NPDES Draft Permit #GUS040000

ENCLOSURE 1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

NPDES PERMIT NO. GUS040000

In compliance with the provisions of the Clean Water Act ("CWA") (Public Law 92-500, as amended, 33 U.S.C. 1251 et seq.), the following discharger is authorized to discharge stormwater runoff and specified non-stormwater discharges from all outfalls from the facility specified below, in accordance with the effluent limits, monitoring requirements, and other conditions set forth in this permit:

Discharger Name	Department of the Navy (DON)
Discharger Address	Department of the Navy Naval Base Guam (NBG) PSC 455, Box 152 FPO AP, Guam 96915
Facility Name	Municipal Separate Storm Sewer System (MS4)
Facility Location Address	Department of Defense Facilities on the Island of Guam
Facility Rating	Minor

This permit was issued on:	TBD
This permit shall become effective on:	TBD
This permit shall expire at midnight on:	TBD

In accordance with 40 CFR 122.21(d), the discharger shall submit a new application for a permit at least 180 days before the expiration date of this permit, unless permission for a date no later than the permit expiration date has been granted by the Director.

Signed this _____ day of _____, 2016, for the Regional Administrator.

_____
Tomás Torres, Director
Water Division

ENCLOSURE 1

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1. Discharges Authorized Under This Permit

1.1 Permit Area. This permit applies to the MS4 owned or operated by the permittee within the area described in Appendix E on the Island of Guam, which includes the following existing facilities.

> **Navy Facilities:** Naval Base at Apra Harbor; family housing/community support areas at Apra Heights; Nimitz Hill; Naval Magazine; Naval Hospital and adjacent high school.[1]

See Appendix C for a map showing the location of these facilities. The requirements of this permit also apply to all additional MS4s owned or operated by the permittee that are constructed in the future within the permit area.

1.2 Authorized Discharges. Subject to the terms of this permit, during the period beginning the effective date of this permit and lasting through the expiration of this permit, the permittee is authorized to discharge stormwater and other non-prohibited discharges from all outfalls of the permittee's MS4.

1.3 Prohibitions – Non-Stormwater Discharges

1.3.1 The permittee shall effectively prohibit all types of non-storm water discharges into its MS4 unless such discharges are either authorized by a separate NPDES permit or not prohibited in accordance with Part 1.3.2.

1.3.2 The following categories of non-storm water discharges (occurring within the jurisdiction of the permittee) are only prohibited if they are identified by the permittee as significant contributors of pollutants to or from the MS4. If any of the following categories of discharges are identified as a significant contributor, the permittee must address the category as an illicit discharge as specified in Part 3.3 of this permit:

a. Water line flushing,
b. Landscape irrigation,
c. Diverted stream flows,
d. Rising ground waters,
e. Uncontaminated ground water infiltration,
f. Uncontaminated pumped groundwater,
g. Discharges from potable water sources,
h. Foundation drains,
i. Air conditioning condensate,
j. Irrigation water,
k. Springs,
l. Water from crawl space pumps,
m. Footing drains,

[1] The permit area does not include the western tip of Navy Barrigada within the Hagåtña watershed.

n. Lawn watering,
o. Individual residential car washing,
p. Discharges from riparian habitats and wetlands,
q. Dechlorinated swimming pool discharges,
r. Street wash water,
s. Discharges or flows from emergency firefighting activities, and
t. Additional discharges which may be developed in accordance with Part 1.3.3 of this permit.

1.3.3 The permittee may also develop a list of other similar occasional incidental non-stormwater discharges (e.g. non-commercial or charity car washes, etc.) that it will allow to be discharged into its MS4. These non-stormwater discharges must not be reasonably expected (based on information available to the permittee) to be significant sources of pollutants to the MS4, because of either the nature of the discharges or conditions the permittee has established for allowing these discharges to the MS4 (e.g., a charity car wash with appropriate controls on frequency, proximity to sensitive waterbodies, BMPs on the wash water, etc.). The permittee shall describe in the stormwater management program document any local controls or conditions placed on the discharges, and include a provision describing the prohibition on any individual non-stormwater discharge that is determined to be contributing pollutants to the MS4.

2. Stormwater Management Program (SWMP)

2.1 General Requirements. The permittee must develop, implement and enforce a SWMP designed to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP), to protect water quality and to satisfy the water quality requirements of the Clean Water Act. The SWMP must include management practices; control techniques; system, design, and engineering methods; and other provisions EPA determines appropriate for the control of pollutants. The SWMP must be implemented throughout the permit area described in Part 1.1 of this permit.

2.2 SWMP Document. The permittee must prepare a written SWMP document and submit the document to Region 9 for review within 18 months after the permit effective date. The SWMP does not contain effluent limitations; the effluent limitations are contained in Parts 1 through 5 of this permit. The SWMP describes the various BMPs and other activities that the permittee will implement to comply with the effluent limitations.

2.2.1 Contents of the SWMP Document. At a minimum, the permittee must include the following information in its SWMP document:

2.2.1.1 Ordinances, or other regulatory mechanisms, providing the legal authority necessary to implement and enforce the requirements of this permit (see Part 2.3);

2.2.1.2 Statement by the permittee's legal counsel certifying to adequacy of legal authority (see Part 2.3), and describing any new ordinances, regulations, or other mechanisms to be developed

(see Part 2.3.1);

2.2.1.3 An enforcement response plan (Part 2.4);

2.2.1.4 Written procedures describing how the permittee will implement the minimum control measures described in Part 3 of this permit, and the special conditions in Part 4; and

2.2.1.5 A description of the monitoring program required by Part 5 of this permit.

2.2.2 Modifications to the SWMP document. EPA Region 9 may notify the permittee of the need to modify the SWMP document. The permittee must make changes to its SWMP and revise the SWMP document within 90 days of notification. The permittee is required to keep the SWMP document up to date during the term of the permit. Where the permittee determines that modifications are needed to address any procedural, protocol, or programmatic change, such changes must be made as soon as practicable, but not later than 90 days after determining that modifications are needed.

2.3 Adequate Legal Authority

2.3.1 Within 18 months after the permit effective date, the permittee must review and revise its relevant ordinances or other regulatory mechanisms, and adopt any new ordinances or other regulatory mechanisms necessary to provide the permittee with adequate legal authority to control pollutant discharges into and from its MS4, and to meet the requirements of this permit.

2.3.2 To be considered adequate, this legal authority must, at a minimum, address the following:

2.3.2.1 Authority to Prohibit and Eliminate Illicit Discharges. Illicit discharges are defined in Appendix A of this permit. Exceptions to this prohibition are found in Part 1.3.2 and 1.3.3 of this permit.

2.3.2.2 Authority to Prohibit Spills or Other Releases. Control the discharge of spills, and prohibit dumping or disposal of materials other than stormwater into the MS4.

2.3.2.3 Authority to Require Compliance. Require compliance with conditions in the permittee's ordinances, permits, contracts, or orders (i.e., hold dischargers accountable for their contributions of pollutants and flows).

2.3.2.4 Authority to Require Installation, Implementation, and Maintenance of Control Measures. Require owners/operators of construction sites, new or redeveloped land, and industrial and commercial facilities to minimize the discharge of pollutants to the MS4 through the installation, implementation, and maintenance of stormwater control measures consistent with the requirements of this permit.

2.3.2.5 Authority to Receive and Collect Information. The permittee must have the authority

to request from operators of construction sites, new or redeveloped land, and industrial and commercial facilities information such as stormwater plans, inspection reports, and monitoring results, and other information deemed necessary to assess compliance with this permit. The permittee must also have the authority to review designs and proposals for new development and redevelopment to determine whether adequate stormwater control measures will be installed, implemented, and maintained.

2.3.2.6 Authority to Inspect. The permittee must have the authority to enter all property for the purpose of inspecting at reasonable times any facilities, equipment, practices, or operations related to stormwater discharges to determine whether there is compliance with local stormwater control ordinances/standards or requirements in this permit.

2.3.2.7 Response to Violations. The permittee must have the ability to promptly require that violators cease and desist illicit discharges or discharges of stormwater in violation of any ordinance or standard and/or cleanup and abate such discharges, including the ability to:

2.3.2.7.1 Effectively require the discharger to abate and clean up their discharge, spill, or pollutant release within 48 hours of notification; or

2.3.2.7.2 For uncontrolled sources of pollutants that could pose an environmental threat, require abatement within 30 days of notification; or,

2.3.2.7.3 Perform the clean-up and abatement work and bill the responsible party, if necessary.

2.3.2.7.4 If a situation persists where pollutant-causing sources or activities are not abated, provide the option to order the cessation of activities until such problems are adequately addressed.

2.3.2.7.5 When all parties agree that clean-up activities cannot be completed within the timeframe provided, determine a new timeframe and notify Region 9.

2.3.2.8 Interagency Agreements. Control of the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements or other similar agreements with other owners of the MS4, such as Guam Department of Public Works.

2.3.2.9 The permittee must include as part of its written SWMP document a statement certified by its chief legal counsel that the permittee has taken the necessary steps to obtain and maintain full legal authority to implement and enforce each of the requirements contained in this permit. This statement must include:

2.3.2.9.1 Identification of all departments within the permittee's jurisdiction that conduct stormwater-related activities and their roles and responsibilities under this permit. Include an up-to-date organizational chart specifying these departments, key personnel, and contact information;

2.3.2.9.2 Identification of the local administrative and legal procedures and ordinances available to mandate compliance with stormwater-related ordinances and therefore with the conditions of this permit;

2.3.2.9.3 A description of how stormwater related-ordinances are implemented and appealed; and

2.3.2.9.4 A description of whether the permittee can issue administrative orders and injunctions, or whether it must go through the court system for enforcement actions.

2.4 Enforcement Measures and Tracking

2.4.1 The permittee must develop and implement within 18 months of the permit effective date an enforcement response plan (ERP), which sets out the permittee's potential responses to violations and addresses repeat and continuing violations through progressively stricter responses as needed to achieve compliance. The ERP must describe how and when the permittee will use each of the following types of enforcement responses based on the type of violation:

2.4.2 Verbal Warnings – Verbal warnings are primarily consultative in nature. At a minimum, verbal warnings must specify the nature of the violation and required corrective action.

2.4.3 Written Notices. Written notices of violation (NOVs) must stipulate the nature of the violation and the required corrective action, with deadlines for taking such action.

2.4.4 Escalated Enforcement Measures. The permittee must have the legal ability to employ any combination of the enforcement actions below (or their functional equivalent), and to escalate enforcement responses where necessary to address persistent non-compliance, repeat or escalating violations, or incidents of major environmental harm:

2.4.4.1 Stop Work Orders. The permittee must have the authority to issue stop work orders that require construction activities to be halted, except for those activities directed at cleaning up, abating discharge, and installing appropriate control measures.

2.4.4.2 Withholding of Plan Approvals or Other Authorizations. Where a facility is in non-compliance, the ERP must address how the permittee's own approval process affecting the facility's ability to discharge to the MS4 can be used to abate the violation.

2.4.4.3 Additional Measures. The permittee may also use other escalated measures provided under local legal authorities. The permittee may perform work necessary to improve erosion control measures and collect the funds from the responsible party in an appropriate manner, such as collecting against the project's bond or directly billing the responsible party to pay for work and materials.

2.4.5 Enforcement Tracking. The permittee must track instances of non-compliance

(electronic tracking system is required). The enforcement case documentation must include, at a minimum, the following:

2.4.5.1 Name of owner/operator of facility or site of violation;

2.4.5.2 Location of stormwater source (i.e., construction project, industrial facility);

2.4.5.3 Description of violation;

2.4.5.4 Required schedule for returning to compliance;

2.4.5.5 Description of enforcement response used, including escalated responses if repeat violations occur or violations are not resolved in a timely manner;

2.4.5.6 Accompanying documentation of enforcement response (e.g., notices of noncompliance, notices of violations);

2.4.5.7 Any referrals to different departments or agencies; and

2.4.5.8 Date violation was resolved.

2.4.6 Recidivism Reduction. The permittee is required to identify chronic violators of any ordinance or other regulatory mechanism and reduce the rate of noncompliance recidivism. The permittee must summarize inspection results by these chronic violators and include incentives, disincentives, or an increased inspection frequency at the operator's sites.

2.5 Ensuring Adequate Resources to Comply with the MS4 Permit

2.5.1 Secure Resources. The permittee must secure the resources necessary to meet all requirements of this permit.

2.5.2 Annual Fiscal Analysis. The permittee must conduct an annual analysis of the capital and operation and maintenance expenditures needed, allocated, and spent as well as the necessary staff resources needed and allocated to meet the requirements of this permit, including any development, implementation, and enforcement activities required. The analysis must include estimated expenditures for the reporting period, the preceding period, and the next reporting period and be submitted with the annual report required by Part 5.4.

2.5.2.1 Each analysis must include a description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.

2.5.2.2 Each analysis must include a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line items.

2.5.2.3 Each analysis must include a description of the staff resources necessary to meet the

requirements of this permit.

3. Minimum Control Measures

3.1 Public Education and Outreach

3.1.1 The permittee must develop and implement a comprehensive stormwater education/outreach program. Within 18 months of the permit effective date, the permittee must develop BMPs and measurable goals for the program, describe those BMPs and measurable goals in the SWMP document, and request funding as required for subsequent years. The permittee must implement all BMPs developed in the program beginning 18 months after the effective date of the permit. The program must, at a minimum:

3.1.1.1 Define the goals and objectives of the program.

3.1.1.2 Target DON base personnel, base residents, base school children, contract workers and vendors, and base tenants.

3.1.1.3 Develop appropriate educational materials (e.g. the materials can utilize various media such as printed materials, billboard and mass transit advertisements, signage at select locations, radio advertisements, social media, television advertisements, websites);

3.1.1.4 Determine methods and process of distribution;

3.1.1.5 Evaluate the effectiveness of the program; and

3.1.1.6 Utilize public input (e.g., the opportunity for public comment, or public meetings) in the development of the program.

3.1.2 During the term of the permit, the permittee must distribute the educational materials, using whichever methods and procedures determined appropriate by the permittee, in such a way that is designed to convey the program's message to a minimum of 20% of the target audience each year.

3.1.3 Within four years of the effective date of this permit, the permittee shall assess changes in public awareness and behavior resulting from the implementation of the program such as using a statistically valid survey and modify the education/outreach program accordingly.

3.1.4 Beginning the second year of the permit term, the permittee shall assess its stormwater education/outreach program annually as specified in Part 5.4 of this permit. The permittee must adjust its educational materials and the delivery of such materials to address any shortcomings found as a result of this assessment.

3.1.5 Written procedures for implementing this program must be incorporated into the SWMP

document.

3.2 Public Involvement/Participation

3.2.1 The permittee must include the public (i.e., DON base personnel, base residents, contract workers and vendors, base tenants and other stakeholders) in developing, reviewing and implementing the SWMP. Within 18 months of the permit effective date, the permittee must make the SWMP available to the public for comment on the DON website*, and also request for funding as required for subsequent years. The permittee must implement all BMPs developed in the program beginning 18 months after the effective date of the permit.

*Note: The permittee need not post on the website any restricted information which for purposes of this permit means information that is privileged or that is otherwise protected from disclosure pursuant to applicable statutes, Executive Orders, or regulations. Such information includes, but is not limited to: classified national security information, protected critical infrastructure information, sensitive security information, and proprietary business information. The permittee must, however, identify those portions of the SWMP what are being withheld from public access.

3.2.2 The program must include the creation of opportunities for the public to participate in the implementation of stormwater controls (e.g., stream clean-ups, storm drain stenciling, volunteer monitoring, and educational activities).

3.2.3 Written procedures for implementing this program must be incorporated into the SWMP document.

3.3 Illicit Discharge Detection and Elimination (IDDE)

3.3.1 IDDE Program Development. The permittee must develop and implement a program to detect, investigate, and eliminate non-stormwater discharges (see Part 1.3), including illegal dumping, into its system. Within two years of the permit effective date, the permittee must develop BMPs and measurable goals for the program, and request funding for implementation as required for subsequent years. The permittee must implement all BMPs developed in the program at the start of the third year of the permit term. Written procedures for implementing this program, including the components described in Parts 3.3.1 – 3.3.7, must be incorporated into the SWMP document.

3.3.1.1 The IDDE program must, at a minimum include the following:

3.3.1.1.1 An up-to-date storm sewer system map (see Part 3.3.2);

3.3.1.1.2 Procedures for identifying priority areas within the MS4 likely to have illicit discharges, and a list of all such areas identified in the system (see Part 3.3.3);

3.3.1.1.3 Field screening to detect illicit discharges (see Part 3.3.4);

3.3.1.1.4 Procedures for source investigation and elimination (see Part 3.3.5);

3.3.1.1.5 Public reporting of non-stormwater discharges and spills (see Part 3.3.6); and

3.3.1.1.6 Illicit discharge education and training (see Part 3.3.7)

3.3.1.2 In implementing the IDDE program, the permittee may conduct the necessary investigations, contract for investigation, coordinate with storm drain investigation activities of others, or use any combination of these approaches.

3.3.1.3 If illicit connections or illicit discharges are observed related to another operator's municipal storm sewer system then the permittee must notify the other operator within 48 hours of discovery.

3.3.1.4 If another operator notifies the permittee of an illegal connection or illicit discharge to the municipal separate storm sewer system then the permittee must follow the requirements specified in Part 3.3.5.4.

3.3.1.5 Written procedures for implementing this program, including those components described in Parts 3.3.2 – 3.3.7 must be incorporated into the SWMP document.

3.3.2 MS4 Mapping. Within two years of the permit effective date, the permittee must develop a complete, up-to-date and accurate storm sewer system map. The map must be geographic information system (GIS) based and compatible with the inventory of MS4 assets required by Part 3.6.13.1.1 of this permit. The map must be updated as necessary at least annually.

3.3.2.1 The storm sewer system map must show the following, at a minimum:

3.3.2.1.1 Jurisdictional boundaries of the permittee's facilities;

3.3.2.1.2 Land use overlay for the areas under the permittee's jurisdiction;

3.3.2.1.3 The location of all MS4 outfalls and drainage areas contributing to those outfalls that are operated by the permittee, and that discharge within the permittee's jurisdiction to a water of the U.S.;

3.3.2.1.4 The location (and name, where known to the permittee) of all waters of the U.S. receiving discharges from the permittee's outfalls. Each mapped outfall must be given an individual alphanumeric identifier, which must be noted on the map. The outfalls must be located using a geographic position system (GPS) and photographs should be taken to provide baseline information and track operation & maintenance needs over time.

3.3.2.1.5 The location of all points at which the permittee's MS4 interconnects with other MS4s

and the drainage areas contributing to those points of interconnection;

3.3.2.1.6 Geographic areas (if any) served by the permittee's MS4 that do not discharge to a water of the U.S., either directly or indirectly through an MS4 operated by another entity.

3.3.2.1.7 Priority outfalls identified under Part 3.3.3; and

3.3.2.2 A copy of the storm sewer system map must be available onsite for review by the permitting authority.

3.3.3 Identification of Priority Outfalls. The permittee shall evaluate all outfalls and identify as priority outfalls any outfall that has any of the areas described below in the drainage area for the outfall:

3.3.3.1 Areas with older infrastructure that are more likely to have illicit connections;

3.3.3.2 Industrial, commercial, or mixed use areas;

3.3.3.3 Areas with a history of past illicit discharges;

3.3.3.4 Areas with a history of illegal dumping;

3.3.3.5 Areas with onsite sewage disposal systems;

3.3.3.6 Areas with older sewer lines or with a history of sewer overflows or cross-connections;

3.3.3.7 Areas upstream of sensitive waterbodies; and

3.3.3.8 All other areas that may discharge significant quantities of pollutants directly to waters of the U.S. or indirectly through the MS4 operated by another entity.

3.3.3.9 The permittee must document in the SWMP document the basis for its selection of each priority outfall and create a list of all priority outfalls identified in the system. This priority outfall list must be updated annually to reflect changing priorities and be available for review by the permitting authority.

3.3.4 Field Screening

3.3.4.1 The IDDE program must include written dry weather field screening protocols designed to detect and eliminate illicit discharges to the MS4. The protocols must be incorporated into the permittee's SWMP document. Dry weather field screening consists of (1) field observations; and (2) analytical monitoring.

3.3.4.2 Beginning in year three of the permit term, the permittee shall conduct dry weather field screening. At a minimum, the permittee must:

3.3.4.2.1 Conduct dry weather field screening at each priority outfall identified above in Part 3.3.3 at least once annually; for all other MS4 outfalls conduct dry weather field screening for a minimum of 20% of the total outfalls each year, to ensure that all non-priority outfalls are screened at least once during the permit term.

3.3.4.2.2 Analyze discharges according to requirements outlined in Part 3.3.4.2.2.1 and 3.3.4.2.2.2 below if flow or ponded runoff is observed at an outfall and there has been at least seventy-two (72) hours of dry weather. The permittee must also record general information such as time since last rain, quantity of last rain, site descriptions (e.g., conveyance type, dominant watershed land uses), flow estimation (e.g., width of water surface, approximate depth of water, approximate flow velocity, flow rate), and visual observations (e.g., odor, color, clarity, floatables, deposits/stains, vegetation condition, structural condition, and biology).

3.3.4.2.2.1 Dry Weather Monitoring Requirements. The permittee is required to analyze for the following constituents: ammonia, conductivity, surfactants, pH and enterococcus. Field sampling techniques[2] may be used except for enterococcus for which samples must be collected and analyzed consistent with the procedures required by 40 CFR Part 136.

3.3.4.2.2.2 The benchmark concentration levels in Table 1 below for dry weather monitoring must be used whereby exceedance of the benchmark will require follow-up investigations to be conducted to identify and eliminate the source causing the exceedance of the benchmark.

Table 1 – Dry Weather Field Screening Benchmark Levels

Indicator	Benchmark
Ammonia	> 50 mg/l
Conductivity	>2000 uS/cm
Surfactants	>0.25 mg/l
pH	<6 or >9 s.u.
Enterococcus	Same Table 2

3.3.4.2.3 Conduct a follow-up investigation under Part 3.3.5 if the benchmarks associated with the constituents listed above in Parts 3.3.4.2.2.1 or 3.3.4.2.2.2 are exceeded; and

3.3.4.2.4 Maintain records of all applicable observations and monitoring results.

3.3.4.3 The permittee must assess its IDDE program once during the term of the permit to determine if updates are needed. Where updates are found to be necessary, the permittee must propose such changes with the permit reapplication.

[2] For appropriate field test methods, see document entitled "Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments", Center for Watershed Protection, 2004.

3.3.5 IDDE Source Investigation and Elimination

3.3.5.1 The IDDE program must include written procedures for conducting investigations into the source of all identified illicit discharges, including approaches to requiring such discharges to be eliminated.*

*Note: Guidance for implementing these requirements can be found in the 2004 document entitled "Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments", published by the Center for Watershed Protection, and available at: https://www.epa.gov/npdes/national-menu-best-management-practices-bmps-stormwater-documents.

3.3.5.2 Minimum Investigation Requirements. At a minimum, the permittee is required to conduct an investigation(s) to identify and locate the source of any continuous or intermittent non-stormwater discharge within 12 hours of becoming aware of the illicit discharge.

3.3.5.2.1 Illicit discharges suspected of being sanitary sewage and/or significantly contaminated must be investigated first.

3.3.5.2.2 Investigations of illicit discharges suspected of being cooling water, wash water, or natural flows may be delayed until after all suspected sanitary sewage and/or significantly contaminated discharges have been investigated, eliminated and/or resolved.

3.3.5.2.3 The permittee must report immediately the occurrence of any dry weather flows believed to be an immediate threat to human health or the environment to the appropriate emergency contact phone number.

3.3.5.2.4 The permittee must track all investigations to document at a minimum the date(s) the illicit discharge was observed; the results of the investigation; any follow-up of the investigation; and the date the investigation was closed.

3.3.5.3 Determining the Source of the Illicit Discharge. The permittee is required to determine and document through its investigations, carried out in Part 3.3.5.1, the source of all illicit discharges. If the source of the illicit discharge is found to be a discharge authorized under an NPDES permit, no further action is required.

3.3.5.3.1 If an illicit discharge is found, but within six (6) months of the beginning of the investigation neither the source nor the same non-stormwater discharge has been identified/observed, then the permittee must maintain written documentation for review by the permitting authority.

3.3.5.3.2 If the observed discharge is intermittent, the permittee must document that a minimum of three (3) separate investigations were made to observe the discharge when it was flowing. If these attempts are unsuccessful, the permittee must maintain written documentation for review by the permitting authority. However, since this is an ongoing program, the permittee should

periodically recheck these suspected intermittent discharges.

3.3.5.4 Corrective Action to Eliminate Illicit Discharge. Once the source of the illicit discharge has been determined, the permittee must immediately notify the responsible party of the problem, and require the responsible party to conduct all necessary corrective actions to eliminate the non-stormwater discharge within 7 days. The permittee must implement the ERP to address illicit discharges. Upon being notified that the discharge has been eliminated, the permittee must conduct a follow-up investigation and field screening, consistent with Part 3.3.4, to verify that the discharge has been eliminated. The permittee is required to document its follow-up investigation. The permittee may seek recovery and remediation costs from responsible parties or require compensation for the cost of field screening and investigations.

3.3.6 Public Reporting of Non-Stormwater Discharges and Spills

3.3.6.1 The IDDE program must promote, publicize, and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from MS4s through a central contact point, including phone numbers for complaints and spill reporting, and publicize to both internal permittee staff and the public.* If 911 is selected, the permittee must also create, maintain, and publicize a staffed, non-emergency phone number with voicemail, which is checked daily.

*Note: For purposes of this permit, "public" refers to the military community consisting of people of live or work on a military installation.

3.3.6.2 The permittee must develop a written spill/dumping response procedure, and a flow chart or phone tree, or similar list for internal use, that shows the procedures for responding to public notices of illicit discharges, the various responsible agencies and their contacts, and who would be involved in illicit discharge incidence response, even if it is a different entity other than the permittee.

3.3.6.3 The permittee must conduct reactive inspections in response to complaints and follow-up inspections as needed to ensure that corrective measures have been implemented by the responsible party to achieve and maintain compliance.

3.3.7 Illicit Discharge Education & Training

3.3.7.1 The IDDE program must include training for all field staff, who, as part of their normal job responsibilities, may come into contact with or otherwise observe an illicit discharge or illicit connection to the storm sewer system. Contact information, including the procedure for reporting an illicit discharge, must be included in the permittee's fleet vehicles that are used by field staff. Training program documents must be available for review by the permitting authority.

3.3.7.2 Not later than three years from the effective date of this permit, the permittee must train all staff identified in Part 3.3.7.1 above on the identification of an illicit discharge or connection,

and on the proper procedures for reporting and responding to the illicit discharge or connection. Follow-up training must be provided as needed to address changes in procedures, techniques, or staffing. The permittee must document and maintain records of the training provided and the staff trained.

