opportunity for CMEs and ETs.
- Evaluate effectiveness of the construction site inspections training program in preventing construction related pollutants from reaching the MS4 conveyance system.

#### **3.4.6 Construction Site Operator Education & Public Involvement**

The NBG construction site operator education and public involvement program will be implemented in conjunction with the MCM 1 and MCM 2. MS4 permit compliance activities for this BMP requirements are described under MCM 1 and MCM 2 of this report.

#### **Past Year Activities:**

- Distribution of construction site informational materials was not conducted this reporting period. Informational materials will be distributed to all construction site workers next reporting period.

#### **Future Year Activities:**

- Distribute and track informational materials to construction site workers. Distribution will be conducted on new or on-going construction site or when new informational materials have been developed. Informational materials distribution should include variety and quantity distributed.

### **3.5 Post-Construction Stormwater Management**

NBG will develop, implement, and enforce a program to address post-construction storm water runoff from new development and redevelopment projects IAW the 2006 CNMI and Guam Stormwater Management Manual and 2010 Guam Transportation Stormwater Drainage Manual.

In addition to the BMP measures required during construction, the CGP conditions require owners, operators and contractors to provide post-construction BMP measures in areas undergoing new development or redevelopment. This program involves multiple components for reporting and describe in the following subsections.

#### **3.5.1 Post-Construction Stormwater Management Policy**

NBG has adopted the 2014 DPRI CSWPPP acceptable post construction BMPs. The

memorandum was issued by the NBG PWD to the FEAD Director to ensure that the post-construction requirements of the MS4 permit are met (Appendix F). As a non-traditional MS4, this memorandum will suffice the requirement of developing an ordinance / regulation for post construction stormwater management.

NBG will apply this program to ensure that site performance standards are met in all Installation's construction projects, which include both public and private maintenance contract and construction projects.

**Past Year Activities:**

- FEAD adopted the 2014 DPRI Comprehensive SWPPP including the specified acceptable post-construction BMPs.

**Future Year Activities:**

- Continue program implementation of inter-department review and as-built submittal requirements to ensure compliance with the site performance standard requirements.

### **3.5.2 Site Plan Review**

Written procedures for this BMP are included in the SWMP document. Full implementation during this permit compliance period is in accordance with the permit schedule. NBG adopted the 2014 DPRI CSWPPP inter-department consultation for site plan review and approval procedure.

An as-built certification submittals are already required for all NBG construction projects.

**Past Year Activities:**

- Implemented standard inter-departmental review process for two (2) completed construction project; however, as-built certifications for the two projects are pending approval.

**Future Year Activities:**

- Continue program implementation of inter-departmental review and as- built submittal requirements. Document "As-built" drawings and certifications and verify performance.
- Continue to implement the review of plans for post-construction BMP procedure as described in the SWMP document.

### **3.5.3 Long-Term Maintenance of Post-Construction BMPs**

Development of the NBG long-term post-construction BMPs maintenance program is included in the SWMP document.

NBG may adopt and implement the requirements describe on Section 3.6.7 of the permit where the Installation is required to conduct a minimum of annual inspection on all structural storm water controls. Maintenance will be provided based on the inspection report recommendations.

**Past Year Activities:**

- Conducted quarterly post-construction BMP operation and maintenance inspections on all active construction projects as describe in Section 3.6.7 of the permit.

**Future Year Activities:**

- Continue to implement the post-construction BMP operations and maintenance program as describe in the SWMP document.
- Document and report number and description of maintenance, repairs, and retrofit performed.

**3.5.4 Post-Construction Stormwater Control Measures Inventory and Maintenance**

An Asset Management System (AMS) or an equivalent program has been implemented by FEAD to track inspections and maintenance of permanent post-construction BMPs. It is important that plans be made for long-term operation and maintenance of permanent post-construction BMPs because if maintenance is inadequate or ceases the BMPs not work as originally intended. BMP's that are not working as designed may become a source of pollution.

**Past Year Activities**

- Post-construction BMP operation and maintenance and inspection database program description is currently being tracked by FEAD.

**Future Year Activities:**

- Continue to implement the post-construction BMP operations and maintenance program as describe in the SWMP document.

**3.5.5 Inspection and Enforcement**

NBG has adopted the inspection schedule provided in Section 3.6.7 of the permit or based on the inspection program description that is in the completed SWMP document. Inspection report will include recommendations for improvements and/or repairs to ensure compliance with regulatory requirements and conformance with Navy and DoD policies.

NBG has also adopted the draft Naval Facilities (NAVFAC) general stormwater management inspection and maintenance flowchart (Figure 1) to ensure the physical integrity of NBG's storm sewer system and compliance with the MS4 permit requirements.

Formal implementation of the post-construction stormwater control measures inspection program was executed this reporting period.

#### Past Year Activities:

- Post-construction BMP operation and maintenance and inspection database program description is currently being tracked by NBG to ensure that the physical integrity of NBGs storm water sewer system is in compliance with the MS4 permit.

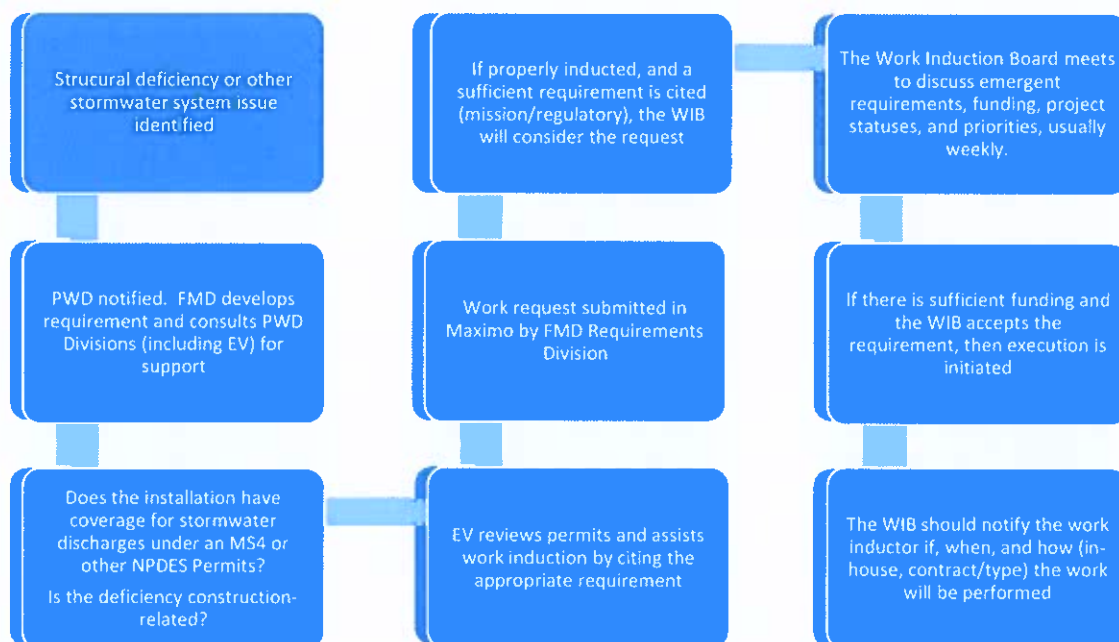
#### Future Year Activities:

- Continue to implement the post-construction BMP operations and maintenance program as described in the completed SWMP document in conjunction with existing NAVFAC processes related to stormwater management (see Figure 1).

### 3.6 Pollution Prevention / Good Housekeeping Program

NBG will develop and implement an operation and maintenance program that aims to prevent and reduce pollutant run-off into the storm drainage system in accordance with the MS4 permit requirements. Written procedures for the program implementation are part of the SWMP document.

**Figure 1: NAVFAC General Stormwater Management Flowchart**





### 3.6.1 Facility Assessment and "High Priority" Facilities Stormwater Controls Program

Development and mapping of facility stormwater control inventory is included in the SWMP document. At a minimum, stormwater control inspections will be conducted based on the schedule specified in Section 3.7.4 of the permit.

Assessment and inspection procedures for "High Priority" facilities has been incorporated in the SWMP document including identification of facilities that are subjected to weekly visual and quarterly comprehensive inspections.

Routine facility inspections are currently conducted by the Installation's HAZWASTE and EC Compliance IDIQ contractor in accordance with the RCRA and MSGP SPCC/SWPPP requirements. NBG plans to build upon and refine these procedures to meet the MS4 permit requirements. Inspections conducted during this reporting period is provided in Table 5 below:

**Table 5: CY 2022 MSGP Facility Inventory and Routine Inspection**

Facility ID	Date Inspected			
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
DLA (Formerly DRMO) Bldg. 631 Disposition Services Guam	3/7/2022	5/23/2022	9/08/2022	12/16/2022
Transportation Maintenance Shop, Bldg. 372	2/8/2022	4/27/2022	9/14/2022	11/14/2022
Material Handling Equipment, Bldg. 364	2/8/2022	4/27/2022	9/14/2022	11/14/2022
Filling Station, Bldg. 374	2/8/2022	4/27/2022	9/14/2022	11/14/2022
A 557 A-C, 561, 562, 563, 571, & 578	3/8/2022	5/24/2022	9/09/2022	11/18/2022
	3/3/2022	4/20/2022	9/14/2022	11/14/2022
3000-3002, 3008 Port Operations,	3/16/2022	5/20/2022	9/14/2022	11/16/2022
Bldg. 3169 Compound 1802-1803	3/16/2022	5/23/2022	9/14/2022	12/05/2022
Marina Facilities, Bldg. 5406	2/16/2022	4/20/2022	9/14/2022	12/30/2022
PACSEA Bldg. 3169	3/16/2022	5/20/2022	9/09/2022	11/16/2022
Navy Berthing Facilities: Bravo, Echo, Romeo, Sierra, Victor)	2/24/2022	5/20/2022	9/09/2022 9/23/2022	11/16/2022
US Coast Guard Station, Apra Harbor	3/08/2022	5/23/2022	9/09/2022	11/08/2022
U	3/08/2022	5/23/2022	9/09/2022	11/08/2022
. 4430, Site III	3/23/2022	5/24/2022	9/08/2022	12/08/2022

Facility ID	Date Inspected			
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Apra Harbor Wastewater Treatment Plant, Bldg 1794- 1809	2/22/2022	4/27/2022	9/14/2022	11/08/2022 12/13/2022
Bldg. 1793 A/B Utilities & Machine Shop	2/18/2022	4/27/2022	9/08/2022	11/08/2022
US Navy Sanitary Landfill	2/18/2022	5/23/2022	9/08/2022	12/05/2022
Seabee's Asphalt Batch Plant	*	*	9/28/2022	*

Source: Environmental Compliance IDIQ N40192-21-D-1820 - MSGP Facility Inspection Report  
Notes: \* Inspection not conducted.

Eighteen (18) facilities located within the MS4 permitted area were visited at least once per quarter for good housekeeping and industrial outfall inspection. A total of sixty- nine (69) inspections were conducted during this reporting period. Table 6 below provides a summary of the CY2022 inspection findings:

**Table 6; CY2022 Inspection Summary**

Inspection Period	Findings / Deficiency	Inspection Comments
1 <sup>st</sup> Quarter	Forty-four (44) Housekeeping	Inspection report provided to NBG EV  IEPD for immediate action. Corrective measure documented in the original Environmental Compliance reports.
2 <sup>nd</sup> Quarter	Thirty-three (33) Housekeeping	
3 <sup>rd</sup> Quarter	Forty (40) Housekeeping	
4 <sup>th</sup> Quarter	Fifty-one (51) Housekeeping	

Source: Environmental Compliance IDIQ N40192-21-D-1820 - Facility Inspection Report

Additional storm water conveyance system inspections are conducted at the Guam High School facility within the Naval Hospital area. This sub-section of the Naval Hospital complex is covered under a Guam EPA SDWA Class V UIC permit. Regular storm drainage system maintenance and inspection is conducted monthly to ensure compliance with the UIC permit conditions.

Plans to abandon the UIC chambers in favor of a percolating ponding basin are in place. Stormwater conveyance inspections in accordance with the UIC permit conditions will continue until the conversion project is completed. A total of twelve (12) inspections and corrective action reports were provided by the Environmental Compliance during this reporting period.

#### **Past Year Activities:**

- Quarterly stormwater routine facility inspections were conducted from eighteen industrial/commercial facilities.
- Conducted monthly stormwater conveyance inspections at Guam High School facility within the Naval Hospital compound in accordance with the Guam UIC

regulation.

#### Future Year Activities:

- Develop a comprehensive facility inspection checklist to meet MS4 permit requirements through the SWMP document.
- Incorporate existing corrective action program in the MS4 enforcement response plan.
- Maintain the NBG facility inspection requirements in the new BOS, HAZWASTE and EC Compliance IDIQ contracts.
- Perform assessment on Guam High School facility once the ponding basin conversion project is completed and incorporate in the SWMP inspection program where applicable.