3.4 Construction Site Runoff Control

3.4.1 General Requirements. The permittee must develop and implement a program which requires operators of public or private "construction activities" to select, install, implement, and maintain stormwater control measures that are consistent with requirements of the document entitled "National Pollutant Discharge Elimination System (NPDES) Program, Comprehensive Construction Stormwater Pollution Prevention Plan (Comprehensive SWPPP) for the Guam Military Relocation DPRI Construction Program", dated November 2014, and the requirements of this permit set forth in Parts 3.4.1 through 3.4.6. The Comprehensive SWPPP must be implemented upon the effective date of this permit. Within 18 months of the permit effective date, the permittee shall develop additional BMPs and measurable goals to comply with Parts 3.4.1 through 3.4.6 of the permit, and request funding as required for subsequent years. The permittee must implement all BMPs developed in the program beginning 18 months after the effective date of the permit. Written procedures for implementing this program, including the components described in Parts 3.4.1 – 3.4.6, must be incorporated into the SWMP document.

"Construction activity" for this permit includes, at a minimum, all public and private construction sites that result in a total land disturbance of one or more acres or that result in a total land disturbance of less than one acre if part of a larger common plan or development or sale.

3.4.1.1 Erosion and Sediment Controls. Design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed and maintained to:

3.4.1.1.1 Control stormwater volume and velocity within the site to minimize soil erosion;

3.4.1.1.2 Control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion;

3.4.1.1.3 Minimize the amount of soil exposed during construction activity;

3.4.1.1.4 Minimize the disturbance of steep slopes;

3.4.1.1.5 Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;

3.4.1.1.6 Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration, unless infeasible; and

3.4.1.1.7 Minimize soil compaction and, unless infeasible, preserve topsoil.

3.4.1.2 Soil Stabilization. Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. Stabilization must be completed within a period of time determined by the permittee

3.4.1.3 Dewatering. Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls.

3.4.1.4 Pollution Prevention Measures. Design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:

3.4.1.4.1 Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;

3.4.1.4.2 Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to stormwater; and

3.4.1.4.3 Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.

3.4.1.5 Prohibited Discharges. The following discharges are prohibited:

3.4.1.5.1 Wastewater from washout of concrete, unless managed by an appropriate control;

3.4.1.5.2 Wastewater from washout and cleanout of stucco, paint, from release oils, curing compounds and other construction materials;

3.4.1.5.3 Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and,

3.4.1.5.4 Soaps or solvents used in vehicle and equipment washing.

3.4.1.6 Surface Outlets. When discharging from basins and impoundments, utilize outlet structures that withdraw water from the surface, unless infeasible.

3.4.2 Construction Site Inventory

3.4.2.1 The permittee must develop and maintain an inventory of all active public and private construction sites that result in a total land disturbance of one or more acres (electronic tracking system is required). The inventory must be continuously updated as new projects are permitted and projects are completed. The inventory must contain relevant contact information for each project (e.g., name, address, phone, etc.), the size of the project and area of disturbance, whether the project has submitted for permit coverage under the NPDES general construction permit for Guam (NPDES permit No. GUR100000), the permit tracking number issued by EPA, and the date the permittee approved the Site-Specific SWPPP in accordance with Part 3.4.3. The permittee must make it available to the permitting authority upon request.

3.4.3 Construction Plan Review Procedures

3.4.3.1 The permittee must require each operator of a construction activity to comply with the requirements of the Comprehensive SWPPP prior to the disturbance of land. The permittee must make it clear to operators of construction activity that they are prohibited from commencing construction activity until they receive receipt of written approval of the plans. If the Site-Specific SWPPP is revised, the permittee must review and approve those revisions.

3.4.3.2 The permittee must implement site plan review procedures that ensure compliance with the following minimum requirements:

3.4.3.2.1 The permittee must not approve any Site-Specific SWPPP unless it contains appropriate site-specific construction site control measures that meet the minimum requirements in Part 3.4.1.1 of this permit.

3.4.3.2.2 The stormwater pollution prevention plan (SWPPP) developed pursuant to the Guam NPDES general construction permit (NPDES permit No. GUR100000) may substitute for the Site-Specific SWPPP prepared in accordance with the permittee's Comprehensive SWPPP for projects where a SWPPP is developed pursuant to NPDES permit No. GUR100000. The permittee is responsible for reviewing those portions of the SWPPP that comply with the permittee's Comprehensive SWPPP.

3.4.3.2.3 The Site-Specific SWPPP must include the rationale used for selecting control measures, including how the control measure protects a waterway or stormwater conveyance.

3.4.3.2.4 The permittee must use qualified individuals, knowledgeable in the technical review of Site-Specific SWPPPs to conduct such reviews.

3.4.3.2.5 The permittee must document its review of each Site-Specific SWPPP using a checklist or similar type of form.

3.4.4 Construction Site Inspections and Enforcement

3.4.4.1 The permittee must conduct inspections of all construction projects at least quarterly.

3.4.4.2 The permittee must also identify a list of priority construction projects for which more frequent inspections would be appropriate, based on threat to water quality. In evaluating the threat to water quality, the following factors must be considered: soil erosion potential; site slope; project size and type; sensitivity of receiving waterbodies; proximity to receiving waterbodies; non-stormwater discharges; and past record of non-compliance by the operators of the construction site. The priority construction projects must be inspected at a frequency determined by the permittee to be appropriate to ensure protection of the receiving waters.

3.4.4.3 The permittee must adequately inspect all phases of construction.

3.4.4.3.1 Prior to Land Disturbance: Prior to allowing an operator to commence land disturbance, the permittee must perform an inspection to ensure all necessary erosion and sediment controls are in place.

3.4.4.3.2 During Active Construction. During active construction, the permittee is required to conduct inspections in accordance with the frequencies determined under Parts 3.4.4.1 and 3.4.4.2 of this permit.

3.4.4.3.3 Following Active Construction. At the conclusion of the project, the Permittee must inspect all projects to ensure that all graded areas have reached final stabilization and that all temporary control measures are removed (e.g., silt fence).

3.4.4.4 The permittee must have trained and qualified inspectors (See Part 3.4.5). The permittee must also develop, and revise as necessary, written procedures outlining the inspection and enforcement procedures. Inspections of construction sites must, at a minimum:

3.4.4.4.1 Check for coverage under the EPA construction general NPDES permit (Permit No. GUR100000) by requesting a copy of any application or Notice of Intent (NOI) or other relevant application form during initial inspections.

3.4.4.4.2 Review the applicable Site-Specific SWPPP and conduct a thorough site inspection to determine if control measures have been selected, installed, implemented, and maintained according to the plan.

3.4.4.4.3 Assess compliance with the permittee's ordinances and permits related to stormwater runoff, including the implementation and maintenance of designated minimum control measures.

3.4.4.4.4 Assess the appropriateness of planned control measures and their effectiveness.

3.4.4.4.5 Visually observe and record non-stormwater discharges, potential illicit connections, and potential discharge of pollutants in stormwater runoff.

3.4.4.4.6 Provide education and outreach on stormwater pollution prevention, as needed.

3.4.4.4.7 Provide a written or electronic inspection report generated from findings in the field.

3.4.4.5 The permittee must track the number of inspections for the inventoried construction sites throughout the reporting period to verify that the sites are inspected at the minimum frequencies required. Inspection findings must be documented and maintained for review by the permitting authority.

3.4.4.6 Based on site inspection findings, the permittee must take all necessary follow-up actions (i.e., re-inspection, enforcement) to ensure compliance in accordance with the permittee's enforcement response plan required in Part 2.4. These follow-up and enforcement actions must be tracked and maintained for review by the permitting authority.

3.4.5 Permittee Staff Training

3.4.5.1 The permittee must ensure that all staff whose primary job duties are related to implementing the construction stormwater program, including permitting, plan review, construction site inspections, and enforcement, are trained to conduct these activities. The training can be conducted by the permittee or outside training can be attended, however, this training must include, at a minimum:

3.4.5.1.1 Erosion and Sediment Control/Stormwater Inspectors:

3.4.5.1.1.1 Initial training, beginning no later than two years after the permit effective date, regarding proper control measure selection, installation, implementation, and maintenance, as well as administrative requirements such as inspection reporting/tracking and use of the permittee's enforcement responses; and

3.4.5.1.1.2 Annual refresher training for existing inspection staff to update them on preferred controls, regulation changes, permit updates, and policy or standards updates. Throughout the year, e-mails and/or memos must be sent out to update the inspectors as changes happen.

3.4.5.1.2 Other Construction Inspectors: Initial training must be held beginning no later than two years after the permit effective date, on general stormwater issues, basic control measure implementation information, and procedures for notifying the appropriate personnel of noncompliance. Refresher training held at least once every two years.

3.4.5.1.3 Plan Reviewers:

3.4.5.1.3.1 Initial training, beginning no later than two years after the permit effective date, regarding control measure selection, design standards, and review procedures; and

3.4.5.1.4.1 Annual training regarding new control measures, innovative approaches, permit updates, regulation changes, and policy or standard updates.

3.4.5.1.5 Third-Party Inspectors and Plan Reviewers: If the permittee utilizes outside parties to conduct inspections and/or review plans, these outside staff must be trained per the requirements listed in Part 3.4.5.1.1 (above).

3.4.6 Construction Site Operator Education & Public Involvement

3.4.6.1 Construction Operator Education. The permittee must develop and distribute educational materials to construction site operators as follows:

3.4.6.1.1 Each year, the permittee must either provide information on existing training opportunities or develop new training for construction operators on control measure selection, installation, implementation, and maintenance as well as overall program compliance.

3.4.6.1.2 The permittee must develop or utilize existing outreach tools (i.e. brochures, posters, website, plan notes, manuals etc.) aimed at educating construction operators on appropriate selection, installation, implementation, and maintenance of stormwater controls, as well as overall program compliance.

3.4.6.1.3 The permittee must make available appropriate outreach materials to all construction operators who will be disturbing land within the MS4 boundary. The permittees' contact information and website must be included in these materials.

3.4.6.1.4 The permittee must include information on appropriate selection, installation, implementation, and maintenance of controls, as well as overall program compliance, on the permittee's existing website.

3.4.6.2 Public Involvement.

3.4.6.2.1 The permittee must adopt and implement procedures for receipt and consideration of information submitted by the public* regarding construction projects. This includes, but is not limited to, the public reporting mechanisms described in Part 3.3.6.

*Note: For purposes of this permit, "public" refers to the military community consisting of people of live or work on a military installation.

3.5 Post-Construction Stormwater Management for New Developments and Redevelopments

3.5.1 General Requirements. The permittee must develop and implement a program to control stormwater discharges from new development and redevelopment sites that is consistent with the performance standards set forth in the documents found in Part 3.5.2, and that is applicable to projects described in these documents. The permittee must ensure consistency with the standards in Part 3.5.2 upon the effective date of this permit. Within 18 months of the permit effective date, the permittee shall develop additional BMPs and measurable goals to comply with Parts 3.5.3 through 3.5.6, and request funding as required for subsequent years. The permittee

must implement all BMPs developed for Parts 3.5.3 through 3.5.6 beginning 18 months after the effective date of the permit. Written procedures for implementing this program, including the components described in Parts 3.5.2 – 3.5.7, must be incorporated into the SWMP document.

3.5.2 Site Performance Standards. The program must ensure the design, installation, implementation and maintenance of post-construction stormwater control measures from new development and redeveloped sites discharging to the MS4 consistent with the following:*

3.5.2.1 2006 CNMI and Guam Stormwater Management Manual; and

3.5.2.2 2010 Guam Transportation Stormwater Drainage Manual.

*Note: If these manuals are updated during the term of the permit, the updated manuals may also be used.

3.5.2.3 In reviewing and approving site plans in accordance with Parts 3.5.2.1 and 3.5.3, the permittee must prioritize post-construction control practices in favor of those that infiltrate, evapotranspire or harvest/reuse stormwater runoff. Management practices that treat and release stormwater are not allowed unless a project proponent demonstrates that practices that infiltrate, evapotranspire or harvest/reuse stormwater are not feasible for a given project.

3.5.3 Site Plan Review

3.5.3.1 To ensure that all applicable new development and redeveloped sites conform to the performance standards required in Part 3.5.2, the permittee must implement project review, approval, and enforcement procedures that include:

3.5.3.1.1 Procedures for the site plan review and approval process(es) that include inter-departmental consultations, as needed, and a required re-approval process when changes to an approved plan are desired; and

3.5.3.1.2 A requirement for submittal of 'as-built' certifications within 90 days of completion of a project.

3.5.3.2 The permittee must conduct site plan reviews, using the procedures described in Part 3.5.3.1, for all new development and redevelopment sites described in the documents found in Part 3.5.2 and that discharge to the MS4. The site plan review must specifically address how the project applicant meets the performance standards in Part 3.5.2 and how the project will ensure long-term maintenance as required in Part 3.5.4.

3.5.4 Long-Term Maintenance of Post-Construction Stormwater Control Measures

3.5.4.1 All structural stormwater control measures installed and implemented to meet the performance standards of Part 3.5.2 must be maintained in perpetuity. The permittee must ensure the long-term maintenance of structural stormwater control measures installed according to this

Part through one, or both, of the following approaches:

3.5.4.1 Maintenance performed by the permittee. See Part 3.6.7 of this permit.

3.5.4.2 Maintenance performed by the owner or operator of a new development or redeveloped site under a maintenance agreement. The permittee must require the owner or operator of any new development or redeveloped site subject to the performance standards in Part 3.5.2 to develop and implement a maintenance agreement addressing maintenance requirements for any structural control measures installed on site to meet the performance standards. The agreement must allow the permittee, or its designee, to conduct inspections of the structural stormwater control measures and also account for transfer of responsibility in leases and/or deeds. The agreement must also allow the permittee, or its designee, to perform necessary maintenance or corrective actions neglected by the property owner/operator, and bill or recoup costs from the property owner/operator when the owner/operator has not performed the necessary maintenance within thirty (30) days of notification by the permittee or its designee.

3.5.5 Tracking of Post-Construction Stormwater Control Measures

3.5.5.1 Inventory of Post-Construction Stormwater Control Measures. The permittee must maintain an inventory of all post-construction structural stormwater control measures installed and implemented at new development and redeveloped sites, including both public and private sector sites located within the permit area. The inventory must be searchable by property location (electronic tracking system is required). New entries to the inventory must be made during the site plan review and approval process in Part 3.5.3.1.

3.5.5.2 Tracking Information. Each entry to the inventory must include basic information on each project, such as project name, owner's name and contact information, location, start/end date, etc. In addition, inventory entries must include the following for each project:

3.5.5.2.1 Short description of each stormwater control measure (type, number, design or performance specifications);

3.5.5.2.2 Latitude and longitude coordinates of each stormwater control measure;

3.5.5.2.3 Short description of maintenance requirements (frequency of required maintenance and inspections); and

3.5.5.2.4 Inspection information (date, findings, follow up activities, prioritization of follow-up activities, compliance status).

3.5.5.3 Based on inspections conducted under Part 3.5.6, the permittee must update the inventory as appropriate where changes occur in property ownership or the specific control measures implemented at the site. This inventory must be maintained and available for review by the permitting authority.

3.5.6 Inspections and Enforcement

3.5.6.1 Inspection Frequency. To ensure that all stormwater control measures are operating correctly and are being maintained as required consistent with its applicable maintenance agreement, the permittee must conduct inspections of each project site covered under Part 3.5.2 performance standards at least one time during the permit term. A description of inspection procedures must be developed and be included in the SWMP document.

3.5.6.2 Post-Construction Inspection. Within 1 week of completion of construction of any project required to meet the Part 3.5.2 performance standards, the permittee must conduct a post-construction inspection to verify that the permittee's performance standards have been met. The permittee must include in its SWMP a procedure for being notified by construction operators/owners of their completion of active construction so that the post-construction inspection may be conducted.

3.5.6.3 Inspection Reports. The permittee must document its inspection findings in an inspection report. Each inspection report must include:

3.5.6.3.1 Inspection date;

3.5.6.3.2 Name and signature of inspector;

3.5.6.3.3 Project location (street address, latitude/longitude, etc.) and inventory reference number (from inventory established in Part 3.5.5.1)

3.5.6.3.4 Current ownership information (for example, name, address, phone number, fax, and email)

3.5.6.3.5 A description of the condition of the structural stormwater control measure including the quality of: vegetation and soils; inlet and outlet channels and structures; embankments, slopes, and safety benches; catch basins; spillways, weirs, and other control structures; and sediment and debris accumulation in storage and forebay areas as well as in and around inlet and outlet structures;

3.5.6.3.6 Photographic documentation of all critical structural stormwater control measure components; and

3.5.6.3.7 Specific maintenance issues or violations found that need to be corrected by the property owner or operator along with deadlines and reinspection dates.

3.5.6.4 The permittee must document and maintain records of inspection findings and enforcement actions and make them available for review by the permitting authority.

3.5.7 Retrofit Plan

3.5.7.1 The permittee must develop and implement a plan to retrofit existing developed sites that are impacting water quality. The retrofit plan must be developed within three years of permit effective date and must emphasize controls that infiltrate, evapotranspire, or harvest and use stormwater discharges. Written procedures for implementing this plan must be incorporated into the SWMP document. The plan must include:

3.5.7.1.1 An inventory of potential retrofit locations, which considers, at a minimum:

- Locations that contribute pollutants of concern to an impaired waterbody
- Locations that contribute to receiving waters that are significantly eroded
- Locations that are tributary to a sensitive ecosystem or protected area
- Locations that are tributary to areas prone to flooding

3.5.7.1.2 An evaluation and ranking of the inventoried locations to prioritize retrofitting which includes, at a minimum:

- Feasibility
- Cost effectiveness
- Pollutant removal effectiveness
- Impervious area potentially treated
- Maintenance requirements
- Landowner cooperation
- Neighborhood acceptance
- Aesthetic qualities, and
- Efficacy at addressing concern.

3.6 Pollution Prevention/Good Housekeeping for Municipal Operations

3.6.1 Program Development. The permittee must develop and implement a program to minimize pollutants discharges from municipal facilities through good housekeeping and pollution prevention. Within 18 months of the permit effective date, the permittee shall develop BMPs and measurable goals for the program, and request funding as required for subsequent years. The permittee must implement all BMPs developed in the program beginning 18 months after the effective date of the permit. Written procedures for implementing this program, including the components described in Parts 3.6.2 – 3.6.12, must be incorporated into the SWMP document.

3.6.2 Municipal Facility and Controls Inventory

3.6.2.1 Development of a Municipal Facility and Stormwater Control Inventory. The permittee must develop and maintain an inventory of municipally-owned or operated facilities and stormwater controls, including but not limited to the following:

- Composting facilities

- Equipment storage and maintenance facilities
- Fuel farms
- Hazardous waste disposal facilities
- Hazardous waste handling and transfer facilities
- Incinerators
- Landfills
- Landscape maintenance on municipal property
- Materials storage yards
- Pesticide storage facilities
- Public buildings, including schools, libraries, police stations, fire stations, municipal buildings, and similar buildings
- Public parking lots
- Public golf courses
- Public swimming pools
- Public works yards
- Recycling facilities
- Solid waste handling and transfer facilities
- Street repair and maintenance sites
- Vehicle storage and maintenance yards
- Municipally-owned and/or maintained structural stormwater controls

3.6.2.2 Documentation. The inventory of municipally-owned or operated facilities and stormwater controls must be maintained and available for review by the permitting authority.

3.6.2.3 Mapping. On a map of the area covered by the MS4 permit, the permittee must identify where the municipally-owned or operated facilities and stormwater controls are located. The map must identify the stormwater outfalls corresponding to each of the facilities as well as the receiving waters to which these facilities discharge. The permittee must also identify the manager of each facility and their contact information. The map must be maintained and updated regularly and be available for review by the permitting authority. Incorporation of facility information into the GIS required by Part 3.3.2 of the permit is required.

3.6.3 Facility Assessment

3.6.3.1 Municipally-Owned or Operated Facility Assessment

3.6.3.1.1 Comprehensive Assessment of Pollutant Discharge Potential. The permittee must conduct a comprehensive assessment of each municipally-owned or operated facilities identified in Part 3.6.2.1 annually for their potential to discharge in stormwater the following typical urban pollutants: sediment, nutrients, metals, hydrocarbons (e.g., benzene, toluene, ethylbenzene and xylene), pesticides, chlorides, and trash. Other pollutants may be associated with, but not generated directly from, the municipally-owned or operated facilities, such as bacteria, chlorine, organic matter, etc. Therefore, the permittee must determine additional pollutants associated with its facilities that could be found in stormwater discharges. A description of the assessment

process must be included in the SWMP document. This assessment must be updated annually.

3.6.3.1.2 Identification of "High Priority" Facilities. Based on the Part 3.6.3.1.1 comprehensive assessment, the permittee must identify as "high-priority" those facilities that have a high potential to generate stormwater pollutants. Among the factors that must be considered in giving a facility a high priority ranking is the amount of pollutants stored at the site, the identification of improperly stored materials, activities such as vehicle or equipment maintenance or washing, proximity to waterbodies, poor housekeeping practices, and discharge of pollutant(s) of concern to impaired water(s). High priority facilities must include the permittee's maintenance yards, hazardous waste facilities, fuel storage locations, and any other facilities at which chemicals or other materials have a high potential to be discharged in stormwater.

3.6.3.1.3 Documentation of Comprehensive Assessment Results. The permittee must document the results of the assessments and maintain copies of all site evaluation checklists used to conduct the comprehensive assessment. The documentation must include the results of the permittee's initial assessment, any identified deficiencies and corrective actions taken, and a list of the "high priority" facilities identified per Part 3.6.3.1.2.

3.6.4 Development of Facility-Specific Stormwater Management Standard Operating Procedures (SOPs) and Implementation of Facility Stormwater Controls

3.6.4.1 Facility-Specific Stormwater Management SOPs for "High Priority" Facilities

3.6.4.1.1 For each "high priority" facility or operation identified in Part 3.6.3.1.2, the permittee must develop a site-specific SOP that identifies stormwater controls (i.e., structural and non-structural controls, and operational improvements) to be installed, implemented, and maintained to minimize the discharge of pollutants in stormwater. At a minimum, the facility-specific SOP must include the stormwater control measures described below in Part 3.6.4.2, as well as inspection and visual monitoring procedures and schedules described in Part 3.6.4.3.

3.6.4.1.2 A copy of the facility-specific stormwater management SOP must be maintained and be available for review by the permitting authority. The SOP must be kept on-site at each of the municipally-owned or operated facilities' offices for which it was completed. The SOP must be updated as necessary.

3.6.4.1.3 The permittee must install, implement, and maintain all stormwater controls required per Part 3.6.4.2 of this permit and included in the facility's site-specific SOP.

3.6.4.2 Stormwater Controls for "High Priority" Facilities. The following stormwater controls must be implemented at all "high priority" municipally-owned or operated facilities identified in Part 3.6.3.1.2. A description of any controls included in this part and any standard operating procedures developed to comply with this part must be included as part of the of each facility's SOP:

3.6.4.2.1 General Good Housekeeping. The following good housekeeping practices must be implemented for all facilities identified as "high priority":

3.6.4.2.1.1 The permittee must keep all municipally-owned or operated facilities neat and orderly, minimizing pollutant sources through good housekeeping procedures and proper storage of materials.

3.6.4.2.1.2 Materials exposed to stormwater must be covered where feasible (without creating additional impervious surfaces, if possible).

3.6.4.2.2 Fueling Operations. The permittee must implement standard operating procedures for vehicle fueling and receiving of bulk fuel deliveries at municipally-owned or operated facilities with the goal of reducing the likelihood of spills, and providing spill controls in the event that accidental spills do occur.

3.6.4.2.3 Vehicle Maintenance. The permittee must implement an SOP for vehicle maintenance and repair activities that occur at municipally-owned or operated facilities with the goal of reducing the likelihood of spills or releases and providing controls in the event that accidental spills do occur. The SOPs must include regular inspections of all maintenance areas and activities.

3.6.4.2.4 Equipment and Vehicle Washing. The discharge of equipment and vehicle wash wastewater to the MS4 or directly to receiving waters from municipal facilities is prohibited. The permittee may meet this requirement by either installing a vehicle wash reclaim system, capturing and hauling the wastewater for proper disposal, connecting to sanitary sewer (where applicable and approved by local authorities), ceasing the activity, and/or applying for and obtaining a separate NPDES permit.

3.6.4.3 Inspections and Visual Monitoring

3.6.4.3.1 Weekly Visual Inspections. The permittee must perform weekly visual inspections to ensure materials and equipment are clean and orderly, and to minimize the potential for pollutant discharge. The permittee must look for evidence of spills and immediately clean them up to prevent contact with precipitation or runoff. The weekly inspections must be tracked in a log for every facility, and records kept with the SWMP document. The inspection report must also include any identified deficiencies and the corrective actions taken to fix the deficiencies.

3.6.4.3.2 Quarterly Comprehensive Inspections. At least once per quarter, a comprehensive inspection of "high priority" facilities, including all stormwater controls, must be performed, with specific attention paid to waste storage areas, dumpsters, vehicle and equipment maintenance/fueling areas, material handling areas, and similar potential pollutant-generating areas. The quarterly inspection results must be documented and records kept with the SOP document. This inspection must be done in accordance with the developed SOPs. The inspection report must also include any identified deficiencies and the corrective actions taken to fix the deficiencies.

3.6.5 Storm Sewer System Maintenance Activities

3.6.5.1 MS4 Catch Basin Maintenance

3.6.5.1.1 Assessment/Prioritization of Catch Basins. The permittee must assign a priority to each of its catch basin inlets within its jurisdiction as one of the following:

- Priority A – Catch basins that are designated as consistently generating the highest volumes of trash and/or debris
- Priority B – Catch basins that are designated as consistently generating moderate volumes of trash and/or debris
- Priority C – Catch basins that are designated as generating low volumes of trash and/or debris

The permittee must use information compiled from citizen complaints/reports to help in the determination of the appropriate priority level. A description of the prioritization scheme must be included in the SWMP.

3.6.5.1.2 Catch Basin Inspection and Cleaning

3.6.5.1.2.1 Based on the priorities assigned in Part 3.6.5.1.1, the permittee must inspect and clean catch basins in accordance with the following schedule:

- Priority A – 3 times per year
- Priority B – 2 times per year
- Priority C – 1 time per year

The permittee must develop a catch basin cleaning schedule based on the frequency specified in this permit, along with a list of each of its catch basins and the priority assigned to them per Part 3.6.5.1.1.

3.6.5.1.2.2 In addition to catch basin cleanings performed above, the permittee must ensure that any catch basin that is inspected and found to be between one third and one half full of trash and/or debris must be cleaned within 7 days of discovery. The permittee must maintain a log of all maintenance performed.

3.6.5.1.2.3 The permittee must document that it has performed all required catch basin cleanings in a log that is to be made available for review by the permitting authority upon request.

3.6.5.1.3 Catch Basin Labeling. The permittee must ensure that each catch basin includes a legible stormwater awareness message (e.g., a label, stencil, marker, or pre-cast message such as "drains to the creek" or "only rain in the drain"). Catch basins with illegible or missing labels must be recorded and re-labeled within 7 days of inspection.

3.6.5.1.4 Maintenance of Surface Drainage Structures. The permittee must visually monitor

permittee-owned open channels and other drainage structures for debris at least once per year and identify and prioritize problem areas, such as those with recurrent illegal dumping, for inspection at least three times per year. Removal of trash and debris from open channels and other drainage structures must occur at least annually. The permittee must document its drainage structure maintenance in a log that is to be made available for review by the permitting authority upon request.

3.6.5.1.5 Disposal of Waste Materials. The permittee must develop a procedure to dewater and dispose of materials extracted from catch basins. This procedure must ensure that waste material and water removed during the catch basin cleaning process will not discharge or reenter the MS4.

3.6.5.2 Municipal Operation and Maintenance Activities

3.6.5.2.1 Assessment of Municipal Activities and Operations

3.6.5.2.1.1 The permittee must assess and revise as necessary its operation and maintenance (O&M) activities to minimize pollutant discharges from the MS4. The following municipal O&M activities must be included in the assessment for their potential to discharge pollutants in stormwater:

- Road and parking lot maintenance, including pothole repair, pavement marking, sealing, and re-paving
- Bridge maintenance, including re-chipping, grinding, and saw cutting
- Right-of-way maintenance, including mowing, herbicide and pesticide application, and planting vegetation
- Municipally-sponsored events such as large outdoor festivals, parades, or street fairs

3.6.5.2.1.2 The permittee must identify all materials that could be discharged from each of these O&M activities. Typical pollutants associated with these activities include metals, chlorides, hydrocarbons (e.g. benzene, toluene, ethylbenzene, xylene), sediment, and trash.

3.6.5.2.1.3 The permittee must develop a set of pollution prevention measures that, when applied during municipal O&M activities, will reduce the discharge of pollutants in stormwater. These pollution prevention measures must include, at a minimum:

- Replacing materials/chemicals with more environmentally benign materials or methods (e.g., use mechanical methods vs. herbicides, or use water-based paints or thermoplastics rather than solvent-based paints for stripping)
- Changing operations to minimize the exposure or mobilization of pollutants (e.g., mulch, compost or landfill grass clippings) to prevent them from entering surface waters

3.6.5.2.1.4 The permittee must develop and implement a schedule for instituting the pollution prevention measures. At a minimum, with respect to all roads, highways, and parking lots with more than 5,000 square feet of pollutant-generating impervious surface area that are owned,

operated, or maintained, the permittee must implement all pollution prevention measures within two years of the permit effective date.

3.6.5.2.1.5 The results of the assessments and pollution prevention measures, including schedules for implementation, must be documented and made available for review by the permitting authority upon request.

3.6.5.2.2 Inspection of Pollution Prevention Measures. All pollution prevention measures implemented at municipal facilities must be visually inspected quarterly to ensure they are working properly; a log of inspections must be maintained and made available for review by the permitting authority upon request.

3.6.6 Street Sweeping and Cleaning

3.6.6.1 The permittee must evaluate and rate all municipally-owned streets, roads, and public parking lots within their jurisdiction. The permittee must include in the evaluation the sweeping frequency, timing, and efficiency of existing street sweeping programs. The street sweeping frequency must be based on land use, trash and stormwater pollutant levels generated. At a minimum, the following areas must be regarded as "high priority," for sweeping activities while the "medium priority" and "low priority" areas are recommended:

- High priority – Streets, road segments, and public parking lots that must be designated as high priority include, but are not limited to, high traffic zones, commercial and industrial districts, shopping malls, large schools, high-density residential dwellings, sport and event venues, and plazas. This designation must include areas that consistently accumulate high volumes of trash, debris, and other stormwater pollutants.
- Medium priority – Streets, road segments and public parking lots the permittee can designate as medium priority include medium traffic zones; warehouse districts; and light, small-scale commercial and industrial areas.
- Low priority – Streets and road segments designated as low priority include light traffic zones and residential zones.

3.6.6.2 The permittee must show on a map of its service area how the streets, roads, and public parking lots have been rated in accordance with Part 3.6.6.3.1.

3.6.6.3 Implementing Sweeping Schedules. The permittee must sweep streets/roads/public parking lots in accordance with the following frequency:

- High priority – annual average of at least twice per month
- Medium priority – annual average of at least once per month
- Low priority – annual average of at least twice per year

If a permittee's existing overall street sweeping effort provides equivalent or greater street sweeping frequency relative to the requirements above, the permittee may continue to implement its existing street sweeping program.

3.6.6.4 For areas where street sweeping is technically infeasible (e.g., streets without curbs), the permittee must increase implementation of other trash/litter control procedures to minimize pollutant discharges to storm drains and creeks. The permittee must show on its Part 3.6.6.3.2 map the location of these areas.

3.6.6.5 Sweeping Equipment Selection and Operation

3.6.6.5.1 When replacing existing sweeping equipment, the permittee must select and operate high-performing sweepers that are efficient in removing pollutants, including fine particulates, from impervious surfaces.

3.6.6.5.2 The permittee must follow equipment design performance specifications to ensure that street sweeping equipment is operated at the proper equipment design speed with appropriate verification, and that it is properly maintained.

3.6.6.5.3 The permittee must operate sweepers to optimize pollutant removal by permitting sweepers access to the curb through the use of parking restrictions that clear the curb or through effective public outreach to inform citizens of sweeping days and times so that voluntary curb clearing can occur.

3.6.6.6 Sweeper Waste Material Disposal. The permittee must develop a procedure to dewater and dispose of street sweeper waste material. This procedure must ensure that water and material will not reenter the MS4.

3.6.6.7 Operator Training. Street sweeper operators must be trained to enhance operations for water quality benefit.

3.6.7 Maintenance of Municipally-Owned and/or Maintained Structural Stormwater Controls. The permittee must inspect at least yearly, and maintain if necessary, all municipally-owned or maintained structural stormwater controls. The permittee must also maintain all green infrastructure practices through regularly scheduled maintenance activities.

3.6.8 Flood Management

3.6.8.1 Flood Management Projects. The permittee must develop and implement a process to assess the water quality impacts in the design of all new flood management projects that are associated with the permittee or that discharge to the MS4. This process must include consideration of controls that can be used to minimize the impacts to site water quality and hydrology while still meeting the project objectives. A description of this process must be included in the SWMP document.

3.6.9 Pesticide, Herbicide, and Fertilizer Application and Management

3.6.9.1 Landscape Maintenance

3.6.9.1.1 The permittee must evaluate the materials used and activities performed on public spaces such as parks, schools, golf courses, easements, public rights of way, and other open spaces for pollution prevention opportunities. Maintenance activities for the turf landscaped portions of these can include mowing, fertilization, pesticide application, irrigation, etc. Typical pollutants include sediment, nutrients, hydrocarbons, pesticides, herbicides and organic debris.

3.6.9.1.2 The permittee must implement the following practices to minimize landscaping-related pollutant generation:

3.6.9.1.2.1 Educational activities, permits, certifications, and other measures for municipal applicators and distributors.

3.6.9.1.2.2 Integrated pest management measures that rely on non-chemical solutions, including:

- Use of native plants, xeriscaping (reduces water usage and fertilization)
- Keeping clippings and leaves away from waterways and out of the street using mulching, composting, or landfilling
- Limiting application of pesticides and fertilizers if precipitation is forecasted within 24 hours or as specified in label instructions
- Limiting or replacing pesticide use (e.g., manual weed and insect removal)
- Limiting or eliminating the use of fertilizers, or, if necessary, prohibiting application within 5 feet of pavement, 25 feet of a storm drain inlet, or 50 feet of a waterbody
- Reducing mowing of grass to allow for greater pollutant removal, but not jeopardizing motorist safety

3.6.9.1.2.3 Schedules for chemical application that minimize the discharge of such constituents due to irrigation and expected precipitation.

3.6.9.1.2.4 The collection and proper disposal of unused pesticides, herbicides, and fertilizers.

3.6.10 Training and Education

3.6.10.1 Employee Training Requirements. The permittee must develop an annual employee training program for appropriate employees involved in implementing pollution prevention and good housekeeping practices in the Part 3.6 of this permit. All new hires must receive training within the first year of their hire date. This annual training must include a general stormwater education component, any new technologies, operations, or responsibilities that arise during the year, and the permit requirements that apply to the staff being trained. A description of the program must be maintained for review by the permitting authority. The permittee must also identify and track all personnel requiring training and records must be maintained.

3.6.11 Contractor Requirements and Oversight

3.6.11.1 Requirements for Contractors:

3.6.11.1.1 Any contractors hired by the permittee to perform municipal maintenance activities must be contractually required to comply with all of the stormwater control measures, good housekeeping practices, and facility-specific stormwater management SOPs described above.

3.6.11.1.2 The permittee must provide oversight of contractor activities to ensure that contractors are using appropriate control measures and SOPs. Oversight procedures must be described in the SWMP document.

3.6.12 Trash Reduction Plan

3.6.12.1 Within two years after the effective date of this permit, the permittee must develop a trash reduction plan which assesses the issue, identifies and implements trash reduction activities, and monitors reductions of trash loads from the MS4. The plan shall include, at a minimum, the following elements:

3.6.12.1.1 Quantitative estimate of the trash currently being discharged (baseline load) from the MS4, including methodology used to determine the load.

3.6.12.1.2 Description of trash reduction activities currently being implemented as well as those needed to eliminate trash discharges from the MS4 in a phased approach consistent with targeted reductions.

3.6.12.1.3 Identification of priority areas for trash reduction activities including as appropriate watersheds of waterbodies listed as impaired for trash on the CWA Section 303(d) list, and areas of high trash generation and accumulation.

3.6.12.1.4 Trash reduction-related education activities as a component of Part 3.6.1 of this permit.

3.6.12.1.5 Integration of trash reduction activities and monitoring to measure progress toward reducing trash discharges.

3.6.12.1.6 An implementation schedule with proposed compliance deadlines for reducing trash discharges from the MS4 by 50% and 100% from the baseline load. Final compliance deadline no more than 15 years from development of trash reduction plan.

3.6.12.1.7 Monitoring plan to measure progress in reaching targeted trash discharge reductions from the MS4 baseline loads. Such monitoring plan should include elements to guide future implementation of trash reduction activities by aiding in identifying sources and temporal and spatial patterns of trash discharges.

3.6.12.2 The Annual Report must include a summary of 1) trash reduction activities (control measures and best management practices) with information on the types of actions, locations and levels of implementation, the total trash loads and dominant types of trash removed by each

action, and 2) progress towards meeting reduction targets, including applicable monitoring results.

3.6.12.3 The plan shall provide for compliance with targeted MS4 trash discharge reductions in the shortest practicable time frame.

3.6.13 Asset Management Plan (AMP)

3.6.13.1 Within two years of the effective date of this permit, the permittee must develop and begin implementation of an asset management plan (AMP) in order to establish intended levels of service for its MS4 consistent with the conditions of this permit. The AMP shall inventory and assess the condition of all critical hard and soft assets and evaluate costs required to achieve intended levels of service, linking those costs to funding sources. The plan must include, at a minimum, the following:

3.6.13.1.1 Inventory of MS4 Assets. The permittee must identify and inventory all critical components of the MS4 including hard assets such as the storm drain system, structural controls and equipment individually valued over $5000. The purchase date, purchase price and replacement costs for the hard assets must also be included. Incorporation of hard asset information into the GIS required by Part 3.3.2 of the permit is required. In addition, the inventory must include soft assets such as the personnel performing the inspections required by permit.

3.6.13.1.2 Required Level of Service. The plan must identify the level of performance required for each of the assets, in particular the performance required to comply with the MS4 permit. The AMP must also include the current performance, consequence of failure and the likelihood of failure of each of the assets in the inventory.

3.6.13.1.3 Maintenance Rehabilitation, and Replacement Plan (MRRP). The permittee must develop and implement a MRRP. The MRRP must evaluate data obtained through asset assessment in order to inform a strategy for prioritizing and scheduling maintenance of the MS4 and rehabilitation and replacement of inventoried assets. The MRRP must be re-assessed annually to address changing conditions and resources.

3.6.13.1.6 Forecasting Costs. The permittee must project costs necessary to meet the desired level of service, at least through the end of the term of this permit. The permittee must then compare these projections with available funding sources to determine the best manner in which to fund operation and maintenance, repair, rehabilitation, and replacement of assets to sustain service and performance.

3.6.13.1.5 Climate Change Impacts. The permittee must identify new or increased threats to the MS4 resulting from climate change that may impact the desired levels of service in the next 50 years. The permittee must project upgrades to existing assets or new infrastructure projects, and associated costs, necessary to meet desired levels of service.

3.6.13.2 Annual Update. The permittee must re-evaluate its AMP on an annual basis and make the plan available to the permitting authority upon request.

3.7 Industrial/Commercial Stormwater Sources

3.7.1 Program Development. The permittee must develop and implement a program to minimize pollutants discharges from industrial/commercial sources within the area covered by the permit. Within two years of the permit effective date, the permittee shall develop BMPs and measurable goals for the program, and request funding as required for subsequent years. The permittee must implement all BMPs developed in the program at the start of the third year of the permit term. Written procedures for implementing this program, including the components described in Parts 3.7.2 – 3.7.6, must be incorporated into the SWMP document.

3.7.2 Facility Inventory. The permittee must develop and maintain an inventory of all industrial and commercial sites/sources within its jurisdiction (regardless of ownership) that could discharge pollutants in stormwater to the MS4. The inventory must be updated annually and available for review by the permitting authority upon request.

3.7.2.1 The inventory must include the following minimum information for each industrial and commercial site/source:

- Name
- Address
- Physical location of storm drain receiving discharge
- Name of receiving water
- Pollutants potentially generated by the site/source
- Identification of whether the site/source is (1) tributary to an impaired water body segment (i.e., whether it is listed under Section 303(d) of the Clean Water Act) and (2) whether it generates pollutants for which the water body segment is impaired
- A narrative description including standard industrial classification (SIC) codes, which best reflects the principal products or services provided by each facility.

Incorporation of facility information into the GIS required by Part 3.3.2 of the permit is required.

3.7.2.2 At a minimum, the following sites/sources must be included in the inventory:

3.7.2.2.1 Commercial Sites/Sources:

- Airplane repair, maintenance, fueling, or cleaning
- Animal facilities
- Automobile and other vehicle body repair or painting
- Automobile (or other vehicle) parking lots and storage facilities
- Automobile repair, maintenance, fueling, or cleaning
- Boat repair, maintenance, fueling, or cleaning

- Building material retailers and storage
- Cement mixing or cutting
- Eating or drinking establishments (e.g., restaurants), including food markets
- Equipment repair, maintenance, fueling, or cleaning
- Golf courses, parks and other recreational areas/facilities
- Landscaping
- Marinas
- Masonry
- Mobile automobile or other vehicle washing
- Mobile carpet, drape or furniture cleaning
- Nurseries and greenhouses
- Painting and coating
- Pest control services
- Pool and fountain cleaning
- Portable sanitary services
- Power washing services
- Retail or wholesale fueling

3.7.2.2.2 Industrial Sites/Sources:

- Industrial Facilities, as defined at 40 CFR § 122.26(b)(14), including those subject to the Multi Sector General Permit or individual NPDES permit
- Facilities subject to Title III of the Superfund Amendments and Reauthorization Act (SARA)
- Hazardous waste treatment, disposal, storage and recovery facilities
- All other commercial or industrial sites/sources tributary to an impaired water body segment, where the site/source generates pollutants for which the water body segment is impaired
- All other commercial or industrial sites/sources that the permittee determines may contribute a significant pollutant load to the MS4

3.7.3 Industrial/Commercial Facility Stormwater Control Measures

3.7.3.1 The permittee must require industrial and commercial facilities included in the Part 3.7.2 inventory to select, install, implement, and maintain stormwater control measures. At a minimum, the permittee must require industrial/commercial facilities to:

3.7.3.1.1 Minimize Exposure. Minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain and runoff by either locating these industrial materials and activities inside or protecting them with storm resistant coverings (although significant enlargement of impervious surface area is not recommended). The facilities must consider, where appropriate:

3.7.3.1.1.1 Using grading, berming, or curbing to prevent runoff of contaminated flows and divert run-on away from these areas

3.7.3.1.1.2 Locating materials, equipment, and activities so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas)

3.7.3.1.1.3 Cleaning up spills and leaks promptly using dry methods (e.g., absorbents) to prevent the discharge of pollutants

3.7.3.1.1.4 Using drip pans and absorbents under or around leaky vehicles and equipment or store indoors where feasible

3.7.3.1.1.5 Using spill/overflow protection equipment

3.7.3.1.1.6 Draining fluids from equipment and vehicles prior to on-site storage or disposal

3.7.3.1.1.7 Performing all cleaning operations indoors, under cover, or in bermed areas that prevent runoff and run-on and also that capture any overspray

3.7.3.1.1.8 Ensuring that all wash water drains to a proper collection system (i.e., not the stormwater drainage system)

3.7.3.1.2 Follow Good Housekeeping Practices. Keep clean all exposed areas that are potential sources of pollutants, using such measures as sweeping at regular intervals, keeping materials orderly and labeled, and storing materials in appropriate containers.

3.7.3.1.3 Conduct Maintenance. Regularly inspect, test, maintain, and repair all industrial equipment and systems to avoid situations that may result in leaks, spills, and other releases of pollutants in stormwater discharged to receiving waters.

3.7.3.1.4 Implement Spill Prevention and Response Procedures. Minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans for effective response to such spills if or when they occur. At a minimum, the facilities must implement:

3.7.3.1.4.1 Procedures for plainly labeling containers (e.g., "Used Oil," "Spent Solvents," "Fertilizers and Pesticides,") that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur

3.7.3.1.4.2 Preventative measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling

3.7.3.1.4.3 Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. Employees who may cause, detect, or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available.

3.7.3.1.4.4 Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies.

3.7.3.1.5 Implement Erosion and Sediment Controls. Stabilize exposed areas and contain runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants.

3.7.3.1.6 Manage Runoff. Divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff, to minimize pollutants in discharges.

3.7.3.1.7 Conduct Employee Training. All facility employees who work in areas where industrial materials or activities are exposed to stormwater, or who are responsible for implementing activities necessary to manage stormwater must be trained. Training must be conducted at least annually.

3.7.3.1.8 Address Non-Stormwater Discharges. Eliminate non-stormwater discharges not authorized by an applicable NPDES permit.

3.7.3.1.9 Control Waste, Garbage and Floatable Debris. Facilities must ensure that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged.

3.7.3.1.10 Control Dust Generation and Vehicle Tracking of Industrial Materials. Minimize generation of dust and off-site tracking of raw, final, or waste materials.

3.7.3.2 Within three years of permit effective date, the permittee must notify the owner/operator of each industrial and commercial site/source of the stormwater requirements for control measures in Part 3.7.3.1.

3.7.3.3 As necessary to minimize any pollutants causing the applicable receiving waterbody to be listed as impaired, the permittee must require implementation of additional controls for industrial and commercial sites/sources that are tributary to the impaired water body segments and that are likely to generate such impairment pollutants.

3.7.4 Industrial and Commercial Facility Inspections

3.7.4.1 Industrial and Commercial Site Inspection Program. The permittee must implement a program to inspect all commercial and industrial facilities included in its Part 3.7.2 inventory. The permittee must describe how this will occur in the SWMP. The inspection program must:

3.7.4.1.1 Prioritize all facilities into high, medium, and low categories on the basis of the potential for water quality impact using criteria such as pollutant sources on site, pollutants of concern, proximity to a water body, and violation history of the facility. The different priority categories will be assigned different inspection frequencies, with the highest priority facilities

receiving more frequent inspections. Describe the process for prioritizing inspections and frequency of inspections. If any geographical areas are to be targeted for inspections due to high potential for stormwater pollution, these areas must be listed in the Inspection Plan.

3.7.4.1.2 Explain how the priority assigned to any one facility may be modified based on the site inspection findings and the facility's potential to discharge pollutants.

3.7.4.2 Minimum Inspection Requirements

3.7.4.2.1 Inspection Frequency. The permittee is required to conduct inspections at the following frequencies, at a minimum:

3.7.4.2.1.1 Facilities with high potential for water quality impact must be inspected annually.

3.7.4.2.1.2 Facilities with medium potential for water quality impact must be inspected at least twice during the term of the permit.

3.7.4.2.1.3 Facilities with low potential for water quality impact must be inspected at least once every 5 years.

3.7.4.2.1.4 Facilities with either a written violation occurring in the previous year must be inspected at least annually until compliance is achieved.

3.7.4.3. Scope of Inspection. Inspections must at a minimum:

3.7.4.3.1 Evaluate the facility's compliance with the Part 3.7.3 requirement to select, design, install, and implement stormwater control measures.

3.7.4.3.2 Conduct a visual observation for evidence of unauthorized discharges, illicit connections, and potential discharge of pollutants to stormwater.

3.7.4.3.3 Verify whether the facility is required to be authorized under the multi-sector general industrial stormwater permit, and whether the facility has in fact obtained such permit coverage.

3.7.4.3.4 Evaluate the facility's compliance with any other relevant local stormwater requirements.

3.7.4.4 Documentation Requirements. At a minimum, the permittee must document the following for each inspection:

- The inspection date and time;
- The name(s) and signature(s) of the inspector(s);
- Weather information and a description of any discharges occurring at the time of the inspection;
- Any previously unidentified discharges of pollutants from the site;

- Any control measures needing maintenance or repairs;
- Any failed control measures that need replacement;
- Any incidents of noncompliance observed; and
- Any additional control measures needed to comply with the permit requirements.

3.7.4.5 Track Inspections. Inspection findings must be tracked to ensure inspections are conducted at the frequency specified in Part 3.7.4.2.1, highlight and document the recidivism of noncompliant facilities, and aid follow up and enforcement activities (electronic tracking system is required).

3.7.5 Enforcement. The permittee must ensure that all necessary follow up and enforcement activities are conducted as necessary to require necessary implementation and maintenance of the control measures described in Part 3.7.3. The permittee is required to utilize the ERP for all enforcement actions.

3.7.6 Staff Training. The permittee must ensure that all staff whose primary job duties are implementing the industrial/commercial stormwater program is trained to conduct facility inspections. The training must cover what is required under this permit in terms of stormwater control measures, the requirements of other applicable stormwater general or individual permits or other related local requirements, the permittee's site inspection and documentation protocols, and enforcement procedures. Follow-up training must be provided every other year to address changes in procedures, techniques, or staffing. Permittees must document and maintain records of the training provided and the staff trained.

4 Special Conditions

4.1 Total Maximum Daily Load (TMDL) Requirements

4.1.1 Requirements Related to the Twenty-Five Guam Beaches and Northern Watershed Bacteria TMDL.

Table 2 – Wasteload Allocations for the Twenty-Five Guam Beaches and Northern Watershed Bacteria TMDLs

Pollutant	Wasteload Allocations (#/100 ml)	
	Geometric Mean	Instantaneous Max
Enterococcus (M-2 Beaches)*	35	104
Enterococcus (M-3 Beaches)*	35	276

*Based on 2001 Guam Water Quality Standards (GAR GEPA, Division II - Water Control, Chapter 5), see Appendix D for a map of the M-2 and M-3 areas.

The wasteload allocation (WLA)-based effluent limitations contained in Table 2 shall become effective 18 months after the permit effective date (unless the permit is modified as described below to incorporate a compliance schedule with an alternate compliance deadline).

If the permittee believes additional time is needed to comply with the effluent limitations in Table 2, the permittee may within 12 months of the effective date of this permit, submit to Region 9 a plan, including an implementation schedule, for achieving compliance with these effluent limitations. The plan must achieve compliance as soon as practicable. If the permittee proposes a schedule that extends beyond one year, the plan must include interim dates and milestones and meet the requirements of 40 CFR 122.47. If such a plan is submitted, EPA may reopen and modify the permit pursuant to 40 CFR 122.62 and 122.47 to incorporate a compliance schedule. The plan must include, at a minimum, the following:

4.1.1.1 Detailed information on the BMPs proposed to be implemented and a schedule for their implementation, including (at a minimum) annual interim milestones and dates that illustrate the steps necessary to implement BMP actions necessary to comply.

4.1.1.2 A detailed and quantitative analysis which demonstrates that the proposed BMPs would ensure compliance with the WLAs.

4.1.1.3 A monitoring plan that identifies representative outfalls to be monitored to verify compliance with the WLAs.

4.1.1.4 A justification explaining why the additional time is needed and demonstrating that the requested schedule will result in compliance as soon as possible.

4.1.2 Permit Reopener for New TMDLs. Pursuant to 40 CFR 122.62, this permit may be reopened and modified to include requirements of TMDLs approved by EPA during the term of this permit with wasteload applications applicable to the permittee. Monitoring of discharges may also be required to ensure compliance with the TMDL.

4.2 General Water-Quality Based Effluent Limits. For parameters other than enterococcus discharges addressed by Part 4.1.1 above, the permittee must protect water quality by ensuring that no discharge shall cause or contribute to an exceedance of applicable water quality standards as set forth in Guam Water Quality Standards (GAR GEPA, Division II - Water Control, Chapter 5).

4.3 Endangered Species Act Requirements. This permit does not authorize nor require the construction of any particular structural stormwater quality control device that could adversely affect listed or proposed threatened or endangered species.

4.4 Historic Preservation. For all activities involving construction or excavation undertaken by the permittee to ensure compliance with this permit, the permittee must follow the procedures in the document entitled "Programmatic Agreement among the Department of Defense, the Advisory Council on Historic Preservation, the Guam State Historic Preservation

Officer, and the Commonwealth of the Northern Marianas State Historic Preservation Officer Regarding the Military Relocation to the Islands of Guam and Tinian", March, 2011.

4.5 Guam EPA CWA Section 401 Certification Requirements (Reserved)

5. Monitoring, Recordkeeping and Reporting Requirements

5.1 Consolidated Information Tracking System. Within 18 months of the permit effective date, the permittee must develop a tracking system to track the information required in the permit as well as the information required to be reported in the annual report (see Part 5.4). Electronic tracking system is required.

5.2 Development of a Comprehensive Monitoring & Assessment Program

5.2.1 Within 18 months of the effective date of this permit, the permittee must develop and implement a comprehensive monitoring and assessment program. A description of this program must be included in the SWMP document. The monitoring and assessment program must be designed to meet the following objectives:

- Assess compliance with this permit;
- Measure the effectiveness of the permittee's SWMP;
- Assess the impacts to receiving waters resulting from stormwater discharges;
- Characterize stormwater discharges;
- Identify sources of specific pollutants;
- Detect and eliminate illicit discharges and illegal connections to the MS4; and
- Assess the overall health and evaluate long-term trends in receiving water quality.