### 3.6.2 Storm Sewer and Catch Basin Maintenance

NBG maintains a performance-based ground maintenance contract which incorporate the management of the storm drain systems. Maintenance contract includes removal of trash, debris, and vegetation from curb gutters, inlets, brow ditches, drainage channels, swales, catch basin, yard drains and other devices used to direct flow of run-off. Table 7 below provide the scope of the storm drainage system maintenance contract:

**Table 7: NBG Permitted Area Storm Drainage System Maintenance**

Location	Annual Requirements	Performance Standard
NBG (including Naval Magazine Area)	31,307 LF	No evidence of obstructions in the visible area of the drainage systems. All accumulated obstructions and debris shall be removed from the work site and disposed of at the end of each workday.
NBG Housing:	6,452 LF	
Lockwood Terrace		
Nimitz Hill		
Apra View		
Apra Palm		
Harbor View		
North Tipalao		
Naval Hospital* (including Ocean Ridge Housing)	2,491 LF	
Source: NAVFAC Marianas Contract No.: N40192-20-D-9000		
Note: The Guam High School facility within the Naval Hospital area is covered under a Class V UIC permit. Regular storm drainage system maintenance and inspection is conducted monthly to ensure compliance with the UIC permit conditions.		

Contractors are also obligated to notify NBG of damages or other stormwater conveyance system issue outside the scope of their contract within 24 hours of discovery.

**Past Year Activities:**

- The storm sewer and catch basin maintenance program description was included and part of Contract N40192-20-D-9000 deliverables.
- Implemented existing storm sewer cleaning and trash removal in accordance with NAVFAC Marianas Facility Services Contract No.: N40192-20-D9000.
- Required storm sewer maintenance contractor to report storm sewer conveyance damages / issues within 24 hours of discovery.
- NBG conducted a bioswale inspection at Apra View Housing on 10/18/2022. Check dam rocks are currently overwhelmed by sediments and vegetation on all three bioswales.
- Bioswale inspection was conducted by NBG at Route 1, Medical and Dental Clinic on 8/18/2022. Heavy growth of weeds on check dam. Recommend removing vegetation prior to project acceptance.
- MCBCM MDC Stormwater Harvesting / Cistern – Lawn Irrigation inspection was conducted on 8/18/2022. Observed section of the distribution line to be leaking during the inspection. Recommend repairing leaking distribution line.

**Future Year Activities:**

- Modify and / or expand Facility Services Contract No.: N40192-21-D9000 to meet the MS4 SWMP storm sewer maintenance and inspection requirements.
- Incorporate storm sewer inspection program to the new BOS or alternate environmental compliance contract.
- Evaluate effectiveness of the storm sewer inspection and maintenance program in preventing debris and other pollutants from reaching any navigable water.

### **3.6.3 Street Sweeping and Cleaning**

Street sweeping has proven to be an effective method of removing sediment and debris from roadways before it reaches the drainage system. NBG maintains a performance-based street sweeping contract for cleared pavement, residential and non-residential areas. Contract includes roads and other paved areas such as parking lots an open storage area. Table 8 below provide the scope of the storm drainage system maintenance contract:

**Table 8: NBG Permitted Area Street Sweeping Schedule**

Location	Requirements	Performance Standard /
EODMU-5	325 MSF Quarterly	Contractor shall sweep roads and other paved surfaces to ensure they are clear in accordance with the specified Common Output Level.
NBG Housing:	2,500 MSF Monthly	
Lockwood Terrace		
Nimitz Hill		
Apra View		
Apra Palm		
Harbor View		
North Tipalao		
Naval Hospital	650 MSF Monthly	

Source: NAVFAC Marianas ISWM Contract No.: N40192-20-D-9000

Note: Some facility names are redacted for OPSEC reason.

**Past Year Activities:**

- The streets, roads and parking lot evaluation are conducted on a monthly basis per ISWM Contract No.: N40192-20-D-9000.
- Implemented existing street sweeping and trash removal in accordance with NAVFAC Marianas Facility Services Contract No.: N40192-20-D9000.

**Future Year Activities:**

- Modify and / or expand Facility Services Contract No.: N40192-20-D9000 to meet the MS4 SWMP streets, roads and parking lots sweeping and trash removal.
- Incorporate street, roads and parking lots inspection and cleaning to the new environmental compliance contract.

### **3.6.4 Pesticide, Herbicide and Fertilizer Application Management**

Written procedure for chemical application management will be included in the NBG MS4 SWMP. Control measures for this BMP will be identified in the SWMP document.

Although formal BMP implementation in accordance with the SWMP is not required for this reporting period, NBG has an ongoing program with existing control measures designed to ensure that pesticides and herbicides are safely and properly applied, and the application process does not affect or enter U.S. waters to the MEP. NBG uses an integrated pest management approach and conducts pesticide / herbicide application only when no other non-chemical approaches are practical.

NBG maintains a grounds maintenance contract (NAVFAC Marianas Contract No.: N40192-20-

D9000) that includes restrictions, procedures, and reporting requirements to minimize landscaping-related pollution:

- The contract requires that herbicide spraying shall be performed only on still days and will be stopped when unfavorable weather or other conditions exist. Application of herbicides on NBG grounds needs prior approval of the Contracting Officer and contractors are required to submit an Herbicide Use Sheet.
- Only organic fertilizer is allowed in NBG grounds and applied at rates in accordance with the manufacturer recommendations. Contractors are required to submit a soil test analysis to determine the fertilizer type to be use.
- Extraneous vegetation, such as grass, weeds, and tree sprout shall be removed through weeding. Weeding shall include but is not limited; to pulling out of weeds, grass, vines, roots, and removing dried leaves and debris. To keep it away from waterways, contractor is required to remove weeding debris and dispose of from the work site at the end of each workday.
- Contractors are required to recycle all organic debris including grass clippings, brush, tree limbs, hedge clippings, etc. Organic debris shall be delivered to an approved recycling facility. Green waste collected from NBG grounds are tracked and recorded through a monthly compost report and annual green waste report.

All contractors involved in pesticide application within NBG facilities are required to have a Guam EPA certified pesticide applicator. This requirement ensures that contractor personnel involved in pesticide application have received training in the proper handling of chemicals. The brand, type, quantity, and locations of applied pesticides are monitored under the N40192-21-D-1820 contract.

#### **Past Year Activities:**

- The NBG chemical application program description is part of NAVFAC Marianas Facility Services Contract.
- Implemented contract restrictions and reporting requirements to minimize pollution from landscaping activities.
- Restricted pesticide application to Guam EPA certified pesticide applicators under the Installations Facility Service Contract.

#### **Future Year Activities:**

- Modify and / or expand the Facility Services Contract to meet the NBG MS4 SWMP chemical application program requirements.
- Continued implementation of contract restriction that minimized pollution generation through landscaping activities including the use of Guam EPA

certified pesticide applicator only.

- Maintain chemical application tracking requirements in the EV IDIQ Contract N40192-21-D-1820

### **3.6.5 Contract Management**

All NBG contracts comes standard with Spec Item 2.10 (Environmental Management and Sustainability) requiring contractors to perform work consistent with the Installation's Environmental Management System (EMS) and comply with all applicable Federal, State, and local laws, regulations, executive orders, and with base-wide instructions, standards and permit requirements. Inspection of any of the facilities operated by the Contractor may be accomplished by the Installation Environmental Protection Coordinator, or authorized officials on a no-notice basis during Government regular working hours.

All contractors and their sub-contractor, performing tasks that have the potential to cause a significant environmental impact, are required to provide competent personnel on the basis of appropriate education, training or experience. In the event an EMS non-conformance or environmental non-compliance associated with the contracted services, tasks, or actions occurs, the Contractors are required to take corrective and/or preventative actions, assume legal and financial liability for the non-compliance and take corrective action immediately to remedy the noncompliance.

#### **Past Year Activities:**

- Implemented standard contract format that includes Spec Item 2.10 in all NBG contracts.
- Required contractors to implement corrective and preventative actions for not conforming to the base's EMS program and/or other environmental regulations.

#### **Future Year Activities:**

- Continued implementation of contract management procedure of Spec Item 2.10 inclusion on all NBG contract solicitation
- Incorporate contract Spec Item 2.10 into the MS4 SWMP ERP.

### **3.6.5 Debris Control Program**

This is a multi-faceted program aimed at reducing discharge of pollutants into the MS4 system and may include all BMPs describe under Section 3.6 of this report. Crucial component of this program is the development of a Trash Reduction Plan and Asset Management System (AMS).

In accordance with the permit, NBG has developed a Trash Reduction Plan that outlines the procedure for trash reduction activities, and monitor reductions of trash loads from the MS4.

The AMS will serve as an inventory of asset such as the storm drainage system, structural

controls, and equipment and will be used to prioritize inspections / maintenance activities, such that resources are focused on areas that pose the greatest risk to water quality.

**Past Year Activities:**

- Description of the NBG's trash reduction plan and asset management system, including inspection program, was included and part of Contract N40192-21-D9000 deliverables.

**Future Year Activities:**

- Modify and / or expand the new EV Compliance IDIQ contract to include implementation and monitoring of the trash reduction plan and asset management system.
- Modify and / or expand the new EV Compliance IDIQ contract to include methods of measuring the volume of trash collected annually to observe efficacy of the trash reduction plan. Analyze annual trend based on collected volume using graphical / statistical means.

**3.6.6 Industrial / Commercial Stormwater Sources**

NBG has an on-going program to minimize pollutants discharges from industrial / commercial sources through the MSGP and AHWWTNPDES permits.

Stormwater pollution prevention activities under the MSGP is provided in Section 3.6.1 of this report. In addition, NBG has an existing inventory and inspection schedule for all industrial / commercial facilities located within the MS4 permitted area. Although inspections are geared towards compliance with the Industrial Waste Discharge Certification Program (IWDCP) requirements of the AHWWTNPDES permit, provisions are included in the inspection checklist to include other environmental concerns such as stormwater pollution.

Additionally, the BOS Contractor IWDCP Program Manager also handles the MSGP program and very keen to call-out possible industrial / commercial facility-related stormwater quality issues. Table 9 below provides an inventory of industrial/commercial facilities and their inspection schedule:



**Table 9: CY 2022 Industrial / Commercial Facility Inventory and Inspection**

Facility ID		Date Inspected			
Building Name	Bldg. No.	1st QTR	2nd QTR	3rd QTR	4th QTR
X-ray BOWTS	791XR	11/24/2021	2/25/2022	4/15/2022	8/16/2022
U	1, 2, 3, 5	12/16/2021	3/08/2022	5/23/2022	9/09/2022
MWR Typhoon Complex	75	11/23/2021	2/18/2022	5/11/2022	9/09/2022
NEX Car Care Center	257	11/01/2021	3/07/2022	5/23/2022	9/26/2022
NEX Food Court	258	11/01/2021	3/03/2022	5/11/2022	9/08/2022
Orote Commissary	275	11/10/2021	2/18/2022	5/11/2022	9/26/2022
Wendy's	282	11/10/2021	3/03/2022	5/11/2022	9/06/2022
McCool Elementary/Middle School	311	11/10/2021	2/08/2022	5/24/2022	9/16/2022
Forklift Maintenance Shop	364	11/03/2021	2/08/2022	4/27/2022	9/14/2022
Transportation Vehicle Wash Rack	364A	11/03/2021	2/08/2022	4/27/2022	9/14/2022
Transportation Car Wash Station	375	11/03/2021	2/08/2022	4/27/2022	9/14/2022
	557A-C	12/27/2021	3/08/2022	5/24/2022	9/09/2022
Alpha Compound Vehicle Wash Rack	563	12/27/2021	3/08/2022	5/24/2022	9/09/2022
Navy Water Treatment Plant	576, 580, 597	12/22/2021	2/08/2022	5/24/2022	8/26/2022
US Navy Laboratory	585, 585A	12/22/2021	2/08/2022	5/24/2022	8/26/2022
Camp Covington Enlisted Dining Facility (Galley)	586	12/22/2021	3/07/2022	5/18/2022	9/26/2022
Camp Covington Boiler	586A	12/22/2021	2/24/2022	5/25/2022	9/14/2022
US Navy Dental Clinic	1	11/01/2021	2/18/2022	5/20/2022	9/16/2022
MWR Auto Hobby Shop	1982A	12/17/2021	2/25/2022	5/13/2022	8/26/2022
NEX Laundromat	1988	11/03/2021	3/03/2022	4/20/2022	8/16/2022
Sierra Wharf BOWTS	1999	11/24/2021	2/25/2022	4/15/2022	8/16/2022
	2105, 2108, 2109, 2112, 2113	12/20/2021	3/03/2022	5/25/2022	9/20/2022
	4451	12/21/2021	2/24/2022	4/27/2022	9/14/2022
	4907	11/24/2021	2/28/2022	5/06/2022	8/16/2022
Steam Air Water Plant (Victor Wharf Boiler)	6025	*	*	*	*
Polaris Point BOWTS	CNRAF	*	*	*	*
Victor Wharf BOWTS	CNRVW	11/24/2021	2/25/2022	4/15/2022	8/16/2022
Sierra Wharf Package Boiler	PB-4	12/21/2021	2/24/2022	5/25/2022	9/14/2022
Uniform Wharf Package Boiler	PB-5	12/21/2021	2/24/2022	5/25/2022	9/14/2022
	3000, 3001, 3008	12/16/2021	3/03/2022	4/20/2022	9/14/2022

Source: Environmental Compliance IWDGP Quarterly Report.