5.2.2 The program must, at a minimum, include the following:

5.2.2.1 Monitoring locations. The permittee must select at least five outfalls from among the different facilities covered by the permit that are representative of land uses within the jurisdiction of the permittee, including industrial, commercial and residential areas.

5.2.2.2 Monitoring Requirements. The parameters in Table 3 below must be monitored once/year at each selected outfall.

Table 3 – Monitoring Requirements

Parameter	Units	Frequency	Sample Type
Flow	Gallons	Once/year	Estimate
Conventional Pollutants			
Chemical Oxygen Demand	mg/l	Once/year	Composite

Biochemical Oxygen Demand (5-day)	mg/l	Once/year	Composite
Oil and Grease	mg/l	Once/year	Grab
pH	s.u.	Once/year	Grab
Total Suspended Solids	mg/l	Once/year	Composite
Priority Pollutants			
Arsenic, Total Recoverable	mg/l	Once/year	Composite
Cadmium, Total Recoverable	mg/l	Once/year	Composite
Copper, Total Recoverable	mg/l	Once/year	Composite
Lead, Total Recoverable	mg/l	Once/year	Composite
Mercury, Total Recoverable	mg/l	Once/year	Composite
Nickel, Total Recoverable	mg/l	Once/year	Composite
Selenium, Total Recoverable	mg/l	Once/year	Composite
Zinc, Total Recoverable	mg/l	Once/year	Composite
PCBs	mg/l	Once/year	Composite
Non-Conventional Pollutants			
Aluminum, Total Recoverable	mg/l	Once/year	Composite
Iron, Total Recoverable	mg/l	Once/year	Composite
Magnesium, Total Recoverable	mg/l	Once/year	Composite
Nitrate+Nitrite Nitrogen	mg/l	Once/year	Composite
Phosphorus, Total	mg/l	Once/year	Composite
Orthophosphorus	mg/l	Once/year	Composite
Dissolved Oxygen	mg/l and % sat.	Once/year	Grab
Enterococcus	CFU/100 ml	Once/quarter	Grab
E. coli	CFU/100 ml	Once/year	Grab
Chronic Toxicity	Pass/Fail	Once/year	Composite
Other pollutants*	mg/l	Once/year	Composite

*The permitttee must develop a list of additional pollutants of concern that may be present in the discharges and include such pollutants in the monitoring program. The list must be based on the source assessment requirements found elsewhere in this permit (e.g., Parts 3.6.3.11, 3.6.9.1 and 3.7.2). If a pollutant is not detected for two successive samples, the sampling may be discontinued, but restarted if circumstances change such that the pollutant is again of concern.

5.2.2.3 Whole Effluent Toxicity (WET) Requirements

5.2.2.3.1 Monitoring Frequency and Test Species. The permittee must conduct annual static non-renewal toxicity tests (using composite effluent samples) with the purple sea urchin, *Strongylocentrotus purpuratus* (Fertilization Test Method 1008.0). A split of each sample must also be analyzed for all other monitoring parameters specified in Table 1 above.

5.2.2.3.2 WET Test Methods. Species and short-term test methods for estimating the chronic toxicity of NPDES effluents are found in the first edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995)

5.2.2.3.3. Chronic WET Permit Trigger

5.2.2.3.3.1 There are no chronic toxicity effluent limits for this discharge. The chronic WET permit trigger is any one WET test (either biological endpoint of survival or sublethal) where a test result is *Fail* at the chronic in-stream waste concentration (IWC). For this discharge, the IWC is 100 percent effluent.

To calculate either a Pass or Fail of the multiple-effluent concentration chronic toxicity test at the IWC, follow the instructions in Appendix A in the *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA/833-R-10-003). A Pass result indicates no toxicity at the IWC, and a Fail result indicates toxicity at the IWC. The permittee must report either a Pass or a Fail on the DMR form.

If a test result is reported as "Fail", then the permittee shall follow the Accelerated Toxicity Testing and TRE/TIE Process, below, of this permit. If a result is reported as Fail, the permittee must also follow Part 5.2.2.3.9 (Reporting of Chronic Toxicity Monitoring Results) of this permit.

5.2.2.3.4. Quality Assurance

5.2.2.3.4.1 Quality assurance measures, instructions, and other recommendations and requirements are found in the *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* referenced above. Additional requirements are specified below.

5.2.2.3.4.2 This discharge is subject to a determination of "Pass" or "Fail" from a single-effluent concentration chronic toxicity test at the IWC (for statistical flowchart and procedures, see *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document*, Appendix A, Figure A-1).

5.2.2.3.4.3 Effluent dilution water and control water should be prepared and used as specified in the test methods manual *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms (EPA/600/R-95/136, 1995).* If the dilution water is different from test organism culture water, then a second control using culture water shall also be used. If the use of artificial sea salts is considered provisional in the test method, then artificial sea salts shall not be used to increase the salinity of the effluent sample prior to toxicity testing without written approval by the EPA.

5.2.2.3.4.4 If organisms are not cultured in-house, then concurrent testing with a reference toxicant shall be conducted. If organisms are cultured in-house, then monthly reference toxicant

testing is sufficient. Reference toxicant tests and effluent toxicity tests shall be conducted using the same test conditions (e.g., same test duration, etc.).

5.2.2.3.4.5 All multi-concentration reference toxicant test results must be reviewed and reported according to EPA guidance on the evaluation of concentration-response relationships found in *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR 136)* (EPA 821-B-00-004, 2000).

5.2.2.3.4.6 If either the reference toxicant or effluent toxicity tests do not meet all test acceptability criteria in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* , then the permittee shall resample and retest within 14 days.

5.2.2.3.4.7 If the discharged effluent is chlorinated, then chlorine shall not be removed from the effluent sample prior to toxicity testing without written approval by the permitting authority

5.2.2.3.5 Initial Investigation TRE Work Plan. This plan shall include steps the permittee intends to follow if toxicity is measured above the WET permit trigger and should include the following, at minimum:

5.2.2.3.5.1 A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.

5.2.2.3.5.2 A description of methods for maximizing in-house treatment system efficiency, good housekeeping practices, and a list of all chemicals used in operations at the facility.

5.2.2.3.5.3 If a Toxicity Identification Evaluation (TIE) is necessary, an indication of who will conduct the TIEs (i.e., an in-house expert or outside contractor).

5.2.2.3.5.4 The permittee may initiate a TIE as part of a TRE to identify the causes of toxicity using the same species and test method and the following EPA manuals: *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003, 1991); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996).

5.2.2.3.6 Accelerated Toxicity Testing and TRE/TIE Process

5.2.2.3.6.1 If the WET permit trigger is exceeded and the source of toxicity is known (e.g., a temporary plant upset), then the permittee shall conduct one additional toxicity test using the same species and test method. This toxicity test shall begin within 14 days of receipt of a test

result exceeding the chronic WET permit trigger. If the additional toxicity test does not exceed the chronic WET permit trigger, then the permittee may return to the regular testing frequency.

5.2.2.3.6.2 If the WET permit trigger is exceeded and the source of toxicity is not known, then the permittee shall conduct six additional toxicity tests using the same species and test method, approximately every two weeks, over a 12-week period. This testing shall begin within 14 days of receipt of a test result exceeding the chronic WET permit trigger. If none of the additional toxicity tests exceed the chronic WET permit trigger, then the permittee may return to the regular testing frequency.

5.2.2.3.7 If one of the additional toxicity tests (in paragraphs 5.2.2..3.6.1 or 5.2.2.3.6.2) exceeds the WET permit trigger, then, within 14 days of receipt of this test result, the permittee shall initiate a TRE using, according to the type of treatment facility, EPA manual Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants (EPA/833/B-99/002, 1999) or EPA manual Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (EPA/600/2-88/070, 1989).

5.2.2.3.8 In conjunction, the permittee shall develop and implement a Detailed TRE Work Plan which shall include the following: further actions undertaken by the permittee to investigate, identify, and correct the causes of toxicity; actions the permittee will take to mitigate the effects of the discharge and prevent the recurrence of toxicity; and a schedule for these actions.

5.2.2.3.9 Reporting of Toxicity Monitoring Results

5.2.2.3.9.1 The permittee shall submit a full laboratory report for all toxicity testing as an attachment to the DMR for the month in which the toxicity test was conducted. The laboratory report shall contain: the toxicity test results; the dates of sample collection and initiation of each toxicity test; all results for effluent parameters monitored concurrently with the toxicity test(s); and progress reports on TRE/TIE investigations.

5.2.2.3.9.2 The permittee shall provide the actual test endpoint responses for the control (i.e., the control mean) and the IWC (i.e., the IWC mean) for each toxicity test to facilitate the review of test results and determination of reasonable potential for chronic WET by the permitting authority.

5.2.2.3.9.3 The permittee shall notify the permitting authority in writing within 14 days of exceedance of the chronic WET permit trigger. This notification shall describe actions the permittee has taken or will take to investigate, identify, and correct the causes of toxicity; the status of actions required by this permit; and schedule for actions not yet completed; or reason(s) that no action has been taken.

5.2.2.3.10 Permit Reopener for Chronic Toxicity. In accordance with 40 CFR Parts 122 and 124, this permit may be modified to include effluent limitations or permit conditions to address chronic toxicity in the effluent or receiving waterbody, as a result of the discharge; or to implement new, revised, or newly interpreted water quality standards applicable to chronic

toxicity.

5.2.3 General Monitoring and Reporting

5.2.3.1 All monitoring shall be conducted in accordance with 40 CFR 136 test methods, unless otherwise specified in this permit. For effluent analyses required in Table 3 of this permit, the permittee shall use 40 CFR 136 test methods with Method Detection Limits (MDLs) and Minimum Levels (MLs) that are lower than the effluent limits in Table 3 of this permit and the water quality criteria concentrations in the National Recommended Water Quality Criteria. If all MDLs or MLs are higher than these effluent limits or criteria concentrations, then the permittee shall use the test method with the lowest MDL or ML available. If all published MDLs are higher than the effluent limitations (or applicable criteria concentrations), the permittee shall utilize the EPA-approved analytical method with the lowest published MDL. The permittee is not required to use "ultra low methods" unless specifically required by the permit.

5.2.3.2 The permittee shall ensure that the laboratory uses a standard calibration where the lowest standard point is equal to or less than the ML. Influent and effluent analyses for metals shall measure "total recoverable metal," except as provided under 40 CFR 122.45(c).

5.2.3.3 As an attachment to the first annual report, the permittee shall submit for all parameters with monitoring requirements specified in Table 3 of this permit:

5.2.3.3.1 The test method number or title and published MDL or ML;

5.2.3.3.2 The preparation procedure used by the laboratory;

5.2.3.3.3 The laboratory's MDL for the test method computed in accordance with Appendix B of 40 CFR 136;

5.2.3.3.4 The standard deviation (S) from the laboratory's MDL study;

5.2.3.3.5 The number of replicate analyses (n) used to compute the laboratory's MDL; and

5.2.3.3.6 The laboratory's lowest calibration standard.

As part of each annual report submittal, the permittee shall certify that there are no changes to the laboratory's test methods, MDLs, MLs, or calibration standards. If there are any changes to the laboratory's test methods, MDLs, MLs, or calibration standards, these changes shall be summarized in an attachment to the subsequent annual submittal.

5.2.3.4 The permittee shall develop a Quality Assurance ("QA") Manual for the field collection and laboratory analysis of samples. The purpose of the QA Manual is to assist in planning for the collection and analysis of samples and explaining data anomalies if they occur. At a minimum, the QA Manual shall include the following:

5.2.3.4.1 Identification of project management and a description of the roles and responsibilities of the participants; purpose of sample collection; matrix to be sampled; the analytes or compounds being measured; applicable technical, regulatory, or program-specific action criteria; personnel qualification requirements for collecting samples;

5.2.3.4.2 Description of sample collection procedures; equipment used; the type and number of samples to be collected including QA/Quality Control ("QC") samples; preservatives and holding times for the samples (see 40 CFR 136.3); and chain of custody procedures;

5.2.3.4.3 Identification of the laboratory used to analyze the samples; provisions for any proficiency demonstration that will be required by the laboratory before or after contract award such as passing a performance evaluation sample; analytical method to be used; MDL and ML to be reported; required QC results to be reported (e.g., matrix spike recoveries, duplicate relative percent differences, blank contamination, laboratory control sample recoveries, surrogate spike recoveries, etc.) and acceptance criteria; and corrective actions to be taken in response to problems identified during QC checks; and

5.2.3.4.4 Discussion of how the permittee will perform data review and reporting of results to EPA and Guam EPA and how the permittee will resolve data quality issues and identify limits on the use of data.

5.2.3.5 Throughout all field collection and laboratory analyses of samples, the permittee shall use the QA/QC procedures documented in its QA Manual. If samples are tested by a contract laboratory, the permittee shall ensure that the laboratory has the permittee's QA Manual on file. A copy of the permittee's QA Manual shall be retained on the permittee's premises and available for review upon request. The permittee shall review its QA Manual annually and revise it, as appropriate.

5.2.3.6 Samples collected during each month of the reporting period must be reported, as follows:

5.2.3.6.1 For a *maximum daily* permit limit or monitoring requirement when one or more samples are collected during the month, report either: The *maximum value*, if the maximum value of all analytical results is greater than or equal to the ML; or *NODI (Q)*, "No Discharge No Data Information" if the maximum value of all analytical results is greater than or equal to the laboratory's MDL, but less than the ML; or *NODI (B)*, if the maximum value of all analytical results is less than the laboratory's MDL.

5.2.3.6.2 For an *average weekly* or *average monthly* permit limit or monitoring requirement when only one sample is collected during the week or month, report either: The *maximum value*, if the maximum value of all analytical results is greater than or equal to the ML; or *NODI (Q)*, if the maximum value of all analytical results is greater than or equal to the laboratory's MDL, but less than the ML; or *NODI (B)*, if the maximum value of all analytical results is less than the laboratory's MDL.

5.2.3.6.3 For an *average weekly* or *average monthly* permit limit or monitoring requirement when more than one sample is collected during the week or month, report: The *average value* of all analytical results where 0 (zero) is substituted for *NODI (B)* and the laboratory's MDL is substituted for *NODI (Q)*.

5.2.3.7 All monitoring results shall be submitted in such a format as to allow direct comparison with the effluent limits, monitoring requirements, and conditions of this permit. Influent and effluent monitoring results are to be reported on EPA Form 3320-1, a pre-printed DMR provided by the EPA Region 9 DMR Coordinator for NPDES. A DMR form must be submitted for the reporting period even if there was not any discharge. DMR forms shall be submitted by the 28th day of the month following the previous annual reporting period. Duplicate signed copies of these, and all other reports required herein, shall be submitted to EPA and Guam EPA at the following addresses, unless otherwise specified in this permit:

U.S. EPA Region 9
Enforcement Division DMR (ENF-4-1)
75 Hawthorne Street
San Francisco, CA 94105

Administrator
Guam EPA
P.O. Box 22439 GMF
Barrigada, GU 96921

The discharger has the option to submit all monitoring results in the electronic reporting format approved by EPA. The Discharger may submit DMRs electronically using EPA's NetDMR application. NetDMR is a national tool for regulated Clean Water Act permittees to submit DMRs electronically via a secure Internet application to EPA. By using NetDMR, dischargers can discontinue mailing hard copy forms under 40 CFR 122.41 and 403.12.

5.3 Evaluation of Overall Program Effectiveness

5.3.1 Annual Effectiveness Assessment. The annual effectiveness assessment must:

5.3.1.1 Use the monitoring and assessment data described in Part 5.2 to specifically assess the effectiveness of each of the following:

5.3.1.1.1 Each significant activity/control measures or type of activity/control measure implemented;

5.3.1.1.2 Implementation of each major component of the Stormwater Management Program (public education/involvement, illicit discharges, construction, post-construction, good housekeeping, industrial/commercial facilities); and

5.3.1.1.3 Implementation of the SWMP as a whole.

5.3.1.2 Identify and use measurable goals, assessment indicators, and assessment methods for each of the items listed in Part 5.3.1.1 above.

5.3.1.3 Document the permittee's compliance with permit conditions.

5.3.2 Based on the results of the effectiveness assessment, the permittee must annually review its activities or control measures to identify modifications and improvements needed to maximize SWMP effectiveness, as necessary to achieve compliance with this permit. The permittee must develop and implement a plan and schedule to address the identified modifications and improvements. Municipal activities/control measures that are ineffective or less effective than other comparable municipal activities/control measures must be replaced or improved upon by implementation of more effective municipal activities/control measures.

5.3.3 As part of its Annual Reports, the permittee must report on its SWMP effectiveness assessment as implemented under Part 5.3.1 above.

5.4 Requirements for Annual Reporting of MS4 Activities

5.4.1 Annual Report Deadline. The permittee must submit annual reports on or before _____ for the reporting period _____ .

5.4.2 Annual Report Requirements. The Permittee must submit a detailed annual report that addresses, for the activities described in the SWMP document required in Part 2.2, including the following:

- A summary of past year activities, including where available, specific quantities achieved and summaries of enforcement actions.
- A description of the effectiveness of each SWMP program component or activity (see Part 5.3);
- Monitoring data collected during the reporting period;
- Planned activities and changes for the next reporting period, for each SWMP program component or activity; and
- Detailed fiscal analysis described in Part 2.5.2.

5.4.3 The annual report must clearly refer to the permit requirements, and describe in quantifiable terms, the status of activities undertaken to comply with each requirement.

5.4.4 Beginning no later than December 21, 2020, annual reports shall be submitted to EPA using NeT, a web-based tool that allows permittees to electronically submit required reports via a secure internet connection. By using NeT, the permittee will no longer be required to submit

hard copies of annual reports to EPA under 40 CFR 122.34(g)(3). Hard copies of annual reports submitted to EPA prior to electronic submittal using NeT shall be submitted to: Water Enforcement Section II (ENF-3-2), EPA Region 9, 75 Hawthorne Street, San Francisco, CA 94105.

Part 5.5 Summary of Deadlines

Table 4 – Summary of Deadlines

Deadline	Description of Requirement	Permit Citation	Page Number
Permit effective date	Begin implementation of permit requirements, including existing local construction and post-construction requirements	Part 2.1, 3.4.1 and 3.5.1	Pages 6, 18, and 23
12 months after permit effective date	Develop TMDL compliance plan and implementation schedule (if appropriate); otherwise TMDL requirements take effect 18 months after permit effective date	Part 4.1.1	Page 43
18 months after permit effective date	Develop SWMP consistent with permit requirements for first 18 months	Part 2.2	Page 6
	Ensure adequate legal authority	Part 2.3.1	Page 7
	Develop enforcement response plan	Part 2.4.1	Page 9
	Develop public education program	Part 3.1.1	Page 11
	Develop public participation program	Part 3.2.1	Page 12
	Update existing construction site controls program to be consistent with permit	Part 3.4.1	Page 18
	Update existing new development/redevelopment controls program to be consistent with permit	Part 3.5.1	Page 23
	Develop municipal operations plan	Part 3.6.1	Page 27
	Develop information tracking system	Part 5.1	Page 45
	Develop monitoring plan	Part 5.2.1	Page 45

Two years after permit effective date	Develop IDDE program	Part 3.3.1	Page 12
	Training for construction inspectors and plan reviewers	Parts 3.4.5.1.1.1 and 3.4.5.1.3.1	Page 22
	Implement pollution prevention plan for municipal operations	Part 3.6.5.2.1.4	Page 32
	Develop trash reduction plan	Part 3.6.12	Page 36
	Develop asset management plan	Part 3.6.13	Page 37
	Develop program for industrial/ commercial sources	Part 3.7.1	Page 38
Three years after permit effective date	Training for general field staff regarding IDDE program	Part 3.3.7.2	Page 17
	Develop retrofit plan	Part 3.5.7	Page 26
	Notification of industrial/ commercial of program requirements	Part 3.7.3.2	Page 41
Four years after permit effective date	Assess effectiveness of public education program	Part 3.1.3	Part 11
90 days after end of each annual reporting period	Submit annual report	Part 5.4.1	Page 53
Within 6 months of permit expiration	Permit reapplication	Appendix B, Section 1	Page 60
As soon as practicable but not to exceed 15 years from development of plan	Compliance with trash reduction requirements	Parts 3.6.12.1.6 and 3.6.12.3	Page 36/37
As soon as practicable (if permit is modified to add a compliance schedule)	Compliance with TMDL requirements	Parts 4.1.1	Pages 43

Appendix A – Definitions and Acronyms

1. "Best Management Practices" (BMPs) refer to schedules of activities, prohibition of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

2. "Composite sample" means a combined sample that is formed by combining a series of individual discrete samples of specific volumes at specific intervals. Samples must be collected during the first 3 hours of the stormwater discharge or for the entire discharge if it is less than 3 hours. The composite sample must be flow-weighted using a continuous sampler, or it must be taken as a combination of a minimum of 3 sample aliquots, taken in each hour of discharge, with each aliquot being separated by a minimum of 15 minutes, and with each aliquot volume being proportional to the flow at the time of the sampling.

3. "CWA" means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended by Pub. L. 95-217, Pub. L. 95-576, Pub. L. 95-483 and Pub. L. 97-117, 33 U.S.C. 1251 et seq.

4. "Director" means the Regional Administrator of EPA Region 9 or an authorized representative.

5. "Grab" or "discrete" sample means a discrete, individual sample collected from a single location within a short period of time (less than 15 minutes).

6. "Illicit Discharge" means any discharge to a municipal separate storm sewer system that is not composed entirely of stormwater except discharges pursuant to an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges from firefighting activities.

7. "MEP" means maximum extent practicable, the technology-based discharge standard for municipal separate storm sewer systems to reduce pollutants in stormwater discharges. A discussion of MEP as it applies to small MS4s is found at 40 CFR 122.34. CWA section 402(p)(3)(B)(iii) requires that a municipal permit "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system design, and engineering methods, and other provisions such as the Administrator or the State determines appropriate for the control of such pollutants."

8. "Measurable Goal" means a quantitative measure of progress in implementing a component of a stormwater management program.

9. "Municipal Separate Storm Sewer" means a conveyance, or system of conveyances (including roads with drainage systems, municipal streams, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

   (i) owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal or sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to water of the United States;
   (ii) designed or used for collecting of conveying stormwater;
   (iii) which is not a combined sewer; and
   (iv) which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

10. "Outfall" means a point source where a municipal separate storm sewer discharges to water of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.

11. "Permittee" means the Department of the Navy, Joint Marianas Region.

12. "Point Source" means any discernible, confined and discrete conveyance, including but not limited to , any pipe, ditch, channel tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged.

13. "Representative Storm" means a storm event of greater than 0.1" of rainfall and at least 72 hours after the previously measurable (greater than 0.1" rainfall) storm event. Where feasible, the variance in the duration of the event and the total rainfall of the event should not exceed 50 percent from the average or median rainfall event in the area.

14. "Small Municipal Separate Storm Sewer System" means all separate storm sewers that are:

   (a) Owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States.

(b) Not defined as "large" or "medium" municipal separate storm sewer systems in accordance with this permit.
(c) This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

15. "Stormwater" means stormwater runoff, snow melt runoff, and surface runoff and drainage.

16. "Trash" means discarded, used or leftover solid materials, including but not limited to garbage, rubbish, refuse, paper, containers, bulky metallic waste, packing or construction materials or carcasses of dead animals.

17. "Urbanized Area of the Island of Guam" means the geographic area on the Island of Guam which is considered to be urbanized by the U.S. Census Bureau based on the 2010 census.

18 "Waters of the United States" means:

(a) all waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
(b) all interstate waters, including interstate "wetlands;"
(c) all other waters such as intrastate lakes, rivers, streams (including intermittent streams, mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
  (i) which are or could be used by interstate or foreign travelers for recreational or other purposes;
  (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
  (iii)which are used or could be used for industrial purposes by industries in interstate commerce;
(d) all impoundments of waters otherwise defined as waters of the United States under this definition;
(e) tributaries of waters identified in paragraphs (a) through (d) of this definition;
(f) the territory sea; and
(g) wetlands adjacent to areas (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to man-made bodies of water which neither were originally created in waters of the United

States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States.

Appendix B - EPA REGION 9 STANDARD FEDERAL NPDES PERMIT CONDITIONS
(Revised for Municipal Stormwater Permits, May 24, 1996)

1. Duty to Reapply [40 CFR 122.21(b)]

The permittee shall submit a new application 180 days before the existing permit expires.

2. Applications [40 CFR 122.22]

a. All permit applications shall be signed as follows:

(1) For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official.

b. All reports required by permits and other information requested by the Director shall be signed by a person described in paragraph (a) of this section, or by a duly authorized representative or representatives of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph (a) of this Section;
(2) The authorization specified either an individual or a position having responsibility for the overall operation of the regulated activity or a portion of the regulated activity, or an individual or position having overall responsibility for environmental matters for the municipality. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
(3) The written authorization is submitted to the Director.

c. Changes to authorization. If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or a portion of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

d. Certification. Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

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.

3. Duty to Comply [40 CFR 122.41(a)]

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

b. The Clean Water Act provides that:

(1) Any person who causes a violation of any condition in this permit is subject to a civil penalty not to exceed $25,000 per day of each violation. Any person who negligently causes a violation of any condition in this permit is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both for a first conviction. For a second conviction, such a person is subject to a fine of not more than $50,000 per day of violation, or by imprisonment for not more than two years, or both. [Updated pursuant to the Water Quality Act of 1987]

(2) Any person who knowingly causes violation of any condition of this permit is subject to fine of not less than $5,000 nor more than $50,000 per day of violation, or by imprisonment for not more than three years, or by both for a first conviction. For a second conviction, such a person is subject to a fine of not more than $100,000 per day of violation, or by imprisonment of not more than six years, or both. [Updated pursuant to the Water Quality Act of 1987]

(3) Any person who knowingly causes a violation of any condition of this permit and, by so doing, knows at that time that he thereby places another in imminent danger of death or serious bodily injury shall be subject to a fine or not more than $250,000, or imprisonment of not more than 15 years, or both. A person who is an organization and violates this provision shall be subject to a fine or not more than $1,000,000 for a first conviction. For a second conviction under this provision, the maximum fine and imprisonment shall be doubled. [Updated pursuant to the Water Quality Act of 1987]

4. Duty to Mitigate [40 CFR 122.41(d)]

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Proper Operation and Maintenance [40 CFR 122.41(e)]

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

6. Permit Actions [40 CFR 122.41(f)]

The permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

7. Property Rights [40 CFR 122.41 (g)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

8. Duty to Provide Information [40 CFR 122.41(h)]

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Director upon request, copies of records required to be kept by this permit.

9. Inspection and Entry [40 CFR 122.41(i)]

The permittee shall allow the Director, or an authorized representative, upon the presentation of credential and other documents as may be required by law, to:

a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

10. Monitoring and Records [40 CFR 122.41(j)]

a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

b. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

c. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained in this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or by both for a first conviction. For a second conviction, such a person is subject to a fine of not more than $20,000 per day of violation, or imprisonment for not more than four years, or both. [Updated pursuant to the Water Quality Act of 1987]

11. Signatory requirement[40 CFR 122.41(k)]

a. All applications, reports or information submitted to the Director shall be signed and certified. (See 40 CFR 122.22)

b. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record other document submitted or required to be maintained under this permit, including monitoring reports of compliance or noncompliance shall, upon conviction, be punished by a fine or not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or by both for a first conviction. For a second conviction, such a person is subject to fine of not more than $20,000 per day of violation, or imprisonment of not more than four years, or both. [Updated pursuant to the Water Quality Act of 1987]

12. Reporting requirements [40 CFR 122.41(l)]

a. Anticipated noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility of activity which may result in noncompliance with the permit requirements.

b. Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(1) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.

(2) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR Part 136, then the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

(3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

c. Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

d. Twenty-four hour reporting.

(1) The permittee shall report any noncompliance which may endanger public health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned in order to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(2) The following shall be included as information which must be reported within 24 hours under this paragraph.

(i) Any unanticipated bypass which exceeds any effluent limitation in the permit. [See 40 CFR 122.41(g).]

(ii) Any upset which exceeds any effluent limitation in the permit.

(3) The Director may waive the written report on a case-by-case basis for

reports under paragraph (d)(2) of this section if the oral report has been received within 24 hours. Reports during normal business hours (8:00 am to 4:30 pm) should be made to the Compliance Section at telephone #415-972-3505. Twenty-four hour reporting can be made at telephone #415-947-4400.

e. Other noncompliance. The permittee shall report all instances of noncompliance not reported under the above paragraphs (c) and (d) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed paragraph (d) of this section.

f. Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

13. Bypass [40 CFR 122.41(m)]

a. Definitions

(1) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. However, diversions of stormwater which are consistent with the normal operation of the municipal storm sewer system shall not be considered bypasses.
(2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypass not Exceeding Limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (c) and (d) of this section.

c. Notice.

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, of possible at least ten days before the date of the bypass.
(2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph (f) of section (13) (24-hour notice).

d. Prohibition of bypass.

(1) Bypasses are prohibited, and the Director may take enforcement action against a permittee for a bypass, unless:

(i) A bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
(ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance, and
(iii) The permittee submitted notices as required under paragraph c of this section.

(2) The Director may approve an anticipated bypass, after considering its adverse effects, if the director determines it will meet the three conditions listed above in paragraph (d) of this section.

14. Upset [40 CFR 122.41(n)]

a. Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirement of paragraph (c) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the permittee can identify the cause(s) of the upset;
(2) The permitted facility was at the time being properly operated; and
(3) The permittee submitted notice of the upset as required in paragraph 13(f)

(24-hour notice).

(4) The permittee complied with any remedial measures required under 40 CFR 122.41(d).

d. Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

15. Termination of permits [40 CFR 122.64]

The following are causes for terminating a permit during its term, or for denying a permit renewal application:

a. Noncompliance by the permittee with any condition of the permit;

b. The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time;

c. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination; or

d. A change in any condition that requires either a temporary or a permanent reduction or elimination of any discharge controlled by the permit (for example, plant closure or termination of discharge by connection to a POTW).

16. Availability of Reports [Pursuant to Clean Water Act Section 308]

Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Regional Administrator. As required by the Act, permit applications, permits, and effluent data shall not be considered confidential.

17. Removed Substances [Pursuant to Clean Water Act Section 301]

Solids, sludges, filter backwash, or other pollutants removed in the course of maintenance of the MS4 shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

18. Severability [Pursuant to Clean Water Act Section 512]

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and remainder of the permit, shall not be affected thereby.

19. Civil and Criminal Liability [Pursuant to Clean Water Act Section 309]

Except as provided in permit conditions on "Bypass" (Section 14) and "Upset" (Section 15), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

20. Oil and Hazardous Substance Liability [Pursuant to Clean Water Act Section 311]

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act.

21. State or Tribal Law [Pursuant to Clean Water Act Section 510]

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the operator from any legal action or relieve the operator from any responsibilities, liabilities, or penalties established pursuant to any applicable State or Tribal law or regulation under authority preserved by Section 510 of the Clean Water Act.

Appendix C – Map of DoD Facilities

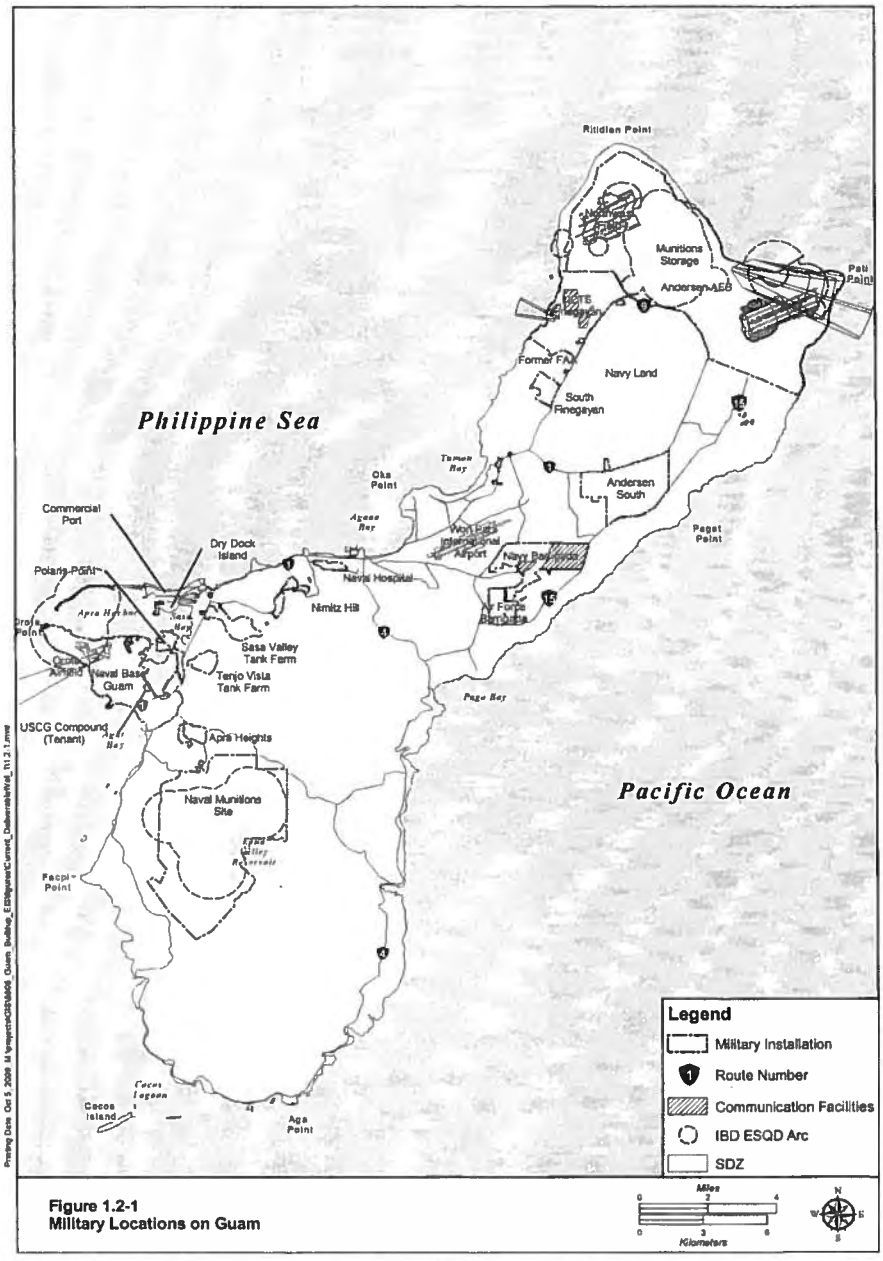
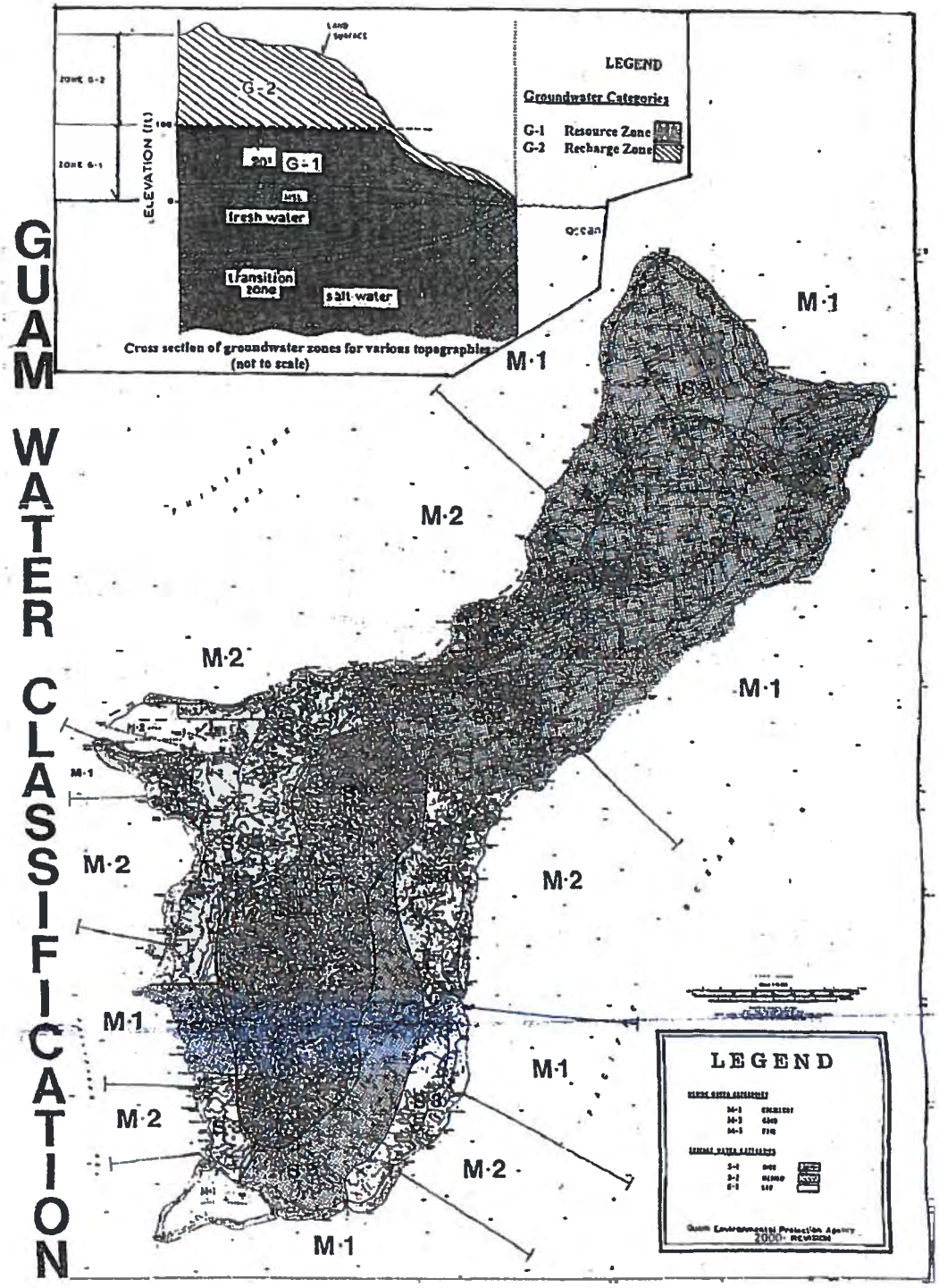


Figure 1.2-1
Military Locations on Guam

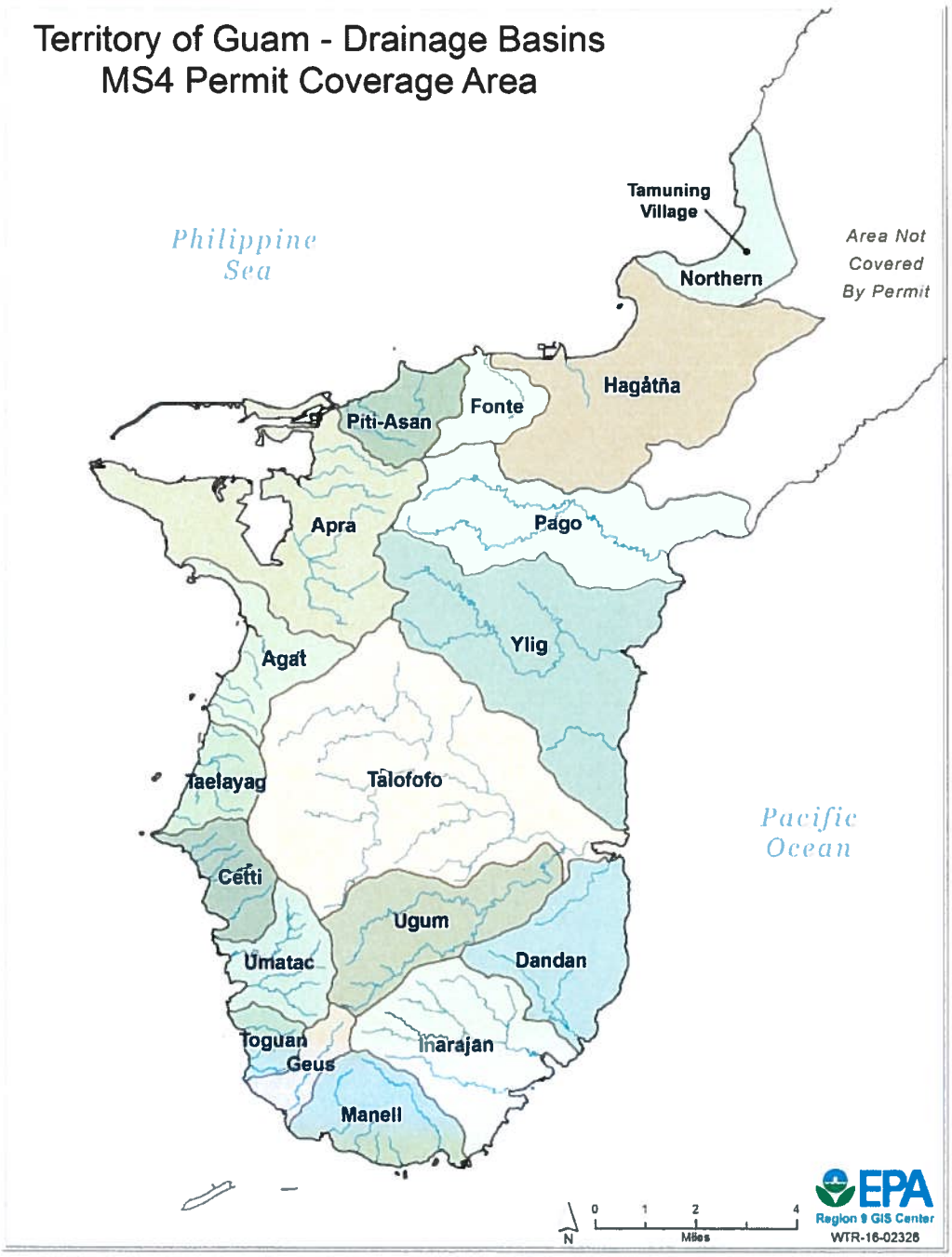
1-8

The existing facilities covered by the permit are the Naval Base at Apra Harbor; family housing/community support areas at Apra Heights; Nimitz Hill, Naval Magazine; Naval Hospital and adjacent high school.

Appendix D – M-2 and M-3 Areas on Guam



Appendix E – MS4 Permit Area



The DON MS4 permit area includes all DoD facilities in the following watersheds: Agat, Apra, Cetti, Dandan, Fonte, Geus, Hagåtña, Inaranjan, Mannell, Pago, Piti-Asan, Talayag, Talafolo, Toguan, Ugum, Umatac, and Ylig. In addition, the village limits of the village of Tamuming are included to the extent these limits extend northward beyond the boundaries of the Hagåtña watershed. The western tip of Navy Barrigada (shown in Appendix C) in the Hagåtña watershed is not covered.

NPDES Draft Permit #GUS040000

Factsheet

ENCLOSURE 2

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

September 2, 2016

FACT SHEET
DRAFT NPDES PERMIT NO. GUS040000
MUNICIPAL SEPARATE STORM SEWER SYSTEM
DEPARTMENT OF DEFENSE FACILITIES ON THE ISLAND OF GUAM

Permittee and Mailing Address: Department of the Navy
Naval Base Guam (NBG)
PSC 455, Box 152
FPO AP, Guam 96915

Permitted Facility and Location: Municipal Separate Storm Sewer System (MS4) Serving Department of Defense Facilities on the Island of Guam

Contact Person: John F. Salas, P.E.
NAVFAC Marianas, Code EV1
Phone: 671-339-2360
John.F.Salas@fe.navy.mil

SUMMARY: The Department of the Navy (DON) has applied to the U.S. Environmental Protection Agency, Region 9 for a National Pollutant Discharge Elimination System (NPDES) permit for discharges from the municipal separate storm sewer system (MS4) serving the portion of the Island of Guam under the jurisdiction of the Department of Defense (DoD). The discharges regulated by the permit would consist primarily of stormwater runoff, but could also include certain specified non-stormwater discharges as well.

NPDES permit coverage for the discharges is proposed in accordance with a preliminary residual designation decision made by Region 9 on February 8, 2011, in accordance with section 402(p)(2)(E) and (6) of the Clean Water Act (CWA), and NPDES regulations at 40 CFR 122.26(a)(9)(i)(D). Additional information concerning the rationale for the designation can be found below and in Region 9's residual designation memorandum which can be found in Appendix A.

Region 9 has prepared a draft permit based on the permit application and is proposing to issue the permit. The draft permit requires the implementation of a stormwater management program to control pollutants in the discharges as required by the CWA. Annual reporting is also required to provide information on the status of the implementation of the stormwater management program.

ENCLOSURE 2

PUBLIC COMMENT PERIOD: Comments on the draft permit must be received or postmarked no later than _____, 2016. Public comments on the draft permit may be submitted by U.S. Mail to: Environmental Protection Agency, Region 9, Attn: Eugene Bromley, NPDES Permits Section (WTR-2-3), 75 Hawthorne Street, San Francisco, California 94105-3901, or by email to: bromley.eugene@epa.gov. Based on the comments received, Region 9 will prepare a response to comments for the final permit.

REQUESTS FOR A PUBLIC HEARING: Interested persons may also request a public hearing pursuant to 40 CFR 124.12 concerning the draft permit. Requests for a public hearing must be sent or delivered in writing to Eugene Bromley at the above address prior to the close of the comment period. Requests for a public hearing must state the nature of the issues proposed to be raised in the hearing. Pursuant to 40 CFR 124.12, the Regional Administrator shall hold a public hearing if he finds, on the basis of requests, a significant degree of public interest in the draft permit. If the Regional Administrator decides to hold a public hearing, a public notice of the date, time and place of the hearing will be made at least 30 days prior to the hearing. Any person may provide written or oral statements and data pertaining to the draft permit at the public hearing.

FOR FURTHER INFORMATION CONTACT: For further information on the draft permit, contact Eugene Bromley, EPA, Region 9 (WTR-2-3), 75 Hawthorne Street, San Francisco, CA 94105, telephone (415) 972-3510, email: Bromley.eugene@epa.gov. Copies of the draft permit and fact sheet will be provided upon request and are also available on Region 9's website at: http://www.epa.gov/region09/water/npdes/pubnotices.html.

ADMINISTRATIVE RECORD: The draft permit and other related documents in the administrative record are on file and may be inspected any time between 8:30 a.m. and 4:00 p.m., Monday through Friday, excluding legal holidays, at the address shown below.

U.S. EPA, Region 9
NPDES Permits Section (WTR-2-3)
75 Hawthorne Street
San Francisco, CA 94105-3901

SUPPLEMENTARY INFORMATION

Table of Contents

1. Background

Region 9's 2011 designation memorandum (Appendix A) provides an overview of the statutory and regulatory background underlying the draft permit. The memorandum also discusses the factors that led Region 9 to propose designation of the MS4 discharges for permitting under the NPDES permit program. However, some of the information in the 2011 memorandum now needs to be updated. Below we provide this update.

1.1 2010 Census Results

EPA's Phase II regulations for small MS4s (64 FR 68722, December 8, 1999) require MS4 permits for urbanized areas due to higher levels of pollutants in stormwater runoff from concentrated centers of population, and the increased risks to receiving waters from the discharges from such areas. On May 1, 2002 (67 FR 21962), the Census Bureau published a list of urbanized areas based on the 2000 Census. Hagåtña, Guam was included on the list of urbanized areas with a population of 132,000, and ordinarily this would have triggered a requirement for an NPDES permit for the MS4 serving this area. However, on August 23, 2002 (67 FR 54631), the Census Bureau reclassified Hagåtña as urban cluster. Pursuant to an agreement between the Census Bureau and the government of Guam, "all urban areas defined within Guam based on the results of Census 2000 are designated as urban clusters regardless of their total population." 67 FR 54631. As a result, the Hagåtña MS4 no longer required an NPDES permit in accordance with the Phase II regulations. It should be noted, however, that the reclassification was simply a result of the Census Bureau's decision not to apply its criteria for urbanized areas to Guam, rather than any change in the population of the area.

The 2010 census results are now available and show that the population of Guam has increased slightly from the previous census. The principal urban area on Guam (now referred to as Dededo-Machanao-Apotgan) has a population of 139,825 based on the latest census (77 FR 18651, March 27, 2012), which is up from about 132,000 in 2000, and it has again been classified as an urban cluster. The increased population will only increase the risks to receiving waters from pollutants discharged from the MS4.

1.2 Military Relocation of U.S. Marines to Guam

Another key concern leading to the 2011 designation was the proposed relocation of U.S. Marines from Okinawa to Guam[1], which was projected to increase the total population on Guam, and thereby increase the risks to receiving waters from stormwater discharges. Furthermore, the relocation would be accompanied by a substantial construction program, raising concerns over pollutants, especially sediment, in construction site runoff. In 2012, the relocation plans were

[1] DON. 2010. Final Environmental Impact Statement, Guam and CNMI Military Relocation, July 2010, available at: http://www.guambuildupeis.us/.

scaled back somewhat and time frame extended; the revised relocation plans are described in a draft supplemental EIS prepared in 2014[2] and record of decision finalized in August 2015.[3] While the scope of the relocation has been reduced, it is still projected to increase the population of the Island by about 7,400 new residents, and be accompanied by moderate construction activity. As such, risks to receiving waters from stormwater runoff remain.

1.3 2014 Integrated Report[4] Submitted by the Guam EPA

In support of the proposed designation, Region 9 cited numerous studies including the 2008 Integrated Report submitted by the Guam EPA pursuant to CWA sections 305(b), 303(d) and 314, which concluded that urban runoff and construction site runoff were significant contributors of pollutants to receiving waters of Guam.

In January 2015, the Guam EPA submitted its 2014 Integrated Report which provides an updated assessment. This report continues to show that urban runoff is a significant contributor of pollutants to receiving waters. Appendix B to the Report lists the categories of discharges that are contributing to impairments and urban runoff is frequently cited.

1.4 2012 DON Permit Application

It its 2012 MS4 permit application, DON disagreed with Region 9's tentative determination that MS4 discharges (at least from DoD facilities) were a significant source of pollutants. As noted above, Guam EPA's 2014 Integrated Report continues to conclude that stormwater discharges for the Island as a whole are a significant source of pollutants. Appendix C shows that DoD facilities are widely dispersed on the Island, and after Region 9's September 2015 visit to Guam (see section 1.5 below) we still believe that at least some DoD facilities are a significant source of pollutants.

As noted in 2011 designation memorandum, the final decision as to whether the designation was proper remains open until the end of the public comment period for the draft permit. For now, Region 9 believes the best course is to continue the permit issuance process and re-evaluate the designation issue at the close of the comment period for the draft permit. At that time, a more informed decision could be made that would consider (and benefit from) information received from the public during the comment period.

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[2] DON. 2014. Supplemental Environmental Impact Statement, Guam and Commonwealth of the Northern Mariana Islands Military Relocation (2012 Roadmap Adjustments), April 2014.

[3] DON. 2015. Record of Decision for the Final Supplemental Environmental Impact Statement for Guam and Commonwealth of the Northern Mariana Islands Military Relocation, August 28, 2015.

[4] Guam EPA. 2014. Guam Environmental Protection Agency 2014 Integrated Report, September 30, 2014.

1.5 U.S EPA Visit to Guam in September 2015

In August 2015, EPA distributed draft MS4 permits for DON and the Guam DPW.[5] In September 2015, EPA also held a public meeting in Guam to discuss the draft permits, receive feedback from the permittees and other interested parties on the permits, and to get a first-hand look at the storm sewer system and stormwater management on Guam. Region 9 prepared a trip report[6] that summarizes the findings and conclusions from the trip. As discussed below, EPA has made certain revisions to the draft permits based on feedback from the meeting, and the actual observations of the storm sewer system.

During the September 2015 public meeting, DoD presented information regarding facilities in northern Guam where DoD believes most stormwater percolates into the ground due to the porous soil and that actual discharges rarely (if ever) occur. On February 4, 2016, DON also submitted written comments on its early draft permit and provided additional information describing the geology of the island.[7] EPA viewed DoD facilities in northern Guam, as well as other parts of northern Guam and noted retention or infiltration basins are common features. Based on this information, Region 9 has reconsidered the geographic scope of the proposed MS4 permit for DoD facilities in northern Guam; the specific facilities that DoD felt were inappropriate for permitting are Andersen AFB, Northwest Field, NCTS, Finegayan and Barrigada. During the EPA visit to DoD facilities in northern Guam, it did appear that surface stormwater discharges would be rare. Based on current information, the facilities in northern Guam that DoD suggested for removal were removed from the draft permit.

There was no disagreement that surface stormwater discharges do occur at other DoD facilities on Guam such as the Guam Naval Base, and the trip provided no new information that would change Region 9's previous conclusion that at least some DoD facilities are significant sources of pollutants on Guam. The revised permit includes the following DoD facilities: Naval Base at Apra Harbor; family housing/community support areas at Apra Heights and Nimitz Hill; Naval Magazine; and Naval Hospital and adjacent high school. The revised list will allow DoD to focus on areas most likely to be contributing to the water quality impairments noted in the 2014 Integrated Report.

Stormwater discharges percolating into Guam's porous soils may nevertheless be transported (possibly with pollutants) to surface waters through a groundwater connection. Figure 1 shows the limestone plateau of the northern half of Guam and the line of demarcation (Adelup Fault) separating the southern half of the island where the volcanic upland soils are less

[5] Region 9 is also proposing a separate draft MS4 permit for Guam's non-DoD areas, NPDES permit No. GUS040001. A separate MS4 permit application was submitted by the Guam Department of Public Works (DPW) for the MS4 serving non-military areas on Guam.