Note: \* Facilities are secured and not in operation.

Thirty-one (31) industrial / commercial facilities located within the MS4 permitted area were visited at least once every quarter for good housekeeping inspection. A total of one hundred sixteen (116) inspections were conducted during this reporting period. All possible stormwater quality issues noted during the inspections are documented and forwarded to NBG Environmental program coordinator for corrective action.

NBG also maintains an inventory of various hazardous waste accumulation points. There are currently twenty-nine (29) satellite accumulation sites (SAS), four (4) less than 90-day and one (1) Conforming Storage Facility (CSF) for hazardous waste located within the MS4 permit area. Regular inspections are afforded to each of these facility in accordance with 40 CFR 264. This inspection also checks for the facility good housekeeping practices to prevent and reduce discharge of pollutants into the environment particularly the MS4 system from these sites. Table 10 below provides a summary of NBG hazardous waste accumulation site inspection activities:

**Table 10: CY 2022 Hazardous Waste Facilities Inspection**

HW Facility	No. of Facility	Inspection Frequency	Total Facility Inspections
SAS	29	Monthly	64
90-Day Facility	4	Monthly	64
CSF	1	Monthly	69

Sources: Hazardous Waste SAS Weekly Inspection Report – HAZWASTE IDIQ N40192-20-R-1800  
Multiple SAS's are located within some facility / compound.

A total of one hundred ninety-seven (197) hazardous waste facility inspections were conducted during this monitoring period.

**Past Year Activities:**

- The NBG industrial / commercial facilities inspection program description was included and part of Contract N40192-21-D-1820 deliverables.
- Implemented industrial facility inspection through the HAZWASTE IDIQ contractor's reports.
- Implemented good housekeeping inspections to various hazardous waste facilities through HAZWASTE IDIQ contractor's deliverables.

**Future Year Activities:**

- Modify and / or expand the environmental compliance contract to meet the NBG MS4 SWMP industrial / commercial facilities inspection requirements.
- Continued implementation of hazardous waste facilities inspection program.
- Update existing inspection procedures and checklist language to meet the NBG MS4 SWMP requirements.

## **Section 4 MONITORING REQUIREMENTS**

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The NBG MS4 comprehensive monitoring and assessment program is part of the SWMP document. This program outlines the technical and management procedures that will be implemented to meet the monitoring requirement of the MS4 permit.

### **4.1 Consolidated Information Tracking System**

The permit requires NBG to develop an electronic tracking system to monitor compliance activities and facilitate data collection process that will be included in the annual reports. This required consolidated information tracking system is dependent on the MCM BMPs and other requirements specified in the SWMP.

An interim information tracking spreadsheet was created for the purpose of submitting the 4<sup>th</sup> annual report (Appendix J).

#### **Past Year Activities:**

- Description of the NBG's MS4 comprehensive monitoring and assessment program is included in the SWMP document
- Interim consolidated information spreadsheet was used to track and monitor the 4<sup>th</sup> annual report MS4 permit requirements.

#### **Future Year Activities:**

- Continue to consolidate information on the tracking system to monitor compliance activities and facilitate data collection process based on the NBG SWMP document requirements on a yearly basis.
- Continue to implement the compliance activity schedule based on the information tracking system on a yearly basis.

### **4.2 Sampling and Monitoring Program**

The NBG SWMP includes a sampling and monitoring program which identifies NBG's stormwater outfalls subject for monitoring. The program describes the outfall sample collection, dry weather field inspection and their respective reporting schedules to Guam EPA and U.S. EPA.

NBG will implement the wasteload allocation (WLA)-based effluent limitations describe in Part 4.1.1 of the permit.

NBG utilized the services of the EV Compliance IDIQ contractor to comply with the sampling and analytical requirements of the permit. The contractor is required to use laboratory's that are accredited to perform DMR sample analysis.

#### **Past Year Activities:**

- Identified a contract mechanism to implement the NBG MS4 monitoring program.
- Approval from USEPA to adopt the MSGP qualifying rain events for Guam for the MS4 program was granted towards the end of January 2023.
- Outfall Talis4 sample was received by the laboratory past the recommended holding time. Sample analysis was cancelled.
- Attempted to sample Outfall Vic3, Hosp4, AP11, and Sum1, however, insufficient flow was observed upon arrival.
- Outfall UniTan1 and SRF4 outfalls were not sampled this reporting period as the storm drain inlets do not have a sample port.

#### **Future Year Activities:**

- Review of the completed SWMP sampling and monitoring requirements and assess existing resources. Program managers to submit request for funding if applicable.
- Modify and / or expand the environmental compliance contract to meet the NBG SWMP sampling, monitoring, recordkeeping and reporting requirements.

### **4.3 Program Evaluation**

This requirement is dependent on the availability of sampling and analytical results. NBG plans to adopt a three-tiered approach for future evaluation of its MS4 program implementation. Program effectiveness assessment will include the following step:

- Assessment of program operations
- Evaluation of social indicators through surveys
- Outfall / Effluent quality monitoring.

#### **Past Year Activities:**

- Not applicable / required during this reporting period. Written strategy for the determination of NBG SWMP effectiveness is dependent upon the availability of sampling and analytical results.

#### **Future Year Activities:**

NBG's annual reports will be completed and submitted in accordance with the MS4 permit and

the completed SWMP requirements. Reports will include a summary of collected data and the required assessment of the results.

#### **4.4.1 Annual Monitoring Reports**

Stormwater monitoring was not conducted during this reporting period due to several factors: Attempted to sample during a qualifying storm event, however, insufficient flow was observed upon arrival to the outfalls, several incorrect monitoring locations were sampled, WET sample was received past the recommended holding time, therefore, sample analysis was cancelled.

Annual analytical reports will be submitted in a format and schedule consistent with the requirements specified in Part 5.2.3.7 of the permit.

#### **Past Year Activities:**

- Discharge Monitoring Reports (DMR) was submitted to US EPA and Guam EPA based on the requirements specified in Part 5.2.3.7 of the permit (Appendix K).

#### **Future Year Activities:**

- Implement sampling and monitoring based on the program that is described in the SWMP document.
- Develop list of pollutants of concern (POC), in addition to POC's listed in Table 3 of the permit, which may be observed from stormwater discharges specific to a particular outfall where applicable.
- Submit annual monitoring report based on the requirements specified in Part 5.2.3.7 of the permit.

#### **4.4.2 Year 4 Annual Report**

This Year 4 reporting period annual report will be submitted to US EPA Region 9 NPDES Permit Section and Guam EPA's Water Pollution Control Program Manager upon review and approval of the IEPD. This annual report, with some redacted information for operational security reasons, will be made available online next to the NBG completed SWMP document:

- <https://www.cnic.navy.mil/Guam/>
- [http://www.cnic.navy.mil/regions/jrm/installations/navbase\\_guam/](http://www.cnic.navy.mil/regions/jrm/installations/navbase_guam/)
- <https://jrm.cnic.navy.mil/installations/NAVBASE-Guam/About/Departments/Envir>

#### **4.4.3 Fiscal Analysis**

The Annual Fiscal Analysis will be completed and submitted as required by the permit. The analysis summarizes the capital needed to maintain the expenditures of operation, maintenance and resources needed to meet the development, implementation and enforcement activities

required by the SWMP document.

See Appendix D: NBG MS4 Year 4 Fiscal Analysis

# **Appendix A:**

## **NBG MS4 Permitted Facilities Overview**





Crosshair System: UTM Zone 51 North  
Projection: Transverse Mercator  
Datum: D 1963 / 1964

## STORM WATER MS4 AREAS

Date: 9/8/2022  
**FOR OFFICIAL USE ONLY**

This map and data are provided for official use only. It is not to be used for any other purpose. It is not to be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the express written permission of the U.S. Navy. It is not to be used for any other purpose. It is not to be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the express written permission of the U.S. Navy.

**LEGEND:**

- Inlet
- Junction
- Outfalls
- Sheet Flow Point
- Source
- Swale
- Pipe Culvert
- Main Road
- Ponding Basin
- Road/Parking/Other
- Paved
- Building/Structure
- Navigable Waters
- MS4 Areas
- Installation Area



# **Appendix B:**

## **NBG MS4 General Permit Schedule Summary**

**Appendix B: Naval Base Guam MS4 General Permit Schedule Summary**  
**Permit Effective Date: February 1, 2019**

<b>Permit Citation</b>	<b>Description of Requirement</b>	<b>Permit Language</b>	<b>Due Date</b>	<b>Permit Year</b>
Part 2.1, 3.4.1 and 3.5.1	Begin implementation of permit requirements, including existing local construction and post-construction requirements	Effective date of permit (EDOP)	01-Feb-2019	1
Part 4.1.1	Develop TMDL compliance plan and implementation schedule (if appropriate); otherwise TMDL requirements take effect 18 months after permit effective date	12 months after EDOP	01-Feb-2020	2
Part 2.2	Develop SWMP consistent with permit requirements for first 18 months	18 months after EDOP	01-Aug-2020	2
Part 2.3.1	Ensure adequate legal authority			
Part 2.4.1	Develop enforcement response plan			
Part 3.1.1	Develop public education program			
Part 3.2.1	Develop public participation program			
Part 3.4.1	Update existing construction site controls program to be consistent with permit			
Part 3.5.1	Update existing new development/redevelopment controls program to be consistent with permit			
Part 3.6.1	Develop municipal operations plan			
Part 5.1	Develop information tracking system			
Part 5.2.1	Develop monitoring plan			
Part 3.3.1	Develop IDDE program	Two years after EDOP	01-Feb-2021	3
Parts 3.4.5.1.1.1 and 3.4.5.1.3.1	Training for construction inspectors and plan reviewers			
Part 3.6.5.2.1.4	Implement pollution prevention plan for municipal operations			
Part 3.6.12	Develop trash reduction plan			
Part 3.6.13	Develop asset management plan			
Part 3.7.1	Develop program for industrial/commercial sources			
Part 3.3.7.2	Training for general field staff regarding IDDE program			
Part 3.5.7	Develop retrofit plan			
Part 3.7.3.2	Notification of industrial/commercial of program requirements			
Part 3.1.3	Assess effectiveness of public education program			
Part 5.4.1	Submit annual report	Three years after EDOP	01-Feb-2022	4
Appendix B, Section I	Permit reapplication	Four years after EDOP	01-Feb-2023	5
	Compliance with trash reduction requirements	90 days after each reporting period		
		Within 6 months of permit expiration		
Parts 3.6.12.1.6 and 3.6.12.3	Compliance with trash reduction requirements	As soon as practicable but not to exceed 15 years from development of plan		
Parts 4.1.1	Compliance with TMDL requirements	As soon as practicable (if permit is modified to add a compliance schedule)		

# **Appendix C:**

## **NBG Environmental Policy Statement**

# **Appendix D:**

## **NBG MS4 Fiscal Analysis Report (Year 4)**

# **Appendix E:**

## **Annual Training Rosters**

# MS4 TRAINING RECORDS

CALENDAR YEAR 2022

prepared by:



N40192-21-D-1820

# **Appendix F:**

## **MS4 Dry Weather Field Screening Report**

# **Appendix F:**

## **MS4 Dry Weather Field Screening Report**



# U.S. NAVAL BASE GUAM

MS4 Dry Weather Field Screening Reports  
(Permit ID: GUS040000)

CALENDAR YEAR 2022

prepared by:



N40192-21-D-1820

# **Appendix G:**

## **IDDE Findings/Corrective Actions & SSO Reports**

## IDDE Findings and Corrective Measures

Site Name	Facility ID	Facility Number	Facility Name	Map Grid/ Appendix AgwNo.	Where Addressed in Report (Section No.)	Direct Discharge	Type	Discharge Estimate (gallons per event)	Recommended Corrective Action	Budgetary Cost Estimate	Priority	GOV MAXIMO WORK ORDER	DZ MAXIMO WORK ORDER
1 NAVAL HOSPITAL	NFA100001408979	28	FIRE STATION 4- NAV HOSPITAL	8Y34/ FIGURE BC-10	SECTION 7.1.1.1	WASH SINK	ID 5		CONNECT THE DISCHARGE LINE FROM THE WASH SINK TO THE SANITARY SEWER.	14500	H	BD3FRL	900838
2 NAVAL MAGAZINE	NFA20000698602	597NM	FENA WTP BFC BLDG	CW20/ FIGURE SC-8	SECTION 7.1.2.1	COAGULANT INJECTION SYSTEM (SPILLS)	ID	VARIOUS	INSPECT AND SEAL ALL CONNECTIONS OF INJECTION SYSTEM AND PROVIDE A SECONDARY CONTAINMENT FOR THE COAGULANT CONTAINERS.	1800	H	BD3FRL	900839
3 NAVAL MAGAZINE	NFA10000994295	740NM	ORDNANCE OPERATIONS BLDG	CL22/ FIGURE SC-8	SECTION 7.1.2.8	WASTEWATER OVERFLOW FROM SEPTIC TANK	PID	VARIOUS	FIX THE BROKEN PIPE AND PERFORM ANY OTHER NECESSARY MAINTENANCE TO THE SEWER SYSTEM.	6000	H	BD3FRL	900843
4 NAVBASE GUAM	NFA100001528796	225Y	MSC / CABRAS MARINE SANDBLAST/PAINT FACILITY	CH13/ FIGURE BC-2	SECTION 7.1.1.2	TRENCH DRAIN (SPILLS)	ID	VARIOUS	DISCONNECT THE TRENCH DRAIN FROM THE STORM DRAIN SYSTEM BY TERMINATING THE TRENCH DRAIN CONNECTION WITHIN THE FACILITY. IMPLEMENT BMPs.	1000	H	BD3FRL	900842
5 NAVBASE GUAM	NFA100001123018	1794	WWTP MAIN OFFICE BLDG	CM11/ FIGURE SC-3	SECTION 7.1.1.5; SECTION 7.2.1	WASH SINK	ID 1		CONNECT THE DISCHARGE LINE FROM THE WASH SINK TO THE SANITARY SEWER.	10	H	BD3FRL	900849
6 NAVBASE GUAM	NFA100009942126	1882A	HOBBY SHOP/ YOUTH CENTER	CL10/ FIGURE BC-3	SECTION 5.1.1.4	WASH SINK	ID 2		RE-ROUTE THE DISCHARGE PIPING FROM THE WASH SINK TO THE FUNNEL DRAIN ON THE RIGHT SIDE.	2000	H	BD3FRL	900846
7 NAVBASE GUAM	NFA100009941671	2105	EOD ARMORY BUILDING	CH12/ FIGURE BC-2	SECTION 6.1.1.8	WASH SINK	ID 0.5		CONNECT THE DISCHARGE LINE FROM THE WASH SINK TO THE SANITARY SEWER. IMPLEMENT BMPs.	105500	H	BD3FRL	900854
8 NAVBASE GUAM	NFA100001748175	3001A	DIVING OPNS / COMMUNICATIONS	CL13/ FIGURE BC-2	SECTION 7.1.1.6	WASH SINK	ID	VARIOUS	RECONNECT THE OUTLET PIPE TO THE DISCHARGE PIPE TO SEWER.	1000	H	BD3FRL	900848
9 NAVBASE GUAM	NFA200000648373	3201CNR	COVERED STORAGE	CM16/ FIGURE BC-3	SECTION 7.1.1.8	FLOOR WASH DOWN	ID 30		ELIMINATE THE GROUND SURFACE WASHING ACTIVITY AND USE DRY CLEAN UP METHODS OR DISCONTINUE THE USE OF CLEANING AGENTS. IMPLEMENT BMPs.	N/A	H	BD3FRL	900857
10 NAVBASE GUAM	NFA100001119871	8100	NAVFACMAR FSCM BOSG BUILDING	CM16/ FIGURE SC-3	SECTION 7.1.1.12	BREAK ROOM	ID 1		UNCLOG THE BUILDING'S SEWER LINE AND RECONNECT THE DISCHARGE PIPE TO THE SEWER LINE.	2000	H	BD3FRL	900851
11 NAVBASE GUAM	NFA100009940208	SBL	JOINT REGION MARIANAS CENTRAL WAREHOUSE	CK10/ FIGURE BC-1	SECTION 6.1.1.12	LAVATORY SINKS	ID 0.5		RECONNECT THE DISCHARGE PIPE TO THE SANITARY SEWER.	1.6	H	BD3FRL	900928
12 SASA VALLEY	NFA100009947434	1729DD	CHECKERS SHACK 1 TOILET	CC35/ FIGURE BC-5	SECTION 6.1.2.2; SECTION 6.2.6	TOILET DISCHARGE PIPE BATHROOM WALL	ID	VARIOUS	UNCLOG SEWER LINE AND SEAL S	1600	H	BD3FRL	900855
13 SASA VALLEY	NFA100009947434	1729DD	CHECKERS SHACK 1 TOILET	CC35/ FIGURE BC-5	SECTION 6.1.2.2; SECTION 6.2.6	BATHROOM WALL	ID	VARIOUS	PLUG THE HOLE IN THE BATHROOM WALL.	1000	H	BD3FRL	900842
14 APPRA HEIGHTS	NFA100009946391	4176AH	APRA HIS MINI- MART	CR19/ FIGURE BC-4	SECTION 5.1.2.1	REVERSE OSMOSIS REJECT WATER	ID	VARIOUS	OBTAIN ADDITIONAL INFORMATION ON THE REVERSE OSMOSIS SYSTEM AND ANTICIPATED REJECT WATER CONCENTRATION. BASED ON THIS INFORMATION, THE INSTALLATION MAY PURSUE COVERAGE OF THIS NON-STORM WATER DISCHARGE UNDER A SEPARATE NPDES PERMIT.	N/A	M	BD3FRL	900856
15 NAVAL HOSPITAL	NFA200001180375	480	DUMPSTER ENCLOSURE - GUAM	BK33/ FIGURE BC-10	SECTION 7.1.3.2	LIQUIDS FROM DUMPSTER AND DUMP TRUCK	ID	VARIOUS	IMPLEMENT BMPs.	N/A	M	BD3FRL	900935
16 NAVAL MAGAZINE	NFA100009945720	1011NM	MISSILE/SPARE STORAGE	CZ23/ FIGURE BC-8	SECTION 7.1.2.2	VEHICLE WASH WATER	ID 20		ELIMINATE THE USE OF CLEANING AGENTS AT THIS FACILITY.	N/A	M	BD3FRL	900866

## IDDE Findings and Corrective Measures

17	NAVBASE GUAM	NFA100001528812	205Y	MISC/ CABRAS MARINE SHOP & ADMIN BLDG	CH14/FIGURE BC-2	SECTION 7.1.1.1: SECTION 7.2.1	WASH SINK	ID	12	1000	M	BD3FSD	900864
18	NAVBASE GUAM	NFA200000646507	495Y	SALT WATER PUMP HOUSE	CL13/FIGURE SC-2	SECTION 7.1.1.3	SECONDARY CONTAINMENT FOR THE OIL RECOVERY TANK	ID	VARIOUS	1500	M	BD3FSC	900868
19	NAVBASE GUAM	NFA200000646605	132	BARRIER HYDRAULIC BLDG	CO13/FIGURE BC-3	SECTION 7.1.1.4	HOLES IN WALL	ID	VARIOUS	1	M	BD3FSG	900870
20	NAVBASE GUAM	NFA100000942470	503	CPO/LOUNGE CLUB	CO16/FIGURE BC-3	SECTION 5.1.1.1: SECTION 5.2.2	HOT FOOD WELL	ID	25	8000	M	BD3FSF	900869
21	NAVBASE GUAM	NFA100000942484	525	MED HAZMAD STORAGE	CO16/FIGURE BC-3	SECTION 6.1.1.3	CHEMICAL STORAGE (SPILLS)	ID	VARIOUS	1200	M	BD3FSK	900874
22	NAVBASE GUAM	NFA100000942894	578	B COMPANY HAZ/FLAM STRG	CP16/FIGURE BC-3	SECTION 6.1.1.4	FUME DISBURSE BOX DRAIN (SPILLS/MAINTENANCE)	ID	VARIOUS	1000	M	BD3FSH	BD3FSH
23	NAVBASE GUAM	NFA100000941056	600	OROLE POINT BOWLING LANES	CL09/FIGURE BC-1	SECTION 6.1.1.5	CONTAINMENT BASIN DISCHARGE VALVE	ID	VARIOUS	1000	M	BD3FSP	900880
24	NAVBASE GUAM	NFA100000942368	634F	USDA TRAP SHOP	CL11/FIGURE BC-3	SECTION 6.1.1.6	WASH SINK	ID	1	1000	M	BD3FSL	900876
25	NAVBASE GUAM	NFA100000947185	641	DOG KENNEL (U.S.O.A.)	CL11/FIGURE BC-3	SECTION 6.1.1.7	WASH TUB	ID	10	1000	M	BD3FSS	900883
26	NAVBASE GUAM	NFA100000947318	780XR	COLD STORAGE BUILDING	CM18/FIGURE BC-3	SECTION 5.1.1.2	WASH SINK	ID	1	1000	M	BD3FSM	900881
27	NAVBASE GUAM	NFA100000948576	2118	WAREHOUSE #9 - DDGM	CK31/FIGURE BC-2	SECTION 6.2.4	SPILL AT TRENCH DRAIN	ID	VARIOUS	N/A	M	BD3FSW	900888
28	NAVBASE GUAM	NFA200000333172	3059	CRG-1 DEL GUAM ADMIN OFFICE	CL09/FIGURE BC	SECTION 7.1.1.7: SECTION 7.2.1	WASH SINK	ID	0.5	1000	M	BD3FSE	900882
29	NAVBASE GUAM	NFA100000947826	3179	WAREHOUSE/OPS STRGE	CL12/FIGURE BC 3	SECTION 6.1.1.9	WASH SINK	ID	0.5	1000	M	BD3FT4	900895
30	NAVBASE GUAM	NFA200000437092	4436PP	TRANSIT SHED	CH15/FIGURE BC 2	SECTION 7.2.4	DISHWASHING AT EXTERIOR HOSE BIB	ID	VARIOUS	N/A	M	BD3FST	900884
31	NAVBASE GUAM	NFA100001120057	4920	UTILITIES STORAGE	CB21/FIGURE BC-5	SECTION 7.1.1.0 SECTION 7.2.6	WASH SINK OUTDOOR STORAGE RUNOFF	ID	1	500	M	BD3FT6	900898
32	NAVBASE GUAM	NFA100001119924	4921	WAREHOUSE/STORAGE	CB21/FIGURE BC-6	SECTION 7.1.1.0 SECTION 7.2.6	WASH SINK AND ICE MACHINE DRAIN (MAINTENANCE) OUTDOOR STORAGE RUN OFF	ID	VARIOUS	N/A	M	BD3F5V	900887
33	SASA VALLEY	NFA100000947345	1704SV	POL MA NT SHOP	CO20/FIGURE EC-5	SECTION 6.1.2.1	TRENCH DRAIN	ID	VARIOUS	1000	M	BD3FT7	900902
34	SASA VALLEY	NFA100000947586	515V	RME-180 STORAGE TANK	CO20/FIGURE BC-5	SECTION 6.2.7	LOWER SASA VALLEY VALVE BOX (LEAKS)	ID	VARIOUS	N/A	M	BD3FSX	900891
35	SASA VALLEY	NFA100000947595	525V	RME-180 STORAGE TANK	CO21/FIGURE BC-5	SECTION 6.2.7	LOWER SASA VALLEY VALVE BOX (LEAKS)	ID	VARIOUS	10000	M	BD3FT9	900904
36	SASA VALLEY	NFA100000947602	535V	RME-180 STORAGE TANK	CO21/FIGURE BC 5	SECTION 6.2.7	LOWER SASA VALLEY VALVE BOX (LEAKS)	ID	VARIOUS	N/A	M	BD3F5Z	900894
37	SASA VALLEY	NFA100000947611	545V	RME-180 STORAGE TANK	CO20/FIGURE BC-5	SECTION 6.2.7	LOWER SASA VALLEY VALVE BOX (LEAKS)	ID	VARIOUS	N/A	M	BD3FT8	900906
38	SASA VALLEY	NFA100000947620	555V	TURBINE FUEL (JP5) TANK	CO20/FIGURE BC-5	SECTION 6.2.7	LOWER SASA VALLEY VALVE BOX (LEAKS)	ID	VARIOUS	N/A	M	BD3FT3	900896

# U.S. NAVAL BASE GUAM

## Sanitary Sewer Overflows Report NPDES GU0110019

CY2022

prepared by:



N40192-21-D-1820

**U.S. Naval Base Guam**  
**Sanitary Sewer Overflows Report**  
**NPDES Permit No. GU0110019**

**Calendar Year 2022**

Code	Incident Date & Time	Point of Contact	Sundance - EA EV Compliance Responder	Description & Location of Source	Volume Released	Duration of Release	Nearest Body of Water	NBC Notification	Cause of the Spill	Corrective Actions
	No spills reported in January									
R	2/24/2022 1100H	M. Martinez Fuel Farm	Clarissa T. Bearden	<ul style="list-style-type: none"> <li>Sewer Pipeline</li> <li>Along a dirt road across Fuel Farm</li> </ul>	~ 100 gal	Unknown	Apra Harbor	R. Camacho	Sewer line break	The sewer line break was repaired and the area disinfected with sodium hypochlorite solution. Contaminated soil was removed and brought to AHWWT for storage in a drying bed until it can be properly disposed of at the landfill.
R	3/1/2022 1920H	Nathan Ball USCG	Mark Santo Domingo	<ul style="list-style-type: none"> <li>Collection Holding Tank (CHT) Discharge</li> <li>Victor Wharf</li> </ul>	~ 0.5 gal	~ 5 minutes	Apra Harbor	R. Camacho	Sewage spill was due to operator error (USCG Myrtle Hazard) due to the overboard discharge valve not being properly secured during discharge to the Victor Wharf CHT.	Pumping activity was ceased immediately when spill was observed. Engineers for USCG held a refresher course on the incident to ensure personnel are knowledgeable/aware of the entire discharge process and to prevent future mishaps/occurrences.
R	3/2/2022 1030H	David Arellano DZSP21	Matthew Borja	<ul style="list-style-type: none"> <li>Collection Holding Tank (CHT) Discharge</li> <li>Kilo Wharf</li> </ul>	~ 40 gal	~ 5 minutes	Apra Harbor	R. Camacho	The sewage spill was due to a cracked riser cap and a riser valve that was not properly secured prior to sewage being pumped from the Abraham Lincoln vessel into the collection holding tank (CHT) risers on Kilo Wharf.	CHT riser valve was placed in the shut position and the cracked cap replaced. Sewage water in berm was pumped out with a pump truck and the area disinfected with sodium hypochlorite solution.
	No spills reported in April									
	No spills reported in May									
	No spills reported in June									
	No spills reported in July									
	No spills reported in August									
	No spills reported in September									
	No spills reported in October									
	No spills reported in November									
	No spills reported in December									

**Notes:**

• R - Reportable; NR - Non Reportable

# **Appendix H:**

## **PWD Memorandum to FEAD**

# **Appendix I:**

## **NBG MS4 Construction Site Inspection Summary**



**Appendix I: 2022 Naval Base Guam  
MS4 Construction Site Inspection Summary**

Project and Contractor Information	Project Site	NPDES ID#	SWPPP Review Process		NOI Coverage Effective Date	NOI Coverage Expiration Date	Pre-Construction Inspection (Date, Inspection Report Reference)	BMP Inspection Dates*	Post Construction Inspection (Date, Inspection Report Reference)
			Reviewed By / Date	Approved By / Date					
Caddell Nan A JV POC: Andy So Title: EV Manager Phone: 687-4200 Email: evalencia@nanhawaii.com	Apra Medical / Denial Clinic	GUR100013	All three (3) projects broke ground prior to issuance of the NBG MS4 Permit. SWPPP review conducted in accordance with the CGP requirements.		1/3/2019	2/15/2022	All three (3) projects broke ground prior to issuance of the NBG MS4 Permit. Inspections conducted in accordance with the CGP requirements.		Pending Receipt of As-Built
								17-Aug-22	
								Project Completed	
H2O Guam JV POC: Todd Cooper Title: Env Manager Phone: 483-5965 Email: Cooper@obayashiguam.com	Lima Wharf Repair	GUR10002T	2/18/2021 N Buyao		2/23/2021	2/16/2022	4/10/2021		On-going
								14-Sep-22	
								29-Nov-22	
Black Construction POC: Zerlene Cruz Title: Env Manager Phone: 797-1500 Email: zerlencr@blackguam.com	P-491	GUR10002H	2/2/2022 N Buyao		2/23/2022	12/19/2022			Project Completed - Pending Receipt of as-builts
								15-Sep-22	
								15-Nov-22	

**Appendix J:**  
**MS4 Compliance Tracker**

MCM	Measurable Goal ID Number	Product Name	Description	Measurable Goal	Responsible Department
MS4 Requirements	MS4 Requirement Summary				
MCM1	ID01	Distribution of Informational Materials	Perform distribution and tracking of informational materials via hard copies and electronic means IAW in Section 2.3.1.1 / 2.3.2.2 of the SWMP and / or Measurable Goal 2-1 / 2-4. Tracking of distribution, at a minimum, should include topic and quantity distributed to target audiences. Facilitate posting of informational material on JRM/NBG official and Social Media sites. Distribution effort may be combined with other requirements including during facility inspections, SWPPP training and New Hire orientations (Measurable goal 2-8).	2-1 2-4 2-8 3-7 7-1	NBG EV / KTR
MCM1	ID02	Development and Distribution of Classroom Informational Materials	Develop informational materials tailored for school children IAW Section 2.3.1.2 / 2.3.2.2 of the SWMP and/or Measurable Goals 2-2 / 2-4. Track quantity and variety of materials posted. Facilitate posting in school premises (GHS, McCools) and JRM/NBG official and social media websites.	2-2 2-4	NBG EV / KTR
MCM1	ID03	Electronic media Outreach	Facilitate posting of materials on NBG official and social media sites. These are for materials other than what is covered on other ELINS or any other information that may be required by the regulators. Encourage Tenants and community groups to participate in SWMP-related programs. Provide support / mechanism to allow viewers to navigate links MS4 documents including annual MS4 Annual Report	2-4 2-15	NBG EV / KTR
MCM1	ID04	Informational Materials Development	Develop new topic / additional informational material, for distribution IAW Section 2.3.1 of the MS4 SWMP. Materials may be in brochure format and provide 500 hard copies for distribution. Example: - Privately owned vehicle maintenance - Hazardous waste brochures - LID Inspection and Maintenance - Reporting Visual Emissions	2-1	NBG EV / KTR
MCM1	ID05	MS4 Training Presentation Material and Records	Update / verify existing MSGP, IWDCP, and New Hire Presentations to include requirements of the MS4 permit. Training shall cover such as spill response procedures, good housekeeping, maintenance requirements and BMPs to prevent stormwater contamination. Continue to train all employee who works in areas where industrial materials or activities exposed to stormwater or who are responsible for implementing activities necessary to meet the conditions of the permit.	2-1	NBG EV / KTR
MCM1	ID06	Annual Commercial / Industrial SWPPP Training	Develop an annual training program IAW the most current MS4 stormwater permits for facilities not covered under MSGP. Training shall cover such as spill response procedures, good housekeeping, maintenance requirements and BMPs to prevent stormwater contamination. Train all employee who works in areas where industrial materials or activities exposed to stormwater or who are responsible for implementing activities necessary to meet the conditions of the permit per Section 2.3.4.1 / Measurable Goal 2-7 of the MS4 SWMP.	2-7	NBG EV / KTR
MCM1	ID07	Newly Hire Personnel Training	Develop presentation materials and provide new personnel with an overview of NBG's MS4 SWMP during contractor's (BOS, Housing, etc) during new-hire orientations IAW Section 2.3.4.2 / Measurable Goal 2-7 of the SWMP. Coordinate with A200 CORs for the orientation schedules. Track quantities and number of attendees.	2-7	NBG EV / KTR
MCM1	ID08	Newly Hire Personnel Training (Government)	Develop presentation materials and provide new personnel with an overview of NBG's MS4 SWMP during Government's new-hire indoctrination IAW Section 2.3.4.3 / Measurable Goal 2-7 of the SWMP. Track quantities and number of attendees.	2-7	NBG EV / Government HR
MCM2	ID09	Public review of SWMP and other MS4 document	Encourage Base Tenants participation by providing a mechanism review and provide input on the overall program IAW Section 2.4.1. Compile and track the quantity of public input. Assess and incorporate applicable comments during the regular SWMP review and update.	2-9	NBG EV
MCM2	ID10	SWMP Slogan and Logo Design	IAW section 2.4.2, invite Base Tenants to participate in the design and development of the NBG MS4 slogan and logo that can be use in the public participation campaign including storm drains labeling.	2-10	NBG EV
MCM2	ID11	Community Clean-up Events	Encourage various sectors / units of NBG community by organizing community relations (COMREL) activities such as streets and beach clean-ups within or outside NBG's permitted area. Track the quantity of MS4 COMREL related activities each year IAW Section 2.4.3.	2-11	NBG EV
MCM2	ID12	Storm Drain Stenciling	IAW Section 2.4.4, Organized storm drain marking activities by establishing partnership with COMREL personnel of various NBG Tenants to promote stormwater pollution awareness and discourage illicit discharges. Track the quantity of completed stenciling.	2-12	NBG EV
MCM2	ID13	Community partnerships	NBG will participate in local environmentally-related community outreach events by active presentation or setting up information kiosk. Track the number of attendees and quantities of educational materials distributed. Identify and establish a list of possible partnership with local organization to widen opportunities for public outreach.	2-13 2-14	NBG EV
MCM2	ID14	Baseline Survey	Conduct baseline survey to gauge existing level of public awareness and behavior prior to active implementation of NBG's MS4 public education and outreach program. Respondents can also be selected during the new-hire orientation.	2-16	NBG EV / KTR
MCM2	ID15	Follow-up survey	NBG shall conduct follow-up survey within two years of public education and outreach program implementation to assess changes in public awareness using the SWMP statistically valid survey procedure.	2-16	NBG EV / KTR
MCM3	ID16				

MCM	Measurable Goal ID Number	Product Name	Description	Measurable Goal	Responsible Department
	ID17	Annual MS4 Map Updates	Update NBG MS4 Field maps and database for any changes observed in the conveyance system (storm drains, Catch Basins, outfalls...) and facilities during the calendar year. Field mapping updates shall be conducted IAW Section 3.2	3-1	NBG EV / KTR
MCM3	ID18	Annual MS4 Map Updates	Update NBG MS4 Field maps and database for any changes observed in the conveyance system (storm drains, Catch Basins, outfalls...) and facilities during the calendar year. Field mapping updates shall be conducted IAW Section 3.2	3-1	NBG EV / KTR
MCM3	ID19	Dry Weather Field Screening	<b>A164</b> Conduct dry weather field screening benchmark IAW Section 3.3.4 of the MS4 permit. Provide sampling and analysis for indicator parameters (NH3, Conductivity, Surfactants, pH and Enterococcus) if flow is detected. Provide a report that at a minimum, shall be in narrative and tabulated format to include field screening findings, sampling locations/IDs, Sampling date, laboratory report ID and analytical results. All outfall must be sampled staggered across the permit period. Estimated number of outfalls per year = 10.	3-3	NBG EV / KTR
MCM3	ID20	IDDE Public Reporting Hotline	NBG to assign an official MS4 Illicit Discharge complaint hotline: 117 / 333-4357 or NBG EV MS4 PM?	3-6	NBG EV
MCM3	ID21	IDDE Public Reporting and Complaint Investigation	Respond to illicit discharge reports and complaints, including those that occurred in active construction sites. Investigate and observe suspected / reported flow and determine source or responsible party. Provide a summary of the response and submit to NBG for corrective action / enforcement.	3-5	NBG EV / KTR
MCM3	ID22	MS4 Construction Site Inspections	Conduct construction site BMP inspections for qualified active construction sites IAW MS4 Permit and DPRJ CSWPPP requirements. Provide an inspection summary report including findings and non-conformances. Submit report to CME for corrective measures and / or enforcement action. Update Construction site inventory and inspection tracker.	4-4	NBG EV / FEAD / KTR
MCM3	ID23	Distribution of Construction Site Informational Materials	Perform distribution and tracking of informational materials targeted for construction site workers IAW Section 4.9 of the SWMP. Facilitate posting of materials on JRM/NBG official and social media sites. Materials distribution tracking should include variety and quantity distributed.	4-5	NBG EV / FEAD / KTR
MCM4	ID24	Field Inspector Training	Develop and implement a training program for active construction site inspectors and post construction BMP inspectors. Maintain records of training Certificates	4-6	NBG EV / FEAD / KTR
MCM4	ID25	Post-construction BMP Inspection	Develop and implement a post-construction BMP program. Each BMP must be inspected and its condition catalog at least once every permit term	5-1	NBG EV / FEAD / KTR
MCM4	ID26	Plan Review and Approval	Adopt the 2014 DPRJ CSWPPP procedure and checklist when reviewing and approving site-specific SWPPP.	4-2	NBG EV / FEAD
MCM4	ID27	MS4 Construction Site Inspections	Conduct construction site BMP inspections for qualified active construction sites IAW MS4 Permit and DPRJ CSWPPP requirements. Provide an inspection summary report including findings and non-conformances. Submit report to CME for corrective measures and / or enforcement action. Update Construction site inventory and inspection tracker.	4-4	NBG EV / FEAD / KTR
MCM4	ID28	Distribution of Construction Site Informational Materials	Perform distribution and tracking of informational materials targeted for construction site workers IAW Section 4.9 of the SWMP. Facilitate posting of materials on JRM/NBG official and social media sites. Materials distribution tracking should include variety and quantity distributed.	4-5	NBG EV / FEAD / KTR
MCM4	ID29	Field Inspector Training	Develop and implement a training program for active construction site inspectors and post construction BMP inspectors. Maintain records of training Certificates	4-6	NBG EV / FEAD / KTR
MCM4	ID30	Post-construction BMP Inspection	Develop and implement a post-construction BMP program. Each BMP must be inspected and its condition catalog at least once every permit term	5-1	NBG EV / FEAD / KTR
MCM5	ID31	MS4 Construction Site Inspections	Conduct construction site BMP inspections for qualified active construction sites IAW MS4 Permit and DPRJ CSWPPP requirements. Provide an inspection summary report including findings and non-conformances. Submit report to CME for corrective measures and / or enforcement action. Update Construction site inventory and inspection tracker.	4-4	NBG EV / FEAD / KTR
MCM5	ID32	Distribution of Construction Site Informational Materials	Perform distribution and tracking of informational materials targeted for construction site workers IAW Section 4.9 of the SWMP. Facilitate posting of materials on JRM/NBG official and social media sites. Materials distribution tracking should include variety and quantity distributed.	4-5	NBG EV / FEAD / KTR
MCM5	ID33	Field Inspector Training	Develop and implement a training program for active construction site inspectors and post construction BMP inspectors. Maintain records of training Certificates	4-6	NBG EV / FEAD / KTR
MCM5	ID34	Post-construction BMP Inspection	Develop and implement a post-construction BMP program. Each BMP must be inspected and its condition catalog at least once every permit term	5-1	NBG EV / FEAD / KTR
MCM5	ID35	MS4 Construction Site Inspections	Conduct construction site BMP inspections for qualified active construction sites IAW MS4 Permit and DPRJ CSWPPP requirements. Provide an inspection summary report including findings and non-conformances. Submit report to CME for corrective measures and / or enforcement action. Update Construction site inventory and inspection tracker.	4-4	NBG EV / FEAD / KTR
MCM5	ID36	Distribution of Construction Site Informational Materials	Perform distribution and tracking of informational materials targeted for construction site workers IAW Section 4.9 of the SWMP. Facilitate posting of materials on JRM/NBG official and social media sites. Materials distribution tracking should include variety and quantity distributed.	4-5	NBG EV / FEAD / KTR
MCM5	ID37	Field Inspector Training	Develop and implement a training program for active construction site inspectors and post construction BMP inspectors. Maintain records of training Certificates	4-6	NBG EV / FEAD / KTR
MCM5	ID38	Post-construction BMP Inspection	Develop and implement a post-construction BMP program. Each BMP must be inspected and its condition catalog at least once every permit term	5-1	NBG EV / FEAD / KTR

MCM	Measurable Goal ID Number	Product Name	Description	Measurable Goal	Responsible Department
MCM6	ID38	Monthly Visual Inspection of High Priority Facilities	Conduct monthly visual inspections of high priority facilities to ensure areas, including materials and equipment, are clean and orderly, to minimize pollutant discharge. Check for evidence of spills and illicit discharges. Document findings and take images if necessary, submit to Government for action. Estimated number of locations (facilities, compound) = 5 (Note: Excluding HazWaste facilities).	6-1	NBG EV / Tenants / KTR
MCM6	ID39	Monthly Visual Inspection of High Priority Facilities	Conduct monthly visual inspections of high priority facilities to ensure areas, including materials and equipment, are clean and orderly, to minimize pollutant discharge. Check for evidence of spills and illicit discharges. Document findings and take images if necessary, submit to Government for action. Estimated number of locations (facilities, compound) = 5 (Note: Excluding HazWaste facilities).	6-1	NBG EV / Tenants / KTR
MCM6	ID40	Weekly Visual Inspection of High Priority Facilities	<b>A159</b> Conduct weekly visual inspections IAW Section 3.6.4.3.1 of the MS4 permit to ensure areas, including materials and equipment, are clean and orderly, to minimize pollutant discharge. Check for evidence of spills and illicit discharges. Document findings and take images if necessary, submit to Government for action. Estimated number of locations (facilities, compound) = 5 (Note: Excluding HazWaste facilities).	6-1	NBG EV / Tenants / KTR
MCM6	ID41	MS4 "High Priority" Facilities Quarterly Comprehensive Inspections	<b>A160</b> Perform a comprehensive inspections IAW Section 3.6.4.3.2 of the MS4 permit. Document where industrial materials or activities are exposed to stormwater with particular attention to waste storage areas, dumpster, vehicle and equipment maintenance/fueling areas, materials handling areas and similar potential pollutant-generating areas. Document findings and take images if necessary, submit to Government for action. Estimated number of locations (facilities, compound) = 5 (Note: Excluding facilities covered under the MSGP).	6-1	NBG EV / KTR
MCM6	ID42	MS4 "Priority C" catch basin inspection.	<b>A161</b> Conduct annual catch basins IAW Section 3.6.5.1.2 of the MS4 permit. Provide documentation of findings, provide images if necessary, and submit to the Government for action. Estimated number of "Priority C" catch basins = 50.	6-1	NBG EV / KTR
MCM6	ID43	MS4 "Priority B" catch basin inspection.	<b>A162</b> Conduct semi-annual catch basins IAW Section 3.6.5.1.2 of the MS4 permit. Provide documentation of findings, provide images if necessary, and submit to the Government for action. Estimated number of "Priority B" catch basins = 25.	6-1	NBG EV / KTR
MCM6	ID44	MS4 "Priority A" catch basin inspection.	<b>A163</b> Conduct semi-annual catch basins IAW Section 3.6.5.1.2 of the MS4 permit. Provide documentation of findings, provide images if necessary, and submit to the Government for action. Estimated number of "Priority C" catch basins = 12.	6-1	NBG EV / KTR
MCM6	ID45	Industrial Facility Inspection	Conduct annual inspections of industrial facilities to ensure areas, including materials and equipment, are clean and orderly, to minimize pollutant discharge. Check for evidence of spills and illicit discharges. Document findings and take images if necessary, submit to Government for action. Estimated number of locations (facilities, compound) = 5 (Note: Excluding HazWaste facilities).	6-1	Industrial Facilities / Tenants / KTR
MCM6	ID46	Street Sweeping Prioritization and Schedule	Implement existing street sweeping program to reduce accumulation of debris in the MS4. Review, redistribute and improve efforts as necessary to meet permit requirements.	6-1	Grounds maintenance Contract
MCM6	ID47	Pesticide, Herbicide and Fertilizer Application Management	Implement a Pesticide, Herbicide and Fertilizer Application Management program. Included herbicide restriction procedure and reporting in the grounds maintenance contract. Included integrated pest management measures in the grounds maintenance contract.	6-1	Grounds maintenance Contract
MCM6	ID48	Trash Volume Monitoring	Monitor volume of trash collected from permitted area. Analyzed annual trend based on collected volume using graphical / statistical means.	6-2	NBG EV / Ground Maintenance Contract
MCM6	ID49	Visible Erosion Monitoring	Respond to reports of visible erosions from the public. Document response to support request for temporary or permanent corrective measures.	7-1	NBG EV / KTR
MCM6	ID50	Stormwater Management	Implement stormwater management measures to ensure areas, including materials and equipment, are clean and orderly, to minimize pollutant discharge. Check for evidence of spills and illicit discharges. Document findings and take images if necessary, submit to Government for action. Estimated number of locations (facilities, compound) = 5 (Note: Excluding HazWaste facilities).	6-1	NBG EV / Tenants / KTR
MCM6	ID51	Stormwater Management	Implement stormwater management measures to ensure areas, including materials and equipment, are clean and orderly, to minimize pollutant discharge. Check for evidence of spills and illicit discharges. Document findings and take images if necessary, submit to Government for action. Estimated number of locations (facilities, compound) = 5 (Note: Excluding HazWaste facilities).	6-1	NBG EV / Tenants / KTR
MCM6	ID52	Stormwater Management	Implement stormwater management measures to ensure areas, including materials and equipment, are clean and orderly, to minimize pollutant discharge. Check for evidence of spills and illicit discharges. Document findings and take images if necessary, submit to Government for action. Estimated number of locations (facilities, compound) = 5 (Note: Excluding HazWaste facilities).	6-1	NBG EV / Tenants / KTR
MCM6	ID53	Stormwater Management	Implement stormwater management measures to ensure areas, including materials and equipment, are clean and orderly, to minimize pollutant discharge. Check for evidence of spills and illicit discharges. Document findings and take images if necessary, submit to Government for action. Estimated number of locations (facilities, compound) = 5 (Note: Excluding HazWaste facilities).	6-1	NBG EV / Tenants / KTR
MCM6	ID54	MS4 Routine Industrial and Commercial Facility Inspection Procedure Update	<b>A158</b> Update / verify existing IWDGP facility inspection procedure to include checks for signs of industrial waste discharges into the stormwater system and evidence of spills that may introduce pollutants into the MS4. Current practice is to note possible MS4 stormwater issues in the "other comments" item in the inspection checklist and reported to the Government for action. Continue to conduct routine facility inspections IAW the most current MSGP, SWPPP, and IWDGP at areas of the facility where industrial activities occur.	9-1 10-1	NBG EV / KTR

MCM	Measurable Goal ID Number	Product Name	Description	Measurable Goal	Responsible Department
Monitoring and Reporting	n/a	MS4 Annual Monitoring Report	A165 Conduct annual outfall IAW Section 5.2.2 of the MS4 permit. Provide sampling and analysis for parameters listed in Table 3 of the permit. Provide a report that at a minimum, shall be in narrative and tabulated format to include field screening findings, sampling locations/IDs, Sampling date, laboratory report ID and analytical results. All outfall must be sampled staggered across the permit period. Estimated number of outfalls per year = 10.	Permit Requirements	NBG EV / KTR
Monitoring and Reporting	n/a	Toxicity Reduction Evaluation (TRE) Work Plan / Accelerated Toxicity Testing	A166 Prepare and submit an initial Investigation Toxicity Reduction Evaluation (TRE) & Plan IAW Section 5.2.2.3 of the Permit. Execute the plan when triggered.  The plan shall outline procedures for addressing exceedances above the Chronic Whole Effluent Toxicity (WET) permit limit.	Permit Requirements	NBG EV / KTR
Monitoring and Reporting	n/a	MS4 Annual Report	A167 Prepare and submit an annual report IAW the requirements in part 2.2 of the permit including but not limited to: a summary of past year activities, specific quantities achieved and summary of enforcement actions, where applicable; a description of effectiveness of each SWMP program component or activity; monitoring data collected during the reporting period; planned activities and changes for the next reporting period.	Permit Requirements	NBG EV / KTR
Administrative Requirements	n/a	Record of Regulatory or other Government Interface	A163 Participate in regulatory or other government official site visits, audits, inspections, or meetings, to include necessary coordination, preinspection of facility to ensure compliance with permit and regulations, address any deficiencies during preinspection, obtain records (if needed), providing technical documents when requested, and responding to any technical questions from regulators and/or government officials. Prepare and submit summary record of regulator site visits/audits/inspections/ meetings and associated sign-in rosters.  Summary record shall indicate pertinent information including but not limited to: date and time of engagement, type of interface, name and affiliation/title of attendees, purpose and summary of visit, highlights of actions required.	Permit Requirements	NBG EV / KTR
Administrative Requirements	n/a	Unscheduled Compliance Response Data Calls	A164 Prepare and submit responses to requests for MS4 information and data calls ranging from but not limited to data summaries, program compliance status, media-specific compliance recommendations, etc.	Permit Requirements	NBG EV / KTR
Administrative Requirements	n/a	MS4 Recordkeeping and Documentation	A155 Maintain all official Clean Water program documentation and records required of the Navy by law for the life of the contract. Submit upon request as necessary to respond to data calls, audits, regulatory requests, and public inquiries. Turn over records to the government at the close of contract.	Permit Requirements	NBG EV / KTR
Administrative Requirements	n/a	MS4 Storm Water Management Plan Update	A156 Revise and update the SWMP IAW the permit to reflect any changes in operation, maintenance, or construction of new facilities that may affect the discharge of significant quantities of pollutants. Include any newly identified information (e.g., maintenance activities, significant spills, etc.); and any changes that are required for best management practices to ensure compliance with the conditions of the MS4 permit.	Permit Requirements	NBG EV / KTR
Administrative Requirements	n/a	MS4 Permit Renewal Application	A168 Prepare permit application for renewal of NPDES Permit No. GUS040000. The permits expires 31 January 2024. Provide all necessary supporting data (e.g., site plans, maps, discharge information, etc.) and prepare IAW the MS4 permit and 40 CFR Part 122.21(b)	Permit Requirements	NBG EV / KTR