[6] EPA Region 9. 2015. Trip Summary, NPDES Permit Visit to Island of Guam, October 30, 2015.

[7] February 4, 2016 Letter from Mark Bonsavage to Tomas Torres, Water Division Director, EPA Region 9.

Figure 1 – Limestone Plateau of Northern Guam
Source: 2014 Integrated Report

permeable. As noted above, given the porous soils in northern Guam, much of the stormwater runoff infiltrates into the ground rather than being discharged. However, the 2014 Integrated Report indicates that stormwater runoff contributes to various water quality impairments even in northern Guam such as impairments to recreational waters in the Hagåtña Bay and Tumon Bay areas. Region 9 and Guam EPA will continue to evaluate the potential water quality impacts from stormwater runoff in northern Guam and future requirements for stormwater management may be developed in accordance with the findings of such evaluations.

At the meeting both DoD and the Guam DPW had a general request for more time for implementation of permit requirements. In response, several of the deadlines in the first drafts were extended in second draft permits that were provided to the permittees in April 2016. In an email[8] to Region 9 dated June 2, 2016, DON provided comments on the second draft permit. Among the comments, DON requested an additional 12 months (24 months total) for the development of the SWMP. Given that this is the first MS4 permit issued to DON, Region 9 believes that 18 months should be sufficient and the draft permit was revised to provide 18

[8] Email dated June 2, 2016 from Charles Damian of NAVFAC Marianas to Eugene Bromley, Region 9.

months.[9] However, as discussed in section 4.1.1 of this fact sheet, if the permittee desires a permit modification to incorporate a compliance schedule to achieve compliance with TMDL requirements, a proposed compliance plan and implementation schedule would be due 12 months after the permit effective date. Part 5.5 of the revised drafts also includes a summary of the deadlines for the various requirements of the permits.

2. Summary of Permit Conditions

2.1 Permit Area.

The draft permit would apply to the MS4 operated by the permittee within the area described in Appendix D on the Island of Guam, which includes the following existing facilities.[10]

> **Navy Facilities:** Naval Base at Apra Harbor; family housing/community support areas at Apra Heights; Naval Magazine; and Naval Hospital and adjacent high school.[11]

See Appendix C for a map showing the location of these facilities. The permit would also cover any new MS4s owned or operated by the permittee that are constructed in the future within the permit area.

2.2 Authorized Discharges.

Subject to the terms of the permit, during the period beginning the effective date of the permit and lasting through the expiration of the permit, the permittee would be authorized to discharge stormwater and other non-prohibited discharges (see section 2.3 below) from all outfalls of the permittee's regulated MS4.

2.3 Prohibitions – Non-Stormwater Discharges

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[9] The 2012 Los Angeles County MS4 permit (NPDES permit No. CAS004001) also provides 18 months for the development of programs of greater complexity. Likewise, the 2013 San Diego Regional MS4 permit (NPDES permit No. CAS0109266) provides 18 months. Based on experiences such as these in California, Region 9 believes that 18 months would be appropriate for DON as well.

[10] In its MS4 permit application, DON noted that discharges from the Sasa Valley and Tenjo Vista fuel farms are entirely covered by EPA's multi-sector general permit (GUR050000); as such separate MS4 permitting is not needed and those facilities are not covered by this permit.

[11] For reasons discussed in section 1.5 of the fact sheet, the DON MS4 permit area does not include the western tip of Navy Barrigada that is within the Hagåtña watershed. The watersheds that comprise the DON permit area match those proposed for NPDES permit No. GUS040001 for the Guam DPW MS4 based on considerations discussed in section 1.5.

As noted in section 3.3 below, the permittee must implement an ongoing program of various activities related to the prevention of illicit connections and illegal dumping of pollutants into the MS4. NPDES regulations also clarify that although the permittee must address all types of unpermitted non-stormwater discharges to the MS4, certain types of minor discharges which are listed at 40 CFR 122.34(b)(3)(iii) need not be addressed unless the permittee determines that they are a significant source of pollutants. These basic regulatory requirements regarding the prohibition of unpermitted non-stormwater discharges are included in Part 1.3 of the draft permit. Additional requirements are found in Part 3.3 (Illicit Discharge Detection and Elimination).

Part 1.3.3 of the draft permit also provides that the permittee may develop additional categories of non-stormwater discharges that will not be addressed as illicit discharges. Such discharges must reasonably be expected not to be significant sources of pollutants, based on information available to the permittee or the controls placed on the discharges. This provision is being added to the permit since the list at 40 CFR 122.34(b)(3)(iii) may not be comprehensive.

2.4 Development of a Stormwater Management Program (SWMP)

2.4.1 General Requirements of the CWA

In developing the terms and conditions of the draft permit, Region 9 closely followed the recommendations in EPA's 2010 MS4 Permit Improvement Guide (2010 Guide, EPA 833-R-10-001)[12]; we also made extensive use of suggested permit language in the 2010 Guide. EPA began issuing NPDES permits for MS4s in the early 1990s and the 2010 Guide reflects almost 20 years of experience with these permits.

Since 2001, Region 9 has also been conducting audits of MS4 programs in the four states (Arizona, California, Hawaii and Nevada) that are within Region 9.[13] The audit reports consistently show the need for detailed, measurable permit requirements to provide clarity and to ensure an effective and enforceable permit. This need has also been recognized at the national level, and one of the principal goals of the 2010 Guide, and the suggested permit language in the Guide, was to address this need. As such, Region 9 believes the Guide constitutes an appropriate source of requirements for the draft permit.

In accordance with NPDES regulations at 40 CFR 122.33(b)(2)(i), DON submitted a proposed SWMP with its MS4 permit application, including numerous best management practices (BMPs) to control pollutants in the discharges. For the draft permit, and following the recommendation of the 2010 Guide, the SWMP is not considered to contain actual effluent limits; instead, these are found in the permit itself. The technology-related effluent limits are

[12] Available at: http://www.epa.gov/npdes/pubs/ms4permit_improvement_guide.pdf

[13] MS4 audit reports are available: http://www.epa.gov/region9/water/npdes/ms4audits.html.

found in Part 3 while the water quality-related effluent limits are found in Part 4. By placing the effluent limits directly in the permit, the limits are available for public review at the time the draft permit is public noticed. This ensures an opportunity for public participation consistent with the 2005 decision by the Second Circuit Court in *Waterkeeper Alliance et al. v. EPA*, 399 F.3d 486, and the 2003 decision by the Ninth Circuit Court in *Environmental Defense Center, Inc. v. EPA*, 344 F.3d 832.

The draft permit does require the development, implementation and enforcement of a SWMP by DON. The SWMP is a written plan that describes the various BMPs through which the discharger complies with the actual effluent limits in the permit.

2.4.2 Other Requirements for Development of the SWMP

The 2010 Guide includes several other recommendations related to the development of a SWMP. These include ensuring adequate legal authority to implement the permit requirements, development of an enforcement response plan (ERP), and ensuring adequate resources to comply with the permit. The 2010 Guide also provides suggested permit language to address these issues; with minor modifications, the suggested permit language from the 2010 Guide has been incorporated into Parts 2.3, 2.4 and 2.5 of the draft permit.

3. Minimum Control Measures (MCMs)

As noted in Appendix A, the MS4 serving DON facilities on Guam is considered to be a Phase II or small MS4. NPDES regulations applicable to Phase II MS4s were promulgated by EPA on December 8, 1999 (64 FR 68722). The Phase II regulations at 40 CFR 122.34(b) set forth the following six MCMs to be included in SWMPs.

- Public Education and Outreach
- Public Involvement/Participation
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post-Construction Stormwater Management in New Developments/Redevelopments
- Pollution Prevention/Good Housekeeping for Municipal Operations

The MS4 permit application submitted by DON includes a proposed SWMP that addresses each of the above MCMs. However, the 2010 Guide provides more detailed program descriptions for the MCMs than DON's proposed SWMP. In view of the need for permit clarity noted earlier, the draft permit language is largely derived from the 2010 Guide, while also including some of DON's proposals as well.

The permit language in the 2010 Guide was developed for the situation in which a permit is being reissued, and assumes a continuation of BMPs already being implemented in accordance with the previous permit. The draft permit for DON would be a first-round permit, and as appropriate, the draft permit provides time for development and implementation of many of the necessary programs. However, for some MCMs such as the construction program, DON's program is well developed already and the draft permit requires implementation of many of the components of the MCM on the permit effective date.

3.1 Public Education and Outreach

The specific requirements of the draft permit for this MCM were derived for the most part from the 2010 Guide, while also incorporating DON's suggestions for appropriate target audiences at DoD facilities. The draft permit would require the development of BMPs and measurable goals for the public education program within 18 months of the permit effective date after which program implementation would begin. Given the time necessary to develop appropriate outreach strategies and secure funding for the activities, Region 9 believes 18 months is reasonable.

3.2 Public Involvement/Participation

This MCM is closely related to the above MCM pertaining to public education/outreach, and the draft permit requirements are a blend of DON's permit application and the 2010 Guide. As in the case of the MCM for public education/outreach, the draft permit would require that the BMPs and measurable goals for public involvement/participation be developed within the first 18 months of the permit term. During this time period, funding would also be requested for program implementation in subsequent years, with implementation beginning 18 months after the permit effective date.

Part 3.2.1 of draft permit also includes a clarifying note that as part of the outreach efforts concerning the SWMP the permittee need not post restricted information such as classified national security information on the permittee's website. The draft permit language was derived from a similar provision in EPA's 2015 multi-sector general permit.[14] This provision was added in response to concerns from the permittee regarding inadvertent release of sensitive information. Clarifications were added to Part 3.3.6.1 and Part 3.6.4.2 of the permit for the same reason.

3.3 Illicit Discharge Detection and Elimination (IDDE)

The draft permit requirements for this MCM (Parts 3.3.1 through 3.3.7 of the draft permit) were derived largely from the suggested permit language in the 2010 Guide. However,

[14] Available at: https://www.epa.gov/npdes/stormwater-discharges-industrial-activities#overview

the Guide leaves some of the specific requirements for the field screening program to the discretion of the permitting authority based on the issues of concern for a particular MS4. The proposed field screening requirements for the draft permit and certain issues related to MS4 mapping are discussed below. Otherwise the permit language closely follows the 2010 Guide.

3.3.1 MS4 Mapping.

As part of the IDDE program, Part 3.3.2 of the draft permit requires that the permittee develop and maintain an accurate map of the storm sewer system. In addition to certain other information recommended by the 2010 Guide, Part 3.3.2.1.6 requires that the permittee identify areas within the DoD facilities covered by the revised draft permit (if any) that do not discharge to a water of the U.S. (either directly or through a connection to another operator's MS4).

3.3.2 Field Screening Program.

The 2010 Guide does not provide a specific list of indicator parameters to be sampled for the field screening program; instead the list is developed on a case-by-case basis for the given MS4. The list in the draft permit was derived from the minimum suggested list in the 1999 Phase II MS4 regulations and includes ammonia, conductivity, surfactants and pH. In addition, enterococcus is included given that it is a common constituent of concern in Guam.

The 2010 Guide also recommends that benchmark levels be included that would require follow-up by the permittee if a benchmark is exceeded. Such benchmarks are include in Table 1 in the draft permit, along with required follow-up procedures in Part 3.3.5. The benchmark values (except for enterococcus) were obtained from the 2004 IDDE manual[15] prepared for EPA by the Center for Watershed Protection. For enterococcus the benchmarks are the same as the water quality standards for Guam found in Table 2 of the draft permit. Field test methods (such as those described in the 2004 IDDE manual) may be used except for enterococcus (a primary constituent of concern) where sampling and analysis much be conducted in accordance with 40 CFR Part 436.

As suggested by the 2010 Guide, annual screening would be conducted at all priority outfalls that are selected by the permittee in accordance with Part 3.3.3 of the draft permit. A minimum of 20% of all other outfalls would be screened per year; this frequency was suggested by the Guam Department of Public Works in its proposed SWMP submitted in accordance with Region 9's designation for permitting of the MS4 serving the non-DoD portions of Guam.

[15] Center for Watershed Protection. 2004. Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments, October 2004.

3.4 Construction Site Runoff Control

The proposed requirements in the draft permit for construction site runoff controls were also derived largely from the 2010 Guide. For construction projects associated with the military relocation to Guam, DON has also developed a detailed plan for managing construction site runoff entitled "National Pollutant Discharge Elimination System (NPDES) Program, Comprehensive Construction Stormwater Pollution Prevention Plan (Comprehensive SWPPP) for the Guam Military Relocation DPRI Construction Program", dated November 2014.

DON's Comprehensive SWPPP already addresses most of the requirements of the draft permit. However, the draft permit does add clarifying requirements to certain components of the program. For example, while the Comprehensive SWPPP refers to site inspections by DON staff, the specifics for the DON program such as the frequency and timing of the inspections is somewhat vague. As such, clarifying requirements are included in Part 3.4.4 of the draft permit. The minimum frequency for site inspections by DON personnel in the draft permit is quarterly (same as the 2015 permit for the Navy facility at Pearl Harbor, NPDES permit No. HIS000257), with more frequent inspections, as may be needed for particular projects, based on water quality risks, as determined by the permittee.

In addition, while the Comprehensive SWPPP refers in general to training to be provided for contractors and DON personnel, the details of the program are somewhat vague. As such, the more detailed requirements from the 2010 Guide are included in Parts 3.4.5 and 3.4.6 of the draft permit. Finally, the 2010 Guide recommends that a permittee consider information that may be received from the public in the implementation of its construction program. This issue was not addressed in the Comprehensive SWPPP; Part 3.4.6.2 was included in the draft permit based on suggested language from the 2010 Guide.

Given that the Comprehensive SWPPP is already available and being implemented, the draft permit requires that the plan be implemented immediately upon the effective date of the permit. The draft permit also requires that within 18 months of the permit effective date that the Comprehensive SWPPP be revised to be consistent with the requirements of the permit. During the first 18 months, funding would also be requested for program implementation in subsequent years. Full implementation would begin 18 months after the permit effective date, and it would apply to all DON construction projects, including any not associated with the military relocation.

3.5 Post-Construction Stormwater Management for New Developments/ Redevelopments

Here again, the proposed requirements for the draft permit were derived largely from the 2010 Guide. The draft permit includes post-construction site performance standards for on-site stormwater management consistent with the 2010 Guam Transportation Stormwater Drainage

Manual[16] (for transportation and linear projects) and the 2006 CNMI & Guam Stormwater Management Manual[17] for other projects (Parts 3.5.2.1 and 3.5.2.2 of the draft permit). This is consistent with requirements Region 9 is proposing for the MS4 permit for the Guam DPW, based on the permit application submitted by the Guam DPW.[18]

As noted earlier, Region 9's MS4 audits have shown the importance of quantitative, measurable requirements in MS4 permits in order to ensure clarity and enforceability. The manuals noted above include quantitative requirements (such as a specific design storm) for post-construction stormwater control measures that are comparable to requirements for other MS4s in Region 9. We believe they are consistent with the intent of the Phase II MS4 regulations and the draft permit requires that the design criteria in these manuals to be followed upon the permit effective date since they are already well-established and being implemented.

Guam DPW noted in an email to Region 9[19] that the manuals may be updated during the term of the permit to address climate change, and that project design should not be limited to the 2006 and 2010 manuals. This could also be a concern for DON and to address the concern the draft permit provides that updated manuals may be used in place of the existing manuals if they became available during the term of the permit.

In the selection of post-construction stormwater controls, Region 9 also favors practices that infiltrate, evapotranspire or harvest/reuse stormwater runoff (sometimes referred to as low impact development (LID)) over practices and treat and release the runoff; this is because full capture of the runoff (e.g., through infiltration) will also prevent the discharge of all pollutants in the runoff. This advantage of infiltration is recognized by the 2010 Guam Transportation Stormwater Drainage Manual and such practices are encouraged. However, the 2006 CNMI and Guam Stormwater Management Manual treats the various types of controls more or less equally. To ensure that the advantages and benefits of runoff capture are more fully realized, the draft permit (Part 3.5.2.3) requires that the permittee require such controls when approving projects unless they are demonstrated to be infeasible for a particular project.

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[16] Guam Department of Public Works. 2010. Guam Transportation Stormwater Drainage Manual, August 2010.

[17] Commonwealth of the Northern Mariana Islands and the Territory of Guam. 2006. CNMI and Guam Stormwater Management Manual, prepared by Horsley Witten Group, Inc. October 2006.

[18] DON's draft SWMP had proposed that DoD construction projects would comply with the site performance standards for on-site stormwater management consistent with DoD's Low Impact Development design policies contained in Unified Facilities Criteria 3-210-10 (which incorporate the requirements of section 438 of the Energy Independence and Securities Act (EISA) of 2009) as well as the 2006 CNMI & Guam Stormwater Management Manual. However, in its June 2, 2016 email to Region 9, DON indicated that while it is committed to complying with the section 438 standards, DON argued that inclusion of a requirement to comply with the standards in the MS4 permit would be inappropriate. Given DON's concerns and since similar standards can be obtained from the Guam manuals, Region 9 is not proposing inclusion of the section 438 standards in the draft MS4 permit.

[19] Email from Guam DPW to EPA Region 9 dated July 6, 2016.

DON's proposed SWMP only briefly mentions the development of procedures for aspects of the program such as inspection and maintenance of post-construction BMPs. As such, the more detailed suggested permit language from the 2010 Guide was included in the draft permit, addressing site plan review (Part 3.5.3), long-term maintenance and tracking (Parts 3.5.4 and 3.5.5) and inspections and enforcement (Part 3.5.6).

The 2010 Guide also recommends that retrofit requirements (with a focus on LID) be considered for MS4 permits to better control pollutants in runoff from existing development. LID control measures are more commonly installed in new developments and redevelopments since the controls can be more easily incorporated into a project as it is being constructed. However, the water quality benefits of LID (and other benefits such as groundwater recharge) would also result from the retrofit of LID controls in existing developed areas. For these reason, the 2010 Guide encourages development of retrofit plans and such a requirement has been included in the draft permit based on the suggested permit language in the 2010 Guide.

3.6 Pollution Prevention/Good Housekeeping for Municipal Operations

The draft permit requirements for this MCM were also largely derived from the 2010 Guide. DON's proposed SWMP does include a brief description of a program to address this MCM. However, the 2010 Guide provides more detailed permit language that was included in the draft permit and that Region 9 believes will ensure a clearer, and more effective and enforceable permit. Permit provisions derived from the 2010 Guide include Part 3.6.2 (municipal facility and controls inventory), Part 3.6.3 (facility assessment), Part 3.6.4 (facility-specific controls and standard operating procedures), Part 3.6.5 (storm sewer maintenance), Part 3.6.6 (street sweeping and cleaning), Part 3.6.7 (maintenance of structural controls), Part 3.6.8 (flood management), Part 3.6.9 (pesticide, herbicide and fertilizer application and management), Part 3.6.10 (training and education), and Part 3.6.11 (contractor requirements and oversight). As in the case of several other MCMs, 18 months are provided to develop BMPs and measurable goals for the program. The permittee would also request funding as necessary in the first 18 months and begin implementation of the program 18 months after the permit effective date.

The draft permit includes two additional proposed requirements that were not specifically derived from the 2010 Guide. These are discussed below and are based on emerging Region 9 priorities for the stormwater program and for NPDES permits in general.

3.6.1 Trash Management Plan.

In recent years, Region 9 has been encouraging requirements for the development and implementation of trash management plans in MS4 permits, given the growing concern over the

accumulation of marine debris in areas such as the North Pacific Gyre[20], and the listing[21] of various receiving waters as impaired under section 303(d) of the CWA due to trash. Although Guam's 2014 Integrated Report did not include any section 303(d) listings due to trash, Governor Eddie Calvo, in his March 2014 State of the Island address[22], acknowledged that trash and marine debris are a problem for Guam. In a 2010 report[23], the Guam Bureau of Statistics and Plans which is responsible implementing Guam's Coastal Management Program, notes that storm drains in particular are a significant source of marine debris for Guam. Cleanup statistics as reported by the Ocean Conservancy[24] also illustrate the problem of marine debris worldwide and for Guam specifically.

Although some of the BMPs in Part 3.6 address trash, Part 3.6.12 of the draft permit requires the development and implementation of a specific plan to reduce discharges of trash from the MS4. The specific requirements for the draft DON permit were derived from similar requirements in the 2011 and 2015 MS4 permits for the City and County of Honolulu (NPDES No. HIS000002), where Region 9 had worked with the State of Hawaii in developing the permit requirements. The draft DON permit requires the development of a program to first determine the current or baseline level of trash discharges, then implement BMPs to reduce trash discharges by 50% from baseline level and then to zero along a time schedule (as short as practicable but not to exceed 15 years) to be developed by DON. A monitoring program would also be required for measuring progress. In developing a suitable program we recommend that DON consider the trash management plan developed by the City and County of Honolulu.[25] California's recently adopted statewide trash policy[26] would be another potentially useful source of information.

Appendix A of the draft permit also includes a definition of the term "trash" which is the same as the definition of "litter" in Article 2 of Chapter 51 (Solid Waste Management and Litter Control) of 10 Guam Code Annotated, Health and Safety. This definition is also very similar to the definition of "trash" in California's statewide trash policy.

3.6.2 Asset Management Plan.

Lastly, Part 3.6.13 of the draft permit requires the development and implementation of an asset management plan (AMP). Region 9 has been emphasizing the development of AMPs in

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[20] U.S. EPA Region 9. 2011. Marine Debris in the North Pacific, A Summary of Existing Information and Identification of Data Gaps, November 2011.

[21] For example, see listing data for Hawaii available at: http://ofmpub.epa.gov/waters10/attains_state.control?p_state=HI

[22] Available at: http://governor.guam.gov/2014/03/25/state-island-green-guam-today-tomorrow-2/

[23] Guam Bureau of Statistics and Plans, Section 309 Assessment and Strategy 2011-2015, September 2010.

[24] Ocean Conservancy. 2014. Turning the Tide on Trash, 2014 Report

[25] City and County of Honolulu, Trash Reduction Plan, City and County of Honolulu, National Pollutant Discharge Elimination System (NPDES Permit No. HIS000002, June 2012).

[26] See http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml.

recent years as a useful tool for ensuring consistent performance of water infrastructure systems while minimizing the costs associated with the operation of these systems. The specific provisions of the draft MS4 permit were derived from a 2014 Region 9 AMP guide[27] and include requirements for an inventory of MS4 assets, an identification of the required performance, a plan for maintenance, rehabilitation and replacement of assets, cost projections, and an assessment of climate change impacts.

3.7 Industrial/Commercial Stormwater Sources

Although the Phase II regulations do not specifically address stormwater discharges from industrial/commercial sources, the 2010 Guide recommends that controls for these sources be considered for Phase II MS4 permits. DON's permit application notes that a number of industrial facilities are present at DoD facilities on Guam, especially in the Naval Base Guam area. DON's website for Naval Base Guam[28] also notes the presence of numerous on-base commercial facilities such as the Navy Exchange, various restaurants, auto repair facilities, a commissary and other facilities that are typical of a municipality, but which may also be sources of pollutants in stormwater runoff.

Given the presence of such industrial/commercial facilities, Region 9 believes BMP requirements are appropriate for the permit to control pollutants in the runoff. The 2010 Guide provides suggested permit language which Region 9 has included in the draft permit, with minor edits to accommodate the specific MS4 involved.

Region 9 recognizes that development of the program will take time, and therefore the draft permit phases in the new requirements. The permit provides two years to develop BMPs and measurable goals for the program. The permittee would also request funding as necessary within the first two years and begin implementation of the program at the start of the third year of the permit term.

4 Special Conditions

4.1 Total Maximum Daily Load (TMDL) Requirements

4.1.1 Guam Bacteria TMDLs for Twenty-Five Beaches and Northern Watershed Bacteria TMDLs

[27] U.S. EPA Region 9. 2014. Asset Management, Incorporating Asset Management Planning Provisions into NPDES Permits, available at: http://www.epa.gov/region9/water/npdes/asset-mgmnt/index.html, December 2014.

[28] See http://www.militaryinstallations.dod.mil/MOS/f?p=MI:CONTENT:0::::P4_INST_ID,P4_CONTENT_DIRECTORY,P4_TAB:3025,ALL,IC

The Twenty-Five Beaches Bacteria TMDL[29] was approved by EPA on February 20, 2015 and establishes wasteload allocations (WLAs) for enterococcus in various discharges (including stormwater runoff) at 25 beaches primarily in the southern half of the Island of Guam. The Northern Watershed Bacteria TMDL[30] was approved by EPA on March 17, 2010 and establishes the same WLAs for discharges (again including stormwater) near beaches in the Tumon Bay area. The WLAs require compliance with Guam water quality standards (GAR GEPA, Division II - Water Control, Chapter 5) at the discharge point.

Some of the DoD facilities on Guam such as the Naval Hospital in the north to the Guam Naval Base itself are in the vicinity of the beaches covered by the TMDLs and the drainage from DoD facilities may be contributing to the impairments.

NPDES regulations at 40 CFR 122.44(d)(1)(vii)(B) require effluent limits in permits that are consistent with applicable WLAs. Region 9 recognizes, however, that immediate compliance with enterococcus WLAs may not be practicable for DON. As such, the draft permit provides an opportunity for the development and implementation of a plan (along with an implementation schedule) for coming into compliance, including a rigorous, quantitative demonstration that the proposed control measures in the plan would ensure compliance with the WLAs; as noted earlier, Region 9's MS4 audits have shown the need for such requirements in the MS4 permits. Submittal of the plan would be required within 12 months of the permit effective date. The plan would be required to achieve compliance as soon as practicable. After submittal of the plan, the permit may be reopened and modified to require implementation of the plan, after considering public comment. If such a plan is not submitted, the WLAs would become effective within 18 months of the permit effective date.

The 2011 MS4 permit for the City and County of Honolulu (CCH) was used as a model in deriving the specific permit language for DON's Guam permit. For the CCH permit, Region 9 had worked with the State of Hawaii in developing permit language for circumstances similar to those for the DON permit for Guam.

4.1.2 Other Approved TMDLs for Guam

EPA also approved a sediment TMDL[31] for the Ugum Watershed on February 22, 2007. Although the Naval Munitions Site extends slightly into the Ugum Watershed, the land cover in the area of the overlap is largely forest land and range land and the runoff from such areas would

[29] Guam EPA. 2013. Bacteria TMDLs for Twenty-Five Beaches, Prepared by Tetra Tech, December 2013; the TMDL can be accessed at: http://iaspub.epa.gov/waters10/attains_state.control?p_state=GU

[30] Guam EPA. 2009. Development of Guam Northern Watershed Bacteria TMDLs, Prepared by Tetra Tech, December 16, 2009, can be accessed at: http://iaspub.epa.gov/waters10/attains_state.control?p_state=GU

[31] Guam EPA. 2006. Sediment TMDL, Ugum Watershed, Guam USA, prepared by Tetra Tech and USEPA, October 16, 2006, can be accessed at: http://iaspub.epa.gov/waters10/attains_state.control?p_state=GU

be considered nonpoint source runoff excluded from the NPDES permit program. Furthermore, a 2005 assessment by WERI[32] did not identify DoD activities in the watershed as a significant source of sediment. As such, no requirements related to this TMDL were included in the draft permit.

4.1.3 TMDLs Established After Permit Issuance

The draft permit (Part 4.1.2) provides that if a TMDL is approved for any waterbody into which the permittee discharges and if that TMDL includes a WLA for a discharge from DON's MS4, EPA may reopen and modify the permit to include the requirements of the TMDL. Monitoring of the discharges may also be required, as appropriate, to ensure compliance with the TMDL. Part 4.1.2 of the draft permit would ensure expeditious implementation through the permit for any TMDLs that may be developed and approved.

4.2 Compliance with Guam Water Quality Standards

Part 4.2 of the draft permit includes a general requirement that the discharges not cause or contribute to exceedances of applicable water quality standards for Guam (22 GAR GEPA, Division II, Water Control, Chapter 5). This requirement would apply to parameters other than those that are subject to TMDLs as described above. Comparable requirements can be found in the 2015 MS4 permit issued by the State of Hawaii Department of Health for Navy Region Hawaii (NPDES permit No. HIS000257). The Navy Region Hawaii MS4 is similar to the Navy's MS4 on Guam and Region 9 wishes to ensure consistency in the requirements of the MS4 permits in the Region.

4.3 CWA Section 401 Certification Requirements

In accordance with 40 CFR 124.53 and section 401 of the CWA, EPA may not issue a permit until certification is granted or waived in accordance with section 401 by the state or territory in which the discharge originates. Certification must be in writing and must include any conditions necessary to assure compliance with referenced applicable provisions of sections 208(e), 301, 302, 303, 306, and 307 of the CWA and appropriate requirements of state or territorial law. The decision to waive, grant, or deny certification is based on the *draft*, not the final "as issued," permit. See 40 CFR 124.53(c)-(e).

Region 9 has certified the draft permit to the Guam EPA (GEPA) and requested that GEPA make a written determination regarding certification under CWA section 401, including any specific conditions necessary to assure compliance with applicable requirements. Part 4.5 of the draft permit has been reserved for any such conditions.

[32] Water and Environmental Research Institute of the Western Pacific. 2005. Environmental Assessment for Non-Point Sources of Pollution for Ugum Watershed, December 2005.

5. Monitoring, Evaluation and Reporting Requirements

The 2010 Guide also recommends permit requirements and provides suggested permit language addressing information tracking, discharge monitoring, program effectiveness assessment and reporting. The draft permit incorporates requirements derived from the 2010 Guide as discussed below.

5.1. Information Tracking System

As recommended by the 2010 Guide, Part 5.1 of the draft permit includes a requirement for the development of an information tracking system within the first 18 months of the term of the permit.

5.2 Monitoring Requirements

In developing the monitoring requirements for the draft permit, Region 9 considered the requirements of permits for similar facilities such as the Naval Base at Pearl Harbor, Hawaii. This facility has been under permit since the 1990s and the most recent 2015 permit (NPDES permit No. HIS000257) issued by the State of Hawaii reflects many years of experience in developing appropriate monitoring requirements for such a facility. Region 9 also considered the requirements of the 2013 permit issued by the San Diego Regional Water Board for the San Diego Naval Base (NPDES permit No. CAS019169).

In selecting a list of constituents for the monitoring program, Region 9 considered the lists in the NPDES permits noted above and also: (1) a list provided in the Guam DPW MS4 permit application of pollutants commonly found in MS4 discharges nationwide that are potentially of concern for Guam as well; (2) pollutants of concern identified in the 2014 Integrated Report submitted by the Guam EPA[33], (3) the 2006 CNMI & Guam Stormwater Management Manual, and (4) the list in the Phase I MS4 regulations (40 CFR 122.26(d)(2)(iii)) for properly characterizing the discharges.

The draft permit would require monitoring at a minimum of five MS4 outfalls selected by the permittee to be representative of industrial, commercial and residential areas under the jurisdiction of the permittee on Guam. DON's 2014 annual report for its facility at Pearl Harbor indicates that DON had selected eight outfalls for its monitoring program at that Naval Base, and this provides at least a benchmark for an appropriate program for the Guam facilities, which are similar in size to those at Pearl Harbor. The permit for DON's Guam facilities would be a first-

[33] PCBs in particular were added to the list based on the 2014 Report.

round permit and Region 9 believes five is a reasonable minimum number of outfalls to be sampled.

The monitoring frequency proposed for the DON Guam permit is annual for most pollutants which is the same as the frequency in DON's Pearl Harbor permit. However, more frequent (quarterly) sampling is proposed for enterococcus given the significance of this pollutant in contributing to the impairment of Guam's receiving waters. The sample type for most pollutants is composite consistent with 40 CFR 122.21(g)(7) for stormwater sampling, except for certain pollutants such as temperature and pH for which composite sampling is not practicable, and grab sampling is required instead.

Given the variety of pollutants that may be present in stormwater runoff, the draft permit also requires whole effluent toxicity (WET) monitoring which measures the aggregate effect of all the pollutants in a discharge. The draft permit requirements for DON were modeled after other recent permits for Guam facilities such as the 2013 permit for the Agana/Hagåtña Sewage Treatment Plant (NPDES permit No. GU0020087). Finally, the permit requires that the permittee monitor for any additional pollutants of concern that may be identified from the source assessment requirements found elsewhere in the permit.

The draft permit would require the development of the monitoring program within 18 months of the permit effective date. During the first 18 months, the permittee would also request funding for implementation which would begin 18 months after the permit effective date.

5.3 Reporting Requirements

In accordance with 40 CFR 122.34(g)(3), Part 5.4 of the draft permit requires the submittal of an annual report to the permitting authority. The permit language and the specific information to be provided were largely taken from the recommendations of the 2010 Guide. However, the permit must also include provisions implementing the requirements of EPA's new electronic reporting requirements (80 FR 64064) that became effective on December 21, 2015. Under this new rule, MS4 annual reports must be submitted electronically no later than five years after the effective date of the new requirements, i.e., no later than December 21, 2020, using EPA's NPDES Electronic Reporting Tool (NeT), which provides a secure internet connection. The e-reporting requirement and deadline of December 21, 2020 are incorporated into Part 5.4.4 of the draft permit.

Hard copies of annual reports submitted to EPA prior to electronic submittal using NeT shall be submitted to: Water Enforcement Section II (ENF-3-2), EPA Region 9, 75 Hawthorne Street, San Francisco, CA 94105. Prior to December 21, 2020, the permittee may also elect to electronically submit annual reports instead of hard copies.

The first report is due _____, 2017, covering the activities of the permittee during the period beginning on the effective date of the permit and ending _____, 2017. Subsequent annual reports are due on _____ of each year following 2017 during the remainder of the term of the permit.

6 Other Legal Requirements

6.1 Endangered Species Act Requirements

The Endangered Species Act (ESA) allocates authority to and administers requirements upon Federal agencies regarding threatened or endangered species of fish, wildlife, or plants and habitat of such species that have been designated as critical. Its implementing regulations (50 CFR Part 402) require EPA to ensure, in consultation with the Secretary of the Interior or Commerce, that any action authorized, funded or carried out by EPA is not likely to jeopardize the continued existence of any threatened or endangered species or adversely affect its critical habitat (40 CFR 122.49(c)).

Implementing regulations for the ESA establish a process by which Federal agencies consult with one another to ensure that the concerns of both the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) (collectively Services) are addressed. In compliance with the applicable regulations, Region 9, in letters dated April 29, 2015 to the Services, requested initiation of informal consultation and also requested lists of threatened and endangered species for inland areas and nearby coastal waters of Guam.

The intent of the permit is to reduce the discharge of pollutants in stormwater discharges on Guam that have never been subject to the NPDES permit program before; as such, Region 9 believes the implications of the permit issuance will be almost exclusively beneficial for listed species. However, as noted earlier, structural stormwater controls (such as LID features) must be included, as appropriate, in new developments/redevelopments and retrofit projects, in accordance with MCM #5. The construction of such controls may also adversely affect the habitat of endangered or threatened species. To address this issue, Part 4.3 was included in the draft permit that provides that in complying with the requirements of the permit, the permittee need not construct any structural stormwater controls which could adversely affect endangered or threatened species.

In sum, when EPA issues the final MS4 Permit it will require DON to begin controlling pollutants in existing stormwater discharges. The effects of this new MS4 Permit are expected to be beneficial to the affected environment due to the reduction of pollutants from current conditions. EPA has initiated informal consultation with the Services under ESA Section 7(a)(2) to explore the potential effects of this action but given the nature of the action (adding pollutant controls to existing discharges), EPA expects the action will not likely adversely affect listed

species or designated critical habitat as it is intended to reduce current levels of pollutants in discharges from the MS4 and will have beneficial effects on listed species and designated critical habitats.

6.2 Coastal Zone Management Requirements

The Coastal Zone Management Act (CZMA) requires that Federal activities and licenses, including Federally permitted activities, must be consistent with an approved state Coastal Management Program (CZMA sections 307(c)(1) through (3)). Section 307(c) of the CZMA and implementing regulations at 40 CFR 930 prohibit Region 9 from issuing a permit for an activity affecting land or water use in the coastal zone until the applicant certifies that the proposed activity complies with the state (or territory) Coastal Management Program, and the state (or territory) or its designated agency concurs with the certification. In Guam, the CZMA authority is the Guam Bureau of Statistics and Plans.

On _____, the Guam Bureau of Statistics and Plans concurred with the permittee's certification that the proposed discharge complies with the enforceable policies of the Guam Coastal Management Program.

6.3 Historic Preservation

The National Historic Preservation Act (NHPA) requires Federal agencies to take into account the effects of Federal undertakings on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places (NRHP). The term "Federal undertaking" is defined in the NHPA regulations to include any project, activity, or program under the direct or indirect jurisdiction of a Federal agency that can result in changes in the character or use of historic properties, if any such historic properties are located in the area of potential effects for that project, activity, or program (36 CFR 802(o)). Historic properties are defined in the NHPA regulations to include prehistoric or historic districts, sites, buildings, structures, or objects that are included in, or are eligible for inclusion in, the National Register of Historic Places (36 CFR 802(e)).

Federal undertakings include EPA's issuance of NPDES permits. The permit application submitted by DON did not address compliance with the NHPA. However, this issue is addressed in the 2014 draft SEIS for activities associated with the military relocation to Guam; the draft SEIS also notes the rich cultural heritage of Guam with numerous sites listed or eligible for listing on the NRHP. The SEIS notes that a programmatic agreement (PA)[34] was developed in 2011 to comply with the requirements of the NHPA for the relocation. The PA includes a

[34] Programmatic Agreement among the Department of Defense, the Advisory Council on Historic Preservation, the Guam State Historic Preservation Officer, and the Commonwealth of the Northern Marianas State Historic Preservation Officer Regarding the Military Relocation to the Islands of Guam and Tinian, March, 2011.

detailed process to ensure compliance with the NHPA for activities associated with the relocation. Region 9 believes that the PA also provides an appropriate mechanism for ensuring compliance with the NHPA for activities undertaken to ensure compliance with the NPDES permit (such as construction of stormwater retention facilities) that may fall outside the scope of the relocation. Part 4.4 of draft permit includes a requirement to follow the procedures in the PA for such activities.

6.4 Magnuson-Stevens Fishery Conservation and Management Act.

In accordance with section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996, Federal agencies must consult with NMFS regarding any of their actions authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken that may adversely affect essential fish habitat (EFH). Upon review, EPA has determined that issuance of this draft permit will have no adverse effect on EFH. Any effects of this permit on EFH would be beneficial by imposing restrictions, including management practices, on the discharges authorized by the permit. Prior to issuance of the MS4 permit, the discharges have occurred without restrictions. Region 9 has provided NMFS with a copy of the draft permit and fact sheet for review and comment on Region 9's tentative conclusions concerning potential effects on EFH.

6.5 Executive Order: Environmental Justice

Executive Order (EO) 12898 (59 FR 7629 (Feb. 16, 1994)) establishes Federal executive policy on environmental justice. Its main provision directs Federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA has developed an environmental justice screening tool (EJSCREEN, available at: http://www2.epa.gov/ejscreen) to help evaluate the potential impact of permitted facilities such as the MS4 and other permitted facilities within the immediate area on local residents. At the present time, however, the screening tool is unable to provide this type of evaluation for Guam. Nevertheless, EPA believes that the MS4 permit will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population.

7. Standard Permit Conditions

NPDES regulations at 40 CFR 122.41 and 122.42 require the inclusion of certain standard conditions in all NPDES permits. The standard conditions that are proposed for the DON MS4 permit are found in Appendix B of the draft permit.

Region 9 normally includes these conditions in all NPDES permits, and we also include certain other basic conditions which set forth additional requirements of the CWA. However, based on experiences with MS4 permits in Arizona, and in consideration of the unique nature of stormwater discharges, Region 9 has made a relatively minor clarification in the definition of a "bypass" in standard condition 13.a.1. The Arizona permittees had expressed concern that bypasses consistent with the normal operation of an MS4 might be considered bypasses prohibited by the permit. Region 9 added a clarification that such bypasses would not be considered violations of the permit. We do not believe that this clarification significantly affects the intent of the standard conditions.

8. Expiration Date of the Draft Permit

The expiration date of the proposed permit is _____, 2021.

Appendix A – Region 9 Designation Memorandum

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

February 8, 2011

MEMORANDUM

SUBJECT: Request for Designation of MS4 Discharges on the Island of Guam for NPDES Permit Coverage

FROM: David Smith, Manager
NPDES Permits Office (WTR-5)

Charlotte Withey
Office of Regional Counsel (ORC-2)

THRU: Alexis Strauss, Director
Water Division (WTR-1)

Nancy Marvel, Regional Counsel
Office of Regional Counsel (ORC-1)

TO: Jared Blumenfeld, Regional Administrator

This memorandum recommends designation of the stormwater discharges from all municipal separate storm sewer systems (MS4s) on the Island of Guam for National Pollutant Discharge Elimination System (NPDES) permit coverage.

Pursuant to section 402(p)(2)(E) and (6) of the Clean Water Act (CWA), and 40 CFR § 122.26(a)(9)(i)(D), the EPA Regional Administrator may designate additional stormwater discharges as requiring NPDES permits where he determines that "the discharge, or category of discharges within a geographic area, contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States."

For the reasons outlined below, we conclude that stormwater discharges from MS4s serving the Island of Guam contribute to violations of water quality standards and are a significant contributor of pollutants to waters of the United States. We therefore recommend designation of stormwater discharges from all MS4s serving the Island of Guam.

I. Legal Background

As part of the Water Quality Act of 1987 (WQA), P.L. 100-4 (Feb. 4, 1987), Congress required EPA to establish permitting requirements for certain stormwater discharges, including discharges from large and medium MS4s. (WQA § 405, codified as CWA § 402(p), 33 U.S.C. § 1342(p)). Congress also gave EPA authority to designate additional stormwater discharges for permitting on a case-by-case basis. *Id.*

A. Current Status of MS4s on Guam under the NPDES Stormwater Regulations

There are currently no regulated MS4s on Guam. EPA's Phase I stormwater regulations (55 FR 47990, November 16, 1990) required NPDES permits for large and medium MS4s, as defined at 40 § CFR 122.26(b)(4) and (7). The regulations included a list of incorporated places (cities) and counties which qualified as large or medium MS4s and required an NPDES permit. (40 CFR § 122, Appendices F through I). Guam has no "counties" or "incorporated places," as defined by the Census Bureau.[1] Thus, no areas of Guam qualified as medium or large MS4s under the Phase I regulations.

EPA's Phase II stormwater regulations (64 FR 68722, December 8, 1999) added a requirement for permitting of small MS4s[2] that are either located in an "urbanized area" under the latest Decennial Census or otherwise designated by the NPDES permitting authority. 40 CFR § 122.32(a). On May 1, 2002 (67 FR 21962), the Census Bureau published a list of urbanized

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[1] *See* Census Bureau, Geographic Areas Reference Manual (Nov. 1994) at 7-19 thru 7-22, available at http://www.census.gov/geo/www/garm.html.

[2] "Small MS4" is defined as all separate storm sewers that are:

> (i) Owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States.
> (ii) Not defined as "large" or "medium" municipal separate storm sewer systems pursuant to paragraphs (b)(4) and (b)(7) of this section, or designated under paragraph (a)(1)(v) of this section.
> (iii) This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

40 CFR 122.26(b)(16).

areas based on the 2000 census.[3] Hagåtña, Guam was included on the list of urbanized areas with a population of 132,000, and ordinarily this would have triggered a requirement for an NPDES permit for the MS4 serving this area. However, on August 23, 2002 (67 FR 54631), the Census Bureau reclassified Hagåtña as urban clusters.[4] As a result, the Hagåtña MS4 no longer required an NPDES permit in accordance with the Phase II regulations. It should be noted, however, that the reclassification was simply a result of the Census Bureau's decision not to apply its criteria for urbanized areas to Guam.[5]

B. Standard for Designation

Small MS4s may be designated for NPDES permits pursuant to three different provisions of the stormwater regulations.

Pursuant to 40 CFR §§ 122.26(a)(9)(i)(A), 122.32(a)(2) and 123.35(b), small MS4s may be designated based upon a determination that a stormwater discharge from the small MS4 "results in or has the potential to result in exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts." 40 CFR § 123.35(b)(i).

Under 40 CFR § 122.26(a)(9)(i)(C), stormwater discharges may be designated where the Regional Administrator determines "that stormwater controls are needed for the discharge based on wasteload allocations that are part of "total maximum daily loads" (TMDLs) that address the pollutant(s) of concern . . ." 40 CFR § 122.26(a)(9)(i)(C).

Finally, under 40 CFR § 122.26(a)(9)(i)(D), the Regional Administrator may designate a stormwater discharge or category of discharges where he determines that: "the discharge, or category of discharges within a geographic area, contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States."

While this memorandum proposes designation only pursuant to 40 CFR § 122.26(a)(9)(i)(D), reference is made to the other designation provisions in order to inform the application of § 122.26(a)(9)(i)(D) to the facts in this case.

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[3] For Census 2000, the Census adopted the following definition of an urbanized area: "contiguous, densely settled census block groups (BGs) and census blocks that meet minimum population density requirements, along with adjacent densely settled census blocks that together encompass a population of at least 50,000 people." 67 Fed. Reg. 11663, 11667.

[4] For Census 2000, the definition of an "urban cluster" is identical to that of an "urbanized area" except that the population of a cluster is at least 2,500 people, but fewer than 50,000 people." *Id.*

[5] Pursuant to an agreement between the Census Bureau and the government of Guam, "all urban areas defined within Guam based on the results of Census 2000 are designated as urban clusters regardless of their total population." 67 FR 54631.

An EPA memorandum entitled *Designation of Stormwater Discharges for Immediate Permitting* (August 8, 1990), available at: http://cfpub.epa.gov/npdes/pubs.cfm?program_id=6) (Designation Memo) provides guidance on designations of stormwater discharges for permitting. Although the Designation Memo was written prior to the promulgation of the Phase I and II regulations, the current standard for making a designation under 122.26(a)(9)(i)(D) is virtually identical to the standard provided for in CWA § 402(p)(2)(E), upon which the Guidance was based. The only substantive difference between the two is that section 122.26(a)(9)(i)(D) allows for designation of a "category of discharges within a geographic area" as well as designation of individual stormwater discharges, whereas section 402(p)(2)(E) only provides for the latter. Despite this difference, the Designation Memo still provides useful guidance on the appropriate factors to be considered when making a designation.

The Designation Memo recommends immediate designation of any discharges known or suspected to:

1. contribute to a violation of a water quality standard for a waterbody segment listed under section 304(l)(1)(B), or contribute significant amounts of pollutants to any waterbody segment listed under sections 304(l)(1)(A), 319(a)(1), or 314(a)(1)(F);
2. contribute significant amounts of pollutants to waters of the United States, including sensitive wetlands, drinking water sources, estuaries, lakes, scenic rivers/streams, or near coastal areas that are highly valued natural resources;
3. originate from municipal separate storm sewer systems that have, or are suspected of having, process waste or sanitary wastes discharged to them; or
4. originate from municipal separate storm sewer systems that are suspected of containing a significant contribution of pollutants.

Designation Memo at 3-4.

Further guidance on appropriate factors to be considered in designating MS4s for NPDES permitting in particular is provided by the Phase II regulations at 40 CFR § 123.35(b). As noted above, we do not specifically rely on this provision. Nonetheless, we believe it is appropriate to look at section 123.35(b)(1)(ii), EPA's recommended designation criteria for MS4s, as guidance. In particular, when examining "other significant water quality impacts", permitting authorities are advised to consider "discharge to sensitive waters, high growth or growth potential, high population density, contiguity to an urbanized area, significant contributor of pollutants to waters of the United States, and ineffective protection of water quality by other programs." 40 CFR 123.35(b)(1)(ii).

II. FACTUAL BACKGROUND

A. General Characteristics of Stormwater Discharges from MS4s

Discharges from MS4s are comprised primarily of urban stormwater.[6] Such discharges typically contain elevated concentrations of pollutants that collect on impervious surfaces, such as city streets, driveways, parking lots, and sidewalks. The first national assessment of urban runoff quality was undertaken for the *Nationwide Urban Runoff Program (NURP)* study in the late 1970s and early 1980s. Overall, data from the NURP study indicated that discharges from separate storm sewer systems draining runoff from residential, commercial, and light industrial areas carried more than 10 times the annual loadings of total suspended solids (TSS) than discharges from municipal sewage treatment plants that provide secondary treatment. The NURP study also indicated that runoff from residential and commercial areas carried somewhat higher annual loadings of chemical oxygen demand (COD), total lead, and total copper than effluent from secondary treatment plants, as well as high levels of bacteria during warm weather conditions. 65 Fed. Reg. at 68725. More recently, discharge monitoring data from medium and large MS4s has been compiled in the National Stormwater Quality Database (NSQD) (Pitt, et al. 2008).[7] Although the NQSD data indicate significant variations in pollutant loadings among different land uses, the data affirm the significance of discharges from MS4s as contributors of pollutants to waters of the United States. For example, the median TSS concentration for all samples was 62.0 mg/L, more than double the 30-day average limit of 30 mg/L for discharges from municipal sewage treatment plants that provide secondary treatment. The median fecal coliform concentration was 4300 mpn/100 mL, which exceeds the former National Recommended Water Quality Criteria (NRWQC) for bathing waters by an order of magnitude.[8]

B. General Water Quality Impacts of Urban Stormwater Discharges on Guam

The 2008 Integrated Report submitted by the Guam EPA pursuant to CWA sections 305(b), 303(d) and 314 (Guam EPA, 2008) provides an assessment of water quality in and around Guam, including current water quality impairments and sources which contribute to the impairments. The Integrated Report concludes that overall, stormwater runoff from urban areas

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[6] The term "urban stormwater" is not defined by regulation, nor does it appear in the text of EPA's stormwater regulations. Consistent with EPA's usage in the preamble to the Phase I and II regulations, the term is used in this document to refer to runoff from urban areas, including residential, commercial, industrial and mixed-use areas, which is discharged through storm sewers. See, e.g. 64 Fed. Reg. at 68725.

[7] Available at http://unix.eng.ua.edu/~rpitt/Research/ms4/Paper/Mainms4paper.html .

[8] *See* EPA's Redbook, Quality Criteria for Water (July 1976) at 79, available at http://water.epa.gov/scitech/swguidance/waterquality/standards/current/index.cfm. EPA now recommends the use of enterococci, rather than fecal coliform, as a bacterial indicator, but there is insufficient data available on average levels of enterococci in urban stormwater to make a meaningful comparison between these levels and the current NRWQC for enterococci.

and construction sites is a significant contributor of pollutants to receiving waters (sections II.B.3.2 and II.B.3.4 of the Integrated Report). Further information on the overall water quality effects of urban stormwater on Guam is provided in the CNMI and Guam Stormwater Management Manual (Stormwater Manual) (Horsley Witten Group, Inc., 2006). The Stormwater Manual stresses the role of urban stormwater as a contributor of sediments (total suspended solids or TSS), nutrients (nitrogen and phosphorus), and pathogens (bacteria and viruses) to receiving waters in and around Guam.

The principal source of urban runoff in a given area is the MS4 given the definition of a municipal separate storm sewer at 40 CFR 122.26(b)(8); thus, the assessment in the Integrated Report concerning the effects of urban runoff supports the designation of the MS4s on Guam for stormwater permitting.

More information and specific water quality impacts of discharges from MS4s are discussed in section 0 below.

C. Planned Relocation of U.S. Marines to Guam from Okinawa

The DoD is currently planning to relocate approximately 8,600 U.S Marines and 9,000 dependents from Okinawa to Guam as part of an international agreement with Japan. Additional information is available in a final environmental impact statement (FEIS) prepared for the relocations (Navy, 2010b).[9] In addition, approximately 600 U.S. Army personnel and 900 dependents will be relocated. At the conclusion of the construction phase, the total population increase on Guam stemming from the relocation is estimated to be about 33,000 including military personnel, civilian military workers and workers in jobs induced by the relocation. At the height of the construction phase, the population increase is estimated at about 79,000. As noted above, the population of the urban area on Guam based on the 2000 census was 132,000; the 2000 census lists the total population of Guam as 155,000. As of 2009, the Government of Guam estimates total Island population at about 178,000.

The relocation will be accompanied by the construction of numerous new facilities (such as housing, retail, schools, utilities and training facilities) to accommodate the new personnel. New construction is expected both on and off-base. Substantial upgrades to the off-base road network on Guam will also be needed. A recent report (Parsons Transportation Group, Inc, 2010) describes the needed upgrades, which include widening and strengthening of existing roads in addition to construction of new roads. Both this construction and the ongoing intensified use of the road network would increase the quantity of pollutants discharged in stormwater from the roadways and the risks to receiving waters from the stormwater runoff.

[9] The FEIS and related documents are available at http://www.guambuildupeis.us/.

III. SCOPE OF PROPOSED DESIGNATION

As noted above, 40 CFR § 122.26(a)(9)(i)(D) allows for designation of a category of discharges within a geographic area, based upon a determination that the category "contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States." In this case, it is appropriate to designate all discharges from MS4s, as defined at 40 CFR § 122.26(b)(18), on Guam.[10] The area covered by this designation will generally coincide with areas on Guam that are urban in character, but will extend somewhat beyond the urbanized clusters as delineated by the 2000 Census. In addition, since the designation is intended to cover future MS4s as well as existing MS4s, it will include MS4s serving all future publicly owned and/or operated storm sewer systems defined as small MS4s, such as storm sewer systems to be constructed to serve new or expanded DoD facilities, and associated road networks.