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Element ID	Description of BMP	Measurable Goal(s)	MCM Status / Update	Performed / Completed?					Responsible Entity/Department
				Y1	Y2	Y3	Y4	Y5	
1A	<b>Informational Materials:</b> Provide stormwater pollution prevention brochures to existing base tenants. Distribute brochure to new personnel via housing office and/or during employee orientation / indoctrination.	01 - Perform distribution and tracking of Informational materials via hard copies and electronic means. Tracking of distribution, at a minimum, should include topic and quantity distributed to target audiences.	Pending SWMP document completion and program implementation / TO award	n/a	n/a	*	*		NBG EV MS4 Compliance Contractor
		02 - Develop Educational materials such as posters, designed specifically for school children and posting at school premises. Track quantity and variety of materials posted.	Pending - NBG / EV1 IDIQ KTR TO	n/a	n/a	*	*		NBG EV MS4 Compliance Contractor
		02 - Create new materials if needed and update existing informational materials based on the effectiveness assessment.	As required / Pending MCM1 evaluation.	n/a	n/a	n/a	n/a		NBG EV MS4 Compliance Contractor
		04 - Develop informational materials for various target audiences within the Permitted area. Track and report the number of stormwater brochures that were provided to NBG personnel including housing, schools and commercial tenants.	Completed Development of 5 educational materials topics of 500 copies each. Distribution pending final SWMP and compliance contract mechanism.	n/a	yes				NBG EV MS4 Compliance Contractor
		04 - Develop educational materials designed specifically for construction site operators. Track and report the type and quantity of materials distributed.	Completed development of 1 Construction Site Educational Material. Quantity distributed being tracked	n/a	150	100	n/a		NBG EV / FEAD
		Stormwater Pollution Prevention Video - NBG to produce a spot to run on the The Joint Military News Network (JMNN) and JRM Youtube Channel. A link will be posted on NBG/JRM Webpages.	As required / Pending MCM1 evaluation	n/a	n/a	n/a	n/a		NBG EV MS4 Compliance Contractor

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1B	<b>Stormwater Education/Outreach Program:</b> NBG to provide a comprehensive program.	03 - Electronic media outreach: SWMP document will be submitted to NBG PAO and posted on NBG website. Provide support / mechanism to allow viewers to navigate links MS4 documents including annual MS4 Annual Report	NBG MS4 site Completed. Link of NBG FB Page	n/a	n/a	yes	yes		JRM PAO NBG EV MS4 Compliance Contractor
		03 - Create Stormwater quality page on NBG Websites.	Pending	n/a	n/a	y			
		03 - Post MS4 public participation activities and MS4 educational materials on NBG's social media pages (i.e. Facebook)	Pending	n/a	n/a	*	*		
		03 - Track public comments and reactions to posted materials. Evaluate public input and update program if necessary.	Pending	n/a	n/a	*	*		
		05 - Update / verify existing MSGP, IWDCP, and New Hire Presentations to include requirements of the MS4 permit. Training shall cover such as spill response procedures, good housekeeping, maintenance requirements and BMPs to prevent stormwater contamination.	ELJN 157	n/a	n/a	yes	yes		
	<b>Provide stormwater pollution prevention education to base tenants:</b> NBG to provide annual SPCC and SWPPP training to grounds	06 - Track and report the number of annual training sessions performed and facilities trained. Training to be tracked to include, but not limited to MSGP, MS4 and SPCC. Develop a combined MS4 / MSGP training presentation.	Annual MSGP and SPCC training are documented and tracked. Additional MS4 training pending SWMP completion and availability of contract mechanism for implementation.	yes	yes	Yes	Yes		NBG EV MS4 Compliance Contractor



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IC	that may be critical in complying with the MS4 permit requirements including IDDE identification and reporting procedure.	07 - Update Contractor's and Tenant's new-hire / indoctrination presentations and programs to include MS4 requirements.	Pending program implementation	n/a	n/a	*	*	NBG EV MS4 Compliance Contractor
		08 - Update Government's new-hire / indoctrination presentation and programs to include MS4 requirements.	Pending program implementation	n/a	n/a	no	yes	NBG EV MS4 Compliance Contractor
ID	Program Effectiveness Assessment	Conduct MCM1 program Effectiveness evaluation as part of the MS4 annual Report	Pending program implementation	n/a	n/a	Yes	Yes	NBG EV MS4 Compliance Contractor

Note: \* Pending award of contract

## MCM 2

## MS4 Consolidated Information Tracking System

Element ID	Description of BMP	Measurable Goal(s)	MCM Status / Update	Performed / Completed?					Responsible Entity/Department
				Y1	Y2	Y3	Y4	Y5	
2A	<b>Public Review of NBG MS4 SWMP:</b> Post a public draft of the SWMP on NBG CNIC website and allow Base tenants to review the document and encourage them to comment and propose revision.	09 - Posting of redacted copy on NBG webpage. Update if Necessary	Completed	n/a	n/a	Yes			NBG PAO NBG EV MS4 Compliance Contractor
		09 - Provide a point of contact for receiving proposed changes and revisions	Completed	n/a	n/a	Yes			NBG PAO NBG EV MS4 Compliance Contractor
2B	<b>Illicit Discharge Public Reporting Hotline:</b> NBG will assign a hotline to facilitate tenant's reporting of illicit discharge to MS4.	See MCM 3 Element ID 3D	See MCM 3 Element ID 3D	n/a	n/a				See MCM3
2C	<b>Slogan and Logo Design:</b> development of NBG Stormwater Slogan and Logo	10 - Encourage NBG tenant's participation in the design and development of NBG Stormwater slogan and logo.	Pending program implementation.	n/a	n/a	n/a			NBG PAO NBG EV DoDEA MS4 Compliance Contractor
		11 - Encourage various sectors / units of NBG community by organizing community relations (COMREL) activities such as streets and beach clean-ups within or outside NBG's permitted area.	Pending program implementation.	n/a	n/a	n/a			NBG EV MS4 Compliance Contractor Participating Unit

MCM 2

## MS4 Consolidated Information Tracking System

2D	<p><b>Public Participation Campaign:</b> Partnering with interested Base organizations and provide opportunities to these groups to participate in the SWMP BMPs implementation</p>	<p>12 - Storm drain stenciling. Develop inventory of storm drains and inlets. Organized storm drain marking activities by establishing partnership with COMREL personnel of various NBG Tenants to promote stormwater pollution awareness and discourage illicit discharges.</p>	<p>Storm drains and Inlets inventory provided in Appendix J.  Pending program implementation.</p>	n/a	n/a	n/a	n/a	*	NBG EV MS4 Compliance Contractor Participating Unit
		<p>13 - Community Partnerships. NBG will participate in local environmentally-related community outreach events by active presentation or setting up information kiosk. Identify and establish a list of possible partnership with local organization to widen opportunities for public outreach.</p>	<p>Pending program implementation.</p>	n/a	n/a	n/a	yes		NFM/NBG EV MS4 Compliance Contractor Participating Unit
2E	<p><b>Surveys:</b> Design a statistically valid survey program to assess changes in public awareness and behavior resulting from implementation of the public outreach program</p>	<p>14 - Baseline Survey: Conduct baseline survey to gauge existing level of public awareness and behavior prior to active implementation of NBG's MS4 public education and outreach program.</p>	<p>Survey methodology included in the SWMP document. Pending program implementation</p>	n/a	n/a	n/a	*		NBG EV NBG PAO MS4 Compliance Contractor
		<p>15 - Follow-up Survey: NBG shall conduct follow-up survey within two years of public education and outreach program implementation to assess changes in public awareness using the SWMP statistically valid survey procedure.</p>	<p>Survey methodology included in the SWMP document. Pending program implementation</p>	n/a	n/a	n/a	n/a		NBG EV NBG PAO MS4 Compliance Contractor

MCM 2		MS4 Consiladated Information Tracking System						
2F	Program Effectiveness Assessment	Conduct MCM2 program Effectiveness evaluation as part of the MS4 annual Report	Included in the annual report	n/a	n/a	yes	yes	NBG EV MS4 Compliance Contractor

Note: \* Pending award of contract

## MCM 3

## MS4 Consolidated Information Tracking System

Element ID	Description of BMP	Measurable Goal(s)	MCM Status / Update	Performed / Completed?					Responsible Entity/Department
				Y1	Y2	Y3	Y4	Y5	
3A	<b>MS4 Mapping<sup>1</sup>:</b> Develop and maintain a geo-database MS4 map of NBG. Identify outfall locations and generate information using GIS/GPS data sources. This map is updated to note any changes, if any.	<b>16</b> - NBG to develop map of the area covered by the permit that identify stormwater features and facilities. Features to include stormwater inlets, outfalls and BMPs locations as well as commercial and industrial facilities. Document MS4 related features such as inlets/catch basins/drain, BMPs, facilities and other stormwater conveyances in the SWMP document.	NBG MS4 Map is part of the SWMP Development. MS4 1 page map from AM completed - pending updates.	n/a	n/a	yes	yes		NBG EV, MS4 SWMP Development contractor, NFM ArcGIS Core
		<b>18</b> - Update NBG MS4 Field maps and database for any changes observed in the conveyance system (storm drains, Catch Basins, outfalls...) and facilities during the calendar year.	As needed, annual review	n/a	n/a	yes	yes		
3B	<b>Priority Outfall Identification<sup>1</sup>:</b> Conduct outfall reconnaissance inventory to gather outfall pertinent information. Perform desktop evaluation of all permit area to identify priority outfalls.	<b>17</b> - Identify priority outfalls in the SWMP document.	NBG MS4 Map is part of the SWMP Development	n/a	n/a	yes			NBG EV, MS4 SWMP Development contractor, Guam EPA
		<b>17</b> - Secure approval from Guam EPA for the proposed priority outfalls.	Proposed Priority Outfalls approved by Guam EPA 6/22/21 - <b>Pending revision</b>	n/a	n/a	yes			
3C	<b>Dry Weather Field Screening:</b> conduct dry weather field inspections to detect illicit discharges and perform follow-up investigation if indicator benchmark levels are exceeded.	<b>19</b> - Document and report the number of dry weather outfall inspections (annually for the priority outfall + 20% of remaining outfall)	Pending program implementation.	n/a	n/a	*	*		NBG EV, MS4 Compliance Contractor
		<b>19</b> - Document and report the number of outfalls with dry weather discharges	Pending program implementation.	n/a	n/a	*	*		
		<b>19</b> - Document and report field screening results and other pertinent information.	Pending program implementation.	n/a	n/a	*	*		

## MCM 3

## MS4 Consolidated Information Tracking System

		19 - Document and report follow-up investigation for benchmark exceedance.	Pending program implementation	n/a	n/a	*	*		
3D	<b>Illicit Discharge Public Reporting Hotline:</b> NBG will assign a hotline to facilitate tenant's reporting of illicit discharge to MS4.	20 - NBG to assign an official MS4 Illicit Discharge complaint hotline.	117 / 333-4357 or NBG EV MS4 PM?	n/a	n/a			NBG EV MS4 Compliance Contractor	
		20 - Implement existing sewer overflow and HAZMAT spill response programs.	Covered under existing EV IDIQ (HazWaste and Env Compliance) contracts.	yes	yes	yes	yes		
		21 - Document and report the number of proactive inspections and response to reported spills.	Program implementation under EVI HW IDIQ	yes	yes	yes	yes		
3E	<b>IDDE Source Investigation and Elimination:</b> develop a program and implement a variety of tools to trace illicit discharge problems back up the pipe to isolate the specific source or improper connection that generates the discharge	21 - Document and report the number of illicit discharges identified and eliminated.	Pending program implementation	n/a	n/a	yes	yes	NBG EV, MS4 Compliance Contractor, EV IDIQ HazWaste KTR, EV IDIQ Env Compliance KTR	
		22 - Implement existing hazardous facilities inspection program	Currently covered under the EV IDIQ Contract and fully funded	yes	yes	yes	yes		
		23 - Document and report the number of illicit discharges eliminated.	Currently covered under the EV IDIQ Contract and fully funded	yes	yes	yes	yes		
3F	Program Effectiveness Assessment	Conduct MCM3 program Effectiveness evaluation as part of the MS4 annual Report	Included in the annual report	n/a	n/a	yes	yes	NBG EV MS4 Compliance Contractor	

Note: \* Pending award of contract

Element ID	Description of BMP	Measurable Goal(s)	MCM Status / Update	Performed / Completed?					Responsible Entity/Department
				Y1	Y2	Y3	Y4	Y5	
4A	Construction SW Management Policy: NBG to adopt the 2014 Comprehensive SWPPP for the Guam Military Relocation DPRI Construction Program for erosion and sediment control on new construction and redevelopment projects greater than or equal to one acre.	24 - Document issuance of CSWPPP adoption policy / memorandum	PWO Memorandum dated 2/24/2020	n/a	yes				NBG EV MCAG EV ROICC FEAD
		25 - Provide a presentation and conduct an awareness training with FEAD personnel (ET's and CME's).	Completed March 12, 2020	n/a	yes				
4B	Site-specific SWPPP Review Process: Document the Operator's site-specific SWPPP review process and approval.	26 - Adopt the 2014 DPRI CSWPPP procedure and checklist when reviewing and approving site-specific SWPPP	Covered under the Pwo Memo	N/A*					NBG EV MCAG EV ROICC FEAD
4C	Construction Site Inventory: Electronic tracking system to include a list of active construction sites and other pertinent information i.e. CGP coverage, Site-Specific SWPPP.	27 - FEAD maintains an electronic (eprojects) construction sites inventory. FEAD informs EV which sites have greater than 1 acre of land disturbance. Document and report the number of active construction sites operating under the erosion and sedimentation control requirements of the 2014 DPRI CSWPPP	Continuous / As-required	yes	yes	yes	yes		NBG EV MCAG EV ROICC FEAD
4D	Development of Construction Site Inspection Program: Government construction representatives inspect all construction projects and enforce erosion, sedimentation, and waste controls.	28 - Adopt the 2014 DPRI Inspection procedure and checklist for active construction site inspection.	PWO Memorandum dated 2/24/2020	yes	yes	yes	yes		NBG EV MCAG EV FEAD
		29 - Conduct construction site BMP inspections for qualified active construction sites IAW MS4 Permit and DPRI CSWPPP requirements. Provide an inspection summary report including findings and non-conformances	Continuous / As-required	yes	yes	yes	yes		

Notes: \* Projects broke ground prior to issuance of MS4 permit.

## MCM 4

## MS4 Consolidated Information Tracking System

Element	Description of RMP	Measurable Goal(s)	MCM Status / Update	Performed / Completed?				Responsible
4E	<b>Construction Site Operator Education &amp; Public Involvement:</b> Implement a program for distribution of educational materials for construction site operators, and provide a mechanism for public to report stormwater issues regarding construction site operation.	30 - Construction site education program will be incorporated in MCM1. 150 brochure distributed and 2 posted on bulletin boards during Y2 100 brochure distributed and 2 posted on bulletin boards during Y3.	Continuous / As-required	See Element ID 1C				NBG EV MCAG EV ROICC FEAD
		Construction site public involvement program including public reporting of illicit discharges is incorporated in MCM3	See MCM 3 Element ID 3D	n/a	n/a	yes	yes	
4F	<b>Permittee Staff training:</b> Implement a training program for NBG staff whose primary duties are related to the construction stormwater program.	31 - Develop and implement a training program for active construction site inspectors and post-construction BMP inspectors.	Continuous / As-required	n/a	yes	yes	yes	NBG EV MCAG EV ROICC FEAD
		31 - Maintain copies of the initial and renewal training records.	Continuous / As-required	n/a	yes	yes	yes	
4G	Program Effectiveness Assessment	Conduct MCM4 program Effectiveness evaluation as part of the MS4 annual Report	Included in the annual report	n/a	n/a	yes	yes	NBG EV MS4 Compliance Contractor

Note: \* Pending award of contract

Notes:\* Projects broke ground prior to issuance of MS4 permit.



## MCM 5

## MS4 Consolidated Information Tracking System

Element ID	Description of BMP	Measurable Goal(s)	MCM Status / Update	Performed / Completed?					Responsible Entity/Department
				Y1	Y2	Y3	Y4	Y5	
5A	<b>Post-Construction Stormwater Management Program:</b> Develop, implement, and enforce a program to address post-construction storm water runoff from new development and redevelopment projects IAW the 2006 CNMI and Guam Stormwater Management Manual and 2010 Guam Transportation Stormwater Drainage Manual.	32 - Adopt DPRI CSWPPP post construction BMP program and acceptable post construction structural BMPs.	Covered under PWO Memorandum	n/a	yes				NBG EV MCAG EV ROICC FEAD
5B	<b>Site-Plan Review:</b> Implement a strategy for evaluating LID projects.	33 - Adopt DPRI CSWPPP Acceptable post construction BMPs and LID. 33 - Document "As-built" drawings and certifications and verify performance standards	Covered under PWO Memorandum As required	n/a	yes				NBG EV MCAG EV ROICC FEAD
5C	<b>Post-Construction Stormwater Control Measures Inventory:</b> Maintain an inventory of structural post-construction stormwater control measures.	34 - Develop Post-construction BMP inventory. Catalog BMP conditions beginning program implementation.	Provided in Appendix J Table J5 Will need annual updates	n/a	na	yes	yes		NBG EV MCAG EV ROICC FEAD
5D	<b>Inspection and Enforcement:</b> Describe inspection procedure in the SWMP Document.	35 - Develop and implement a post-construction BMP program. Each BMP must be inspected and its condition catalog at least once every permit term 35 - Develop inspection Checklist	Inspection program describe in the SWMP Forms available	n/a	n/a	yes	yes		NBG EV MCAG EV ROICC FEAD
	<b>Long-Term Maintenance:</b> Develop and implement a maintenance and inspection program	36 - Describe the long-term maintenance program in the SWMP document	Maintenance program describe in the SWMP	n/a	n/a	yes			NBG EV MCAG EV

MCM 5

MS4 Consolidated Information Tracking System

	that ensures long-term effectiveness of stormwater retention / detention systems.	37 - Document and report the number and description of maintenance, repairs and retrofit performed.	As required	n/a	n/a	n/a	n/a	n/a	ROICC FEAD
5F	Program Effectiveness Assessment	Conduct MCM5 program Effectiveness\$ evaluation as part of the MS4 annual Report	Documented in the annual reports	n/a	n/a	yes	yes	n/a	NBG EV MS4 Compliance Contractor

Element ID	Description of BMP	Measurable Goal(s)	MCM Status / Update	Performed / Completed?					Responsible Entity/Department
				Y1	Y2	Y3	Y4	Y5	
6A	<b>P2 and Good Housekeeping Program<sup>1</sup>:</b> Develop and implement an operation and maintenance program that aims to prevent and reduce pollutant runoff into the storm drainage system.	<b>38</b> - Inventory and mapping of stormwater control and facilities.	Inventory provided in Tables under Appendix J	n/a	n/a	yes			NBG EV MS4 Compliance KTR
		<b>39</b> - Develop facility assessment program	Program described in the SWMP	n/a	n/a	yes	yes		
		<b>40</b> - Implementing weekly visual inspection for HPF <sub>5</sub>	Covered under various programs.	n/a	n/a	yes	yes		
		<b>41</b> - Implement comprehensive quarterly inspection for HPF.	Covered under various programs.	n/a	na				
6B	<b>Catch Basin Inspection and Maintenance:</b> NBG to implement a maintenance and repair program for the stormwater system.	<b>42</b> - Implement Priority "C" Catch basin Inspection	Not applicable / no catch basin found during inventory	n/a	n/a				NBG EV MS4 Compliance KTR
		<b>43</b> - Implement Priority "B" Catch basin Inspection	Not applicable / no catch basin found during inventory	n/a	n/a				
		<b>44</b> - Implement Priority "A" Catch basin Inspection	Not applicable / no catch basin found during inventory	n/a	n/a				
6C	<b>Street Sweeping and Cleaning:</b> Implement sweeping program for roads, streets and parking lots.	<b>45</b> - Develop inventory of streets and parking lots within the permitted area	Provided in Appendix J	n/a	n/a	yes	yes		NBG EV MS4 Compliance KTR
		<b>46</b> - Street sweeping prioritization and implementation	On-going in some locations. Will require Grounds Maintenance contract mod	yes	yes	yes	yes		
		<b>47</b> - Restrict Pesticide, Herbicide and Fertilizer application to Guam EPA certified personnel only.	Standard practice	yes	yes	yes	yes		

## MS4 Consolidated Information Tracking System

6D	<b>Pesticide, Herbicide and Fertilizer Application Management:</b> Evaluation of material use for grounds maintenance activities.	47 - Included integrated pest management measures in the grounds maintenance contract.	Integrated Pest Management clause in the Grounds Maintenance Contract (Pesticide/herbicide use and certified applicators are documented on ELIN 292)	yes	yes	yes	yes	NBG EV FSC and Contractors
6E	<b>Trash Volume Monitoring:</b> For the trash Reduction Program	48 - Monitor volume of trash collected from permitted area. Analyzed annual trend based on collected volume using graphical / statistical means.	May require contract mod to quantify trash collected within the MS4 conveyance system.	yes	yes	yes	yes	NBG EV FSC and Contractors
6F	<b>Visible Erosion Monitoring:</b> Requires Contractors to comply with MS4 requirements / NBG EV may respond.	49 - Respond to reports of visible erosions from the public. Document response to support request for temporary or permanent corrective measures.	May require mod to EV IDIQ if KTR will be required to respond and investigate report of erosions.	n/a	n/a	none	none	NBG EV MS4 Compliance KTR
6G	<b>BMP Field Manual:</b> Development of a BMP Field Reference.	50 - Develop a list of applicable BMP's that can be used within the permitted area to address any deficiency or non-compliance found during inspections, analytical monitoring and audit.	Completed and provided in Appendix D Will need annual updates	n/a	n/a	yes		NBG EV MS4 Compliance KTR
6H	<b>Industrial / Commercial Stormwater Sources:</b> Installation to a develop and implement a program aimed reducing pollutant discharge from Industrial	51 - Develop an inventory of NBG facilities within the permitted area.  52 - Develop an inventory of commercial facilities and inspection schedule.	'Completed and provided in Appendix J Tables 3 and 3.1. may need updates  'Completed and provided in Appendix J Tables 3 and 3.1. may need updates	n/a	n/a	yes	yes	NBG EV MS4 Compliance KTR  NBG EV MS4 Compliance KTR

MCM 6

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	Commercial sources.	53 - Develop an inventory of industrial facilities and inspection schedule.	Completed and provided in Appendix J Tables 3 and 3.1. may need updates.	n/a	yes	yes		NBG EV MS4 Compliance KTR
		54 - MS4 Routine Industrial and Commercial Facility Inspection Procedure Update	As required	n/a	yes	n/a		NBG EV MS4 Compliance KTR

Note(s): 1 - Will be included in the SWMP Document

## Monitoring Requirements

## MS4 Consolidated Information System

Element ID	Description of BMP	Measurable Goal(s)	Requirement Status / Update	Performed / Completed?					Responsible Entity/Department
				Y1	Y2	Y3	Y4	Y5	
7A	<b>Monitoring and Assessment Program:</b> NBG to develop a comprehensive monitoring plan.	Develop a sampling program that identifies the locations and frequency of monitoring.	Program describe in the SWMP	n/a	n/a	yes			NBG EV MS4 Compliance KTR
		Conduct annual outfall monitoring IAW Section 5.2.2 of the MS4 permit. Provide sampling and analysis for parameters listed in Table 3 of the permit.	See notes	n/a	n/a	yes*	yes*		
		Track and report investigation TRE Plan where applicable.	As required	n/a	n/a	n/a	n/a		
		Develop an Excel-Based electronic compliance tracking system to monitor information required of the permit.	Currently in used	yes	yes	yes			
7B	<b>Annual Report:</b> Refers to permit requirements, provide description in quantifiable terms, and status of activities under taken.	Prepare and submit an annual report IAW the requirements in part 2.2 of the permit including but not limited to; a summary of past year activities, specific quantities achieved and summary of enforcement actions, where applicable; a description of effectiveness of each SWMP program component or activity; monitoring data collected during the reporting period; planned activities and changes for the next reporting period.		yes	yes	yes	yes		Environmental Department, MS4 Compliance Contractor

Monitoring Requirements		MS4 Consolidated Information System						
		Use monitoring results to assess effectiveness of BMPs	Document in the annual reports	n/a	n/a	yes	yes	
7C	Program Evaluation: NBG to assess the effectiveness of BMP's describe in the SWMP.	Document NBG compliance with the permit conditions	Document in the annual reports	n/a	n/a	yes	yes	Environmental Department, Contracted Laboratory, MS4 Compliance Contractor
		Review SWMP and BMPs to maximize program implementation effectiveness	Document in the annual reports	n/a	n/a	yes	yes	

Note: \*Multiple attempts to collect sample failed due to WET analyses holding time requirements. Additionally, sampling is limited to qualifying rain events. A request was made and was approved by USEPA to adopt MSGP qualifying rain events for Guam

# **Appendix K:**

## **MS4 Dry Weather Field Screening Benchmark DMR**



### Analytical Methods and Limits

Parameter	Analytical Method #	MCL	Units	Reporting Limits†	
				MDL	RL
Enterococci	SM 9230 D	35 -104	MPN/mL	1.0	1.0
Conductivity	SM 2510	2000	μS/cm	N/A	NA
Surfactant (MBAS)	SM 5540/EPA 425.1	0.25	mg/L	0.003	0.05
pH	SM 4500H B	6.5 - 9	S.U	N/A	N/A
Ammonia	EPA 350.1	50	mg/L	0.014	0.10

Notes:

† = Reporting Limit (RL) or Method Detection Limit (MDL)

MCL = Maximum Contaminant Level

# **Appendix L:**

## **Inspection Reports**

# **Appendix L1:**

## **Bioswale Reports**

# **Appendix L2:**

## **GHS UIC Facility Inspection Reports**

# **Appendix L3:**

## **IWDCP Inspection & Monitoring Reports**

# **Appendix L4:**

## **MSGP Routine Inspection Reports**

# **Appendix L5:**

## **90-Day Storage Facility Inspection Reports**

# **Appendix L6:**

## **Conforming Storage Facility (CSF) Inspection Reports**



# **Appendix L7:**

## **Satellite Accumulation Area (SAA) Inspection Reports**

# **Appendix L8:**

## **Seabee's Asphalt Batch Plant Inspection Report**

# **Appendix L9:**

## **SPCC Inspection Reports**

# **Appendix L10:**

## **Stormwater Harvesting Inspection Report**