The inclusion of areas of new development (i.e., future MS4s) outside of the existing urbanized clusters in the designation is important because much of the new development on the island, including many of the new DoD facilities, is expected to be located outside the existing urban clusters and would not be subject to the permit if the designation were limited to the current urban clusters. Attachment 1 shows the urban area for Guam as determined by the Census Bureau. This map also shows other urban areas as identified by the Government of Guam, existing military facilities, major roads, and rivers, streams and marine waters with impaired water quality. Attachment 2 shows the anticipated future land use in northern and central Guam (Guam Bureau of Statistics and Plans, 2009a), and Attachments 3A and 3B shows the existing and proposed military facilities on Guam. A comparison of these maps shows much of the anticipated new development is expected to occur outside the urban clusters delineated by the Census Bureau. As discussed above, the Integrated Report concluded that urban runoff which is discharged from Guam's MS4s is a significant source of pollutants to local receiving waters, and it is important to address the discharges from the new MS4s as well as the existing MS4s. As illustrated in Attachment 1, impaired waters are located in and adjacent to urban clusters as defined by the Census Bureau, and in many other areas of Guam further from these urban clusters. This map illustrates the importance of addressing all MS4s, and not just MS4s in existing urban clusters, to protect and restore Guam's impaired waters.

IV. BASIS FOR DESIGNATION

While relatively little water quality information has been collected on Guam, the available data indicate that stormwater discharges from MS4s both (1) contribute to violations of water quality standards and (2) are a significant contributor of pollutants to waters of the United States, pursuant to 40 CFR § 122.26(a)(9)(i)(D).

[10] Since there are no large or medium MS4s on Guam, all of the designated discharges would be considered small MS4s, as defined at 40 CFR § 122.26(b)(16)-(17).

A. Contribution of Discharges from MS4s to Violations of Water Quality Standards on Guam

As noted above, Guam's Integrated Report lists numerous beaches and coastal areas on the CWA section 303(d) list of impaired waters due to the exceedances of bacteria standards (see Attachment 1). On March 17, 2010, EPA approved the Guam Northern Watershed Bacteria TMDLs (GNWB TMDL),[11] which are intended to address exceedances of water quality standards for bacteria which are currently occurring at seventeen of Guam's most popular recreational beaches. (Tetra Tech, Inc., 2009). The GNWB TMDL notes that stormwater runoff contributes to the impairment of all seventeen GNWB beaches. (GNWB TMDLs Table 5-2 at 21). Although the exact contribution of stormwater discharges varies among the individual beaches, the GNWB TMDLs emphasize the central role that stormwater discharges play in causing exceedances of the geometric mean (chronic) water quality criterion for bacteria and recommends that, "[e]fforts to achieve Northern Guam Beach TMDL targets based on the geometric mean should focus on storm water discharges to Hagåtña Bay." (GNWB TMDL at 24).

The GNWB TMDL does not distinguish among different types of unpermitted stormwater discharges, so it is not possible to ascertain the exact contribution of discharges from MS4s, as opposed to nonpoint source discharges.[12] However, the TMDL explicitly points out the absence of MS4 permitting requirements on Guam and notes that, "[d]esignation of the urban portions of Guam to be subject to NPDES MS4 permit requirements is an option that would strengthen the stormwater management program relative to TMDL implementation." (GNWB TMDL at 216).

Similarly, the monitoring results reported in the Integrated Report show exceedances of bacteria standards at monitoring stations both adjacent to the Hagåtña urban clusters and at other locations with MS4s as well. Appendix A of the Integrated Report shows the locations of Guam EPA's recreational beach monitoring stations. Some locations with exceedances (e.g., Tumon Bay) are adjacent to the Hagåtña urban clusters, but exceedances are also commonly reported at locations adjacent to MS4s outside this area (e.g., Inarajan Bay, Merizo Pier and Togcha Beach), which are adjacent to the MS4s serving the communities of Inarajan, Merizo, and Agat (see

[11] The official title of the GNWB TMDLs is "DRAFT Development of Guam Northern Watershed Bacteria TMDLs" (Dec. 16, 2009), available at http://www.epa.gov/waters/tmdldocs/Guam_NW_Beach_TMDL_--_2009-12-16_%20jtc.pdf. EPA approved the GNWB TMDLs on March 17, 2010. *See Letter from Alexis Strauss to Lorilee Chrisostomo* (March 17, 2010). Although they are technically seventeen distinct TMDLs, they are referred to collectively as the GNWB TMDL in this document.

[12] In addition, the GNWB TMDL does not specify whether unpermitted point source stormwater discharges are subject to waste load allocations (WLAs) or load allocations (LAs). However, because the TMDL assigns the same concentration-based values to all WLAs and LAs, the actual concentration limits are the same regardless of the form of allocation.

Attachment 1). These results provide support for the broad geographic designation, as described above, of all MS4 discharges on Guam.

On November 12, 2010, EPA published an update[13] to its 2002 guidance memorandum concerning the incorporation of requirements of TMDLs for stormwater discharges into NPDES permits. Among other new recommendations, the updated memorandum expresses concern NPDES permitting authorities have only rarely used the designation authority provided by the CWA and NPDES regulations to permit and more effectively control pollutants in stormwater discharges which are significant enough to be assigned a load allocation in a TMDL, but are not otherwise subject to NPDES permitting under existing regulations. As described above, this is the situation for the stormwater discharges covered by the GNWB TMDL, and designation would be consistent with the guidance in the November 12, 2010 updated memorandum. This memorandum also clarifies stormwater discharges which may be considered loads allocations in a TMDL would be reclassified as wasteload allocations once they become subject to an NPDES permit.

B. MS4s on Guam as a Significant Contributor of Pollutants to Waters of the United States

In addition to identifying that discharges from MS4s on Guam are contributing to violations of bacteria standards on Guam, the available data also indicate that these discharges are collectively a significant contributor of pollutants to U.S. waters.

The most comprehensive study of stormwater pollutant loadings on Guam was conducted during the 1970s (Zolan, *et al.*, 1978a, Zolan, 1981). Urban runoff was collected over an 18-month period from ponding basins and storm drains at various locations in northern Guam and analyzed for common water quality parameters. Overall, the study concluded that urban runoff discharging into coastal areas contained (1) high levels of solids and chlorides, (2) levels of total and fecal coliform bacteria exceeding the GWQS,[14] and (3) concentrations of nitrate-nitrogen exceeding the GWQS nitrogen limit for nearshore waters. As noted earlier, the 2008 Integrated Report concludes stormwater discharges from MS4s continue to contain significant loadings of pollutants which are discharged to Guam's receiving waters.

A more recent study (Denton, *et al.*, 1998) focused on loadings of nutrients (nitrogen and phosphorous) and heavy metals in stormwater collected from various retention sites and one storm drain servicing a hotel in northern Guam. Despite significant spatial and temporal variations, the study found overall relatively low loadings of nutrients and heavy metals in the stormwater retention sites (in comparison to sampling results elsewhere in the world). However, samples taken from the hotel storm drain were "generally enriched in all detectable components" with some samples containing particularly high levels of phosphorus (up to 482 mg/l), which may result from landscaping practices or other activities at the hotel. In the 1998 report and in subsequent publications (Denton, *et al.*, 2005, 2007), the authors proposed that phosphorus

[13] Updated memorandum dated November 12, 2010 is available at: http://cfpub.epa.gov/npdes/whatsnew.cfm?program_id=6

[14] The current GWQS use enterococci rather than fecal or total coliform as a bacterial indicator for all marine waters.

discharges from hotel runoff may be a significant factor contributing to algal blooms in Tumon Bay. However, the authors also noted that most hotels along the bay discharge their stormwater to infiltration chambers rather than directly to waters of the United States or the MS4; phosphorus reaches Tumon Bay via groundwater transport from the infiltration basins. Nevertheless, the data provide an indication of the types and concentrations of pollutants present in urban stormwater on Guam generally and in runoff from landscaped areas in particular.

C. Other Considerations

There are several other considerations that weigh in favor of designation of stormwater discharges from MS4s on Guam. As noted in section 0 above, EPA guidance recommends consideration of various factors in determining whether to designate an MS4 discharge for permitting. Of particular relevance to Guam are the following factors: discharge to sensitive waters, high growth or growth potential, contiguity to an urbanized area, and significant contributor of pollutants to waters of the United States. The overall significance of discharges from MS4s as a contributor of pollutants is discussed in section 0 above. The remaining factors are addressed below.

1. Sensitive Receiving Waters

Coral reefs surround nearly the entire Island of Guam and are "extremely valuable in terms of marine life, aesthetics, food supply, recreation and protection of Guam's highly erodible shorelines." (Integrated Report, Executive Summary at 2). The Government of Guam in its Coral Reef Initiative (see http://allislandscorals.org) has stated the Island's coral reefs are under stress and recommends better control of land-based sources of pollution including stormwater runoff. In a summary report on the status of coral reefs around Guam, the Guam Bureau of Statistics and Plans concludes the top threats to Guam's reefs include sedimentation from upland soil erosion and stormwater runoff and associated pollutants (Guam Bureau of Statistics and Plans, 2009b). Sediment from stormwater runoff can smother coral while excess nutrients and freshwater itself can interfere with the life cycle of coral (Guam Bureau of Statistics and Plans, 2008). The CNMI and Guam Stormwater Management Manual (Stormwater Manual)(Horsley Witten Group, Inc., 2006) also indicates sediment from stormwater runoff is the most significant threat to the coral reefs around Guam.

As described in section II.A above, discharges of stormwater from MS4s typically contain high levels of sediment. It is therefore highly probable that stormwater discharges from MS4s on Guam are contributing to the sedimentation of coral reefs around Guam. The fact coral reefs "surround" almost the entire Island also firmly supports a broad geographic designation of the

MS4s on the Island (including developing areas and the full existing MS4) to ensure adequate control of pollutants in stormwater discharges to protect the corals.

2. High Growth Potential

As noted above, the proposed military relocation is expected to temporarily increase the population of Guam by 79,000 at the height of the construction phase, and to permanently increase the population by about 33,000. This would constitute a substantial increase to Guam's current population of about 178,000 and clearly makes Guam an area of "high growth potential."

The relocation would also be accompanied by a large construction program. The Main Cantonment area alone for the Marines (the area where housing, retail, schools and similar facilities would be located) would be about 2,500 acres in size. Construction site runoff from sites disturbing one or more acres on Guam is regulated under EPA's general NPDES permit for construction sites (73 FR 40338, July 14, 2008); see: http://cfpub.epa.gov/npdes/stormwater/const.cfm. An NPDES permit issued for the MS4s on Guam would enhance the effectiveness of the sediment and erosion control program on Guam by requiring the MS4s to impose a program to control pollutants in construction site runoff within the permitted area. The authorities with jurisdiction over these MS4s are uniquely placed to impose requirements to ensure the reduction of pollutant loadings that are expected to accompany this development during construction. Given the concerns noted in the Integrated Report regarding construction site runoff, this factor provides further support for the designation.

3. Contiguity

The locations of the existing and proposed military facilities in relation to the existing urban clusters identified by the Census Bureau and other urban areas on Guam can be seen by comparing the map in Attachment 1 with Figures 1.2-1 and 2.1-1, respectively, in the FEIS (also reproduced in Attachments 3A and 3B). The maps also show that all the other existing and proposed facilities are either adjacent to the urban area on Guam, or in close proximity, including the largest facilities such as the existing Apra Naval Base, Anderson AFB and the proposed Main Cantonment area for the Marines. This contiguity can be expected to compound the effects of the discharges from the urban areas, the military facilities and associated street and road networks.

In particular, stormwater discharges from these newly developed areas will not only contribute pollutant loadings during the construction phase, but will also continue to contribute pollutants once built out. Designation early in the development process will enhance pollutant removal potential, as it is also widely recognized there is greater potential for incorporating stormwater BMPs into new developments than in retrofitting BMPs into developed areas (55 FR 48055, November 16, 1990).

D. Additional Benefits of Designation

Groundwater is the principal source of drinking water on Guam, and is therefore another highly valued resource. Stormwater Management Manual at 1-17. Given the highly permeable soils overlying the principal aquifer (the North Guam Lens Aquifer which provides 70-80% of Guam's water supply and has been designated a sole source aquifer), the Manual stresses the importance of avoiding contamination of the aquifer as a result of infiltration of contaminated stormwater. The Navy in its FEIS for its Mariana Islands Range Complex (Navy, 2010a) argues implementation of the stormwater pollution prevention plan at Anderson AFB (which overlies the aquifer) has prevented extensive groundwater contamination. Nevertheless, the FEIS notes some wells were contaminated volatile organic compounds such as trichloroethylene and tetrachloroethylene, demonstrating the risks of groundwater contamination by surface water pollution should not be discounted.

Stormwater management under the NDPES permit program may consider potential effects of discharges to surface waters, and also the potential effects on groundwater resources, especially in areas with highly permeable soils such as those in Northern Guam, or when management techniques such as infiltration are used to minimize pollutant discharges to surface waters (see EPA's menu of stormwater best management practices (BMPs) at: http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm). Guam's 2008 Integrated Report cites urban runoff as one of the major threats to groundwater resources on Guam. We expect the MS4 permit would result in additional attention given to the potential effects of urban runoff on groundwater resources in Guam (and additional efforts to mitigate the effects), and thereby better ensure the protection of Guam's important groundwater resources.

V. DESIGNATION PROCEDURE AND PERMIT APPLICATION EQUIREMENTS

Since there are a relatively small number of permittees, we believe individual permits are appropriate; the likely permittees would be Guam Department of Public Works for the non-DoD areas of the Island, while DoD agencies (the U.S. Navy and possibly other agencies as well) would be the permittees for the DoD facilities.

The statutory and regulatory provisions governing issuance and review of individual permits and related actions provide guidance as to the procedures for issuing residual designations and associated permits. Based upon these provisions, we recommend that the Regional Administrator simultaneously (1) provide public notice and take comment on a "preliminary residual designation" (this document) and (2) specifically notify and provide permit application forms to the operators of the preliminarily-designated discharges. The operators of designated discharges would then need to submit permit applications within 180 days of the receipt of this notice, unless permission for a later date is granted by the Regional Administrator. 40 CFR §§ 122.26(a)(9)(iii) & 124.52(c). After receipt of these applications, the Region would issue and take comment on draft individual permits for designated discharges under 40 CFR § 124.6(d). The comment period on the preliminary residual designation would remain open through the close of the comment period on the individual permits. The Region would then issue a final residual designation and final permits to designated dischargers, along with response to

comments. 40 CFR §§ 122.26(a)(9)(i)(C) & (D), 124.15 & 124.17. Designated dischargers (or other interested parties who commented on the preliminary designation and/or draft permit(s)) could then petition the Environmental Appeals Board (EAB) for review of the designation, the determination to require individual permits and/or the permits themselves. 40 CFR §§ 124.19(a) & 124.52(c).

Since the facilities to be permitted in this case are essentially Phase II MS4s, the permit application regulations for Phase II MS4s at 40 CFR § 122.33(b)(2)(i) provide appropriate permit application requirements; these requirements include:

1. A storm water management program (SWMP) including BMPs addressing each of the six minimum control measures set forth at 40 CFR § 122.34(b)(1) through (6), designed to reduce the discharge of pollutants to the maximum extent practicable and protect water quality;
2. Measurable goals for each of the BMPs proposed for the SWMP including, as appropriate, the time frame for implementation of the BMPs;
3. An estimate of the square mileage served by the small MS4; and
4. The person or persons responsible for implementing or coordinating the SWMP.

The permit applications must also include the information required by 40 CFR § 122.21(f) (see Attachment 4).

We anticipate requesting submittal of the applications within 180 days of notification in accordance with 40 CFR § 122.52(c). After receipt of the permit applications, we will prepare and public notice draft NPDES permits for the discharges. Permit requirements will be developed to address the impacts of the discharges on the water resources of Guam. Following review of public comments, we would issue final permits and finalize the designation.

VI. CONCLUSION

For the reasons outlined above, we believe this proposed designation is appropriate under the CWA and its implementing regulations, and therefore recommend your approval. Upon approval of the designation of the stormwater discharges specified above for an NPDES permit, Region 9 will notify the dischargers that their discharges have been preliminarily designated, and require permit applications in accordance with 40 CFR § 124.52.

VII. AUTHORIZING SIGNATURE

Based on the analysis set forth in this memo, it is my preliminary determination that stormwater discharges from MS4s serving the Island of Guam contribute to violations of water quality standards and are a significant contributor of pollutants to waters of the United States. I am therefore issuing a preliminary residual designation of these discharges pursuant to section 402(p)(2)(E) and (6) of the Clean Water Act and 40 CFR § 122.26(a)(9)(i)(D).

February 8, 2011 /s/

Date Approval: Jared Blumenfeld, Regional Administrator

VIII. REFERENCES

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Robert Lennox. 1998. Urban Runoff in Guam: Major Retention Sites, Elemental Composition and Environmental Significance, Water and Environmental Research Institute of the Western Pacific, University of Guam, Technical Completion Report No. 84, December 1998.

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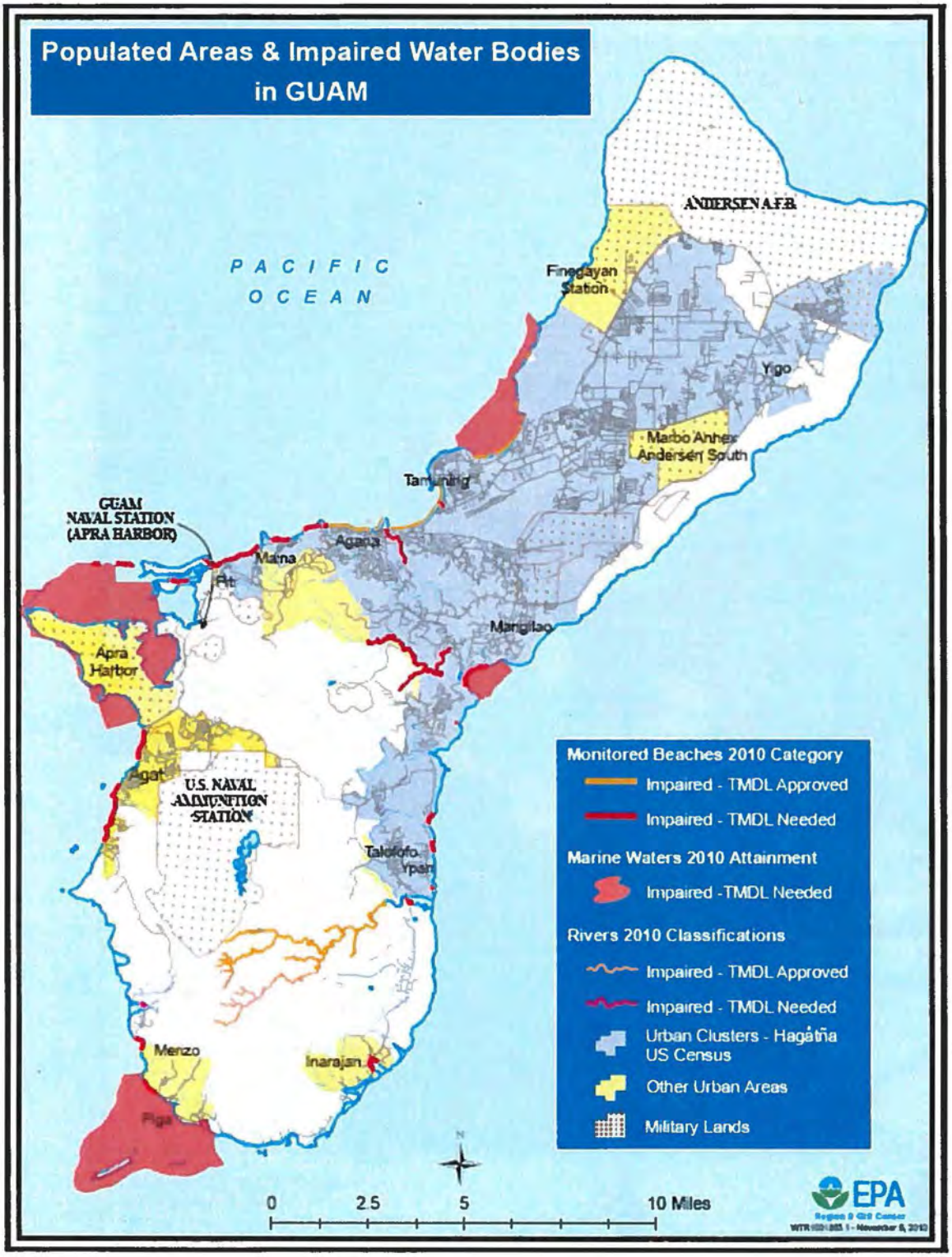
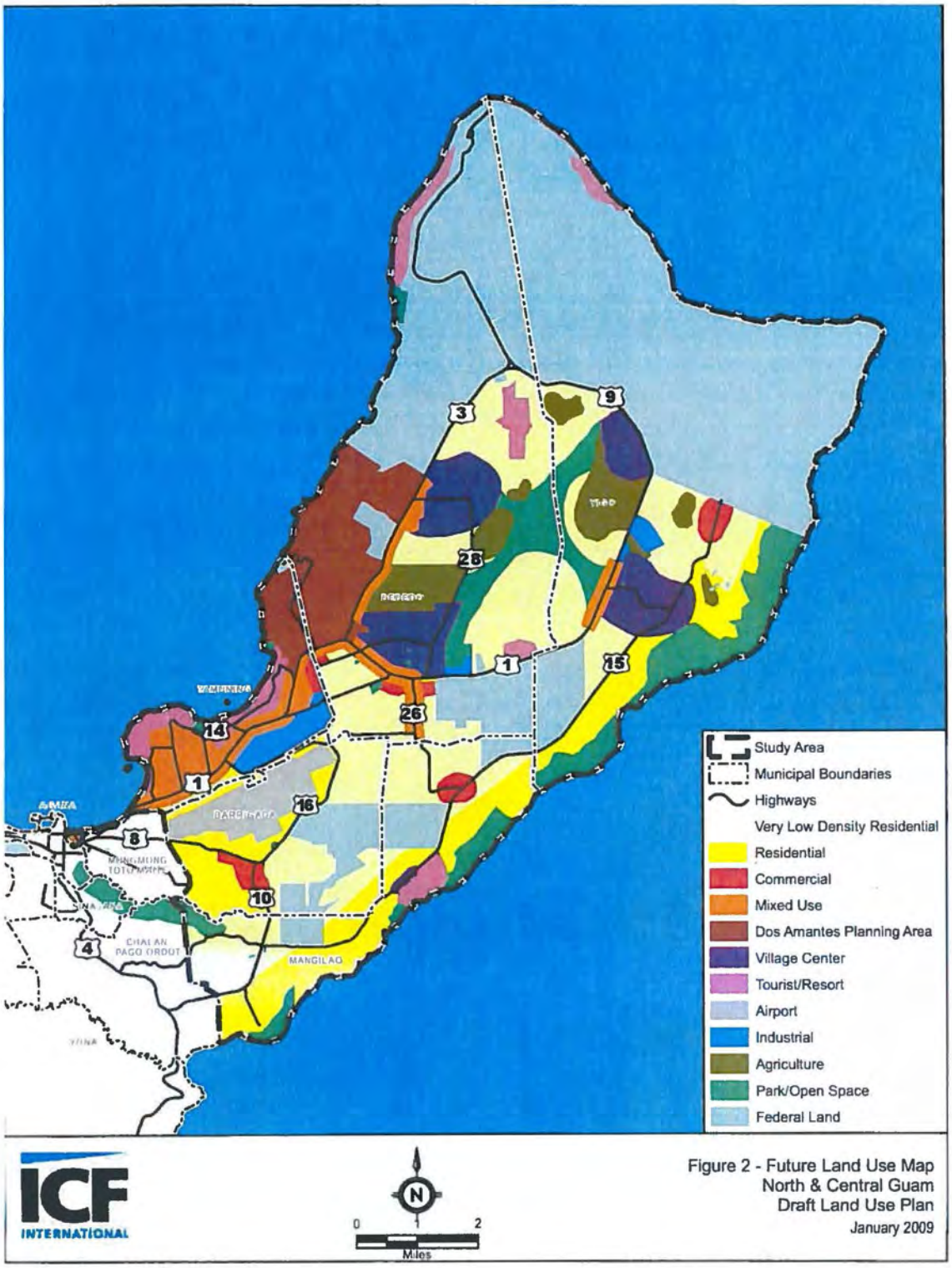
Zolan, William J. 1981. Metals Concentrations in Guam Urban Runoff, Water and Energy Research Institute of the Western Pacific, University of Guam, Technical Completion Report No. 25, June 1981.

Attachment 1



Attachment 2 - Future Land Use in Northern and Central Guam
(Guam Bureau of Statistics and Plans, 2009)



Attachment 3 – Military Facilities on Guam Designated for MS4 Permitting

The FEIS accompanying DoD's proposed relocation of U.S. Marines from Okinawa to Guam includes a list of existing and proposed military facilities on the Island. These facilities are all designated for NPDES permitting as MS4s. The list of existing and proposed facilities follows below. Figure 1.2-1 from the FEIS (Attachment A) shows the locations of the existing facilities; Figure 2.1-1 from the FEIS (Attachment B) shows the locations of the proposed facilities.

I. Existing Facilities

A. Existing Navy Facilities

1) Naval Base at Apra Harbor
2) Naval Computer and Telecommunications Station (NCTS), Finegayan
3) Family housing/community support areas at Apra Heights, Nimitz Hill and NCTS, Finegayan
4) Sasa Valley and Tenjo Vista fuel farms
5) Naval magazine Apra Heights
6) Naval Hospital and adjacent high school
7) Military operations on urban terrain training range
8) Navy golf course at Barrigada

B. Existing Air Force Facilities

1) Anderson Air Force Base
2) Anderson South
3) Barrigada (Air Force)
4) Mount Santa Rosa communications facility

C. Existing Army Facilities

1) Training facility for Guam Army National Guard and Army reserves at Barrigada and Dededo

II. New Facilities

A. Main Cantonment Area

1) Headquarters and administrative areas
2) Base operations
3) Bachelor's Quarters and temporary lodging
4) Family housing
5) Educational facilities
6) Quality of life functions

B. Waterfront Area

1) Amphibious task force ship berthing
2) Embarkation and cargo ship inspection and staging area
3) LCAC/AAV laydown area
4) Apra Harbor medical/dental clinic
5) Military working dog kennels; USCG wharf and support facilities

C. Anderson AFB Area

1) Air embarkation
2) ACE beddown

D. Training Areas

1) Training range complex
2) Ammunition storage
3) Non-firing ranges
4) Aviation training
5) Command, control and simulation

Attachment 3A – Existing Military Facilities on Guam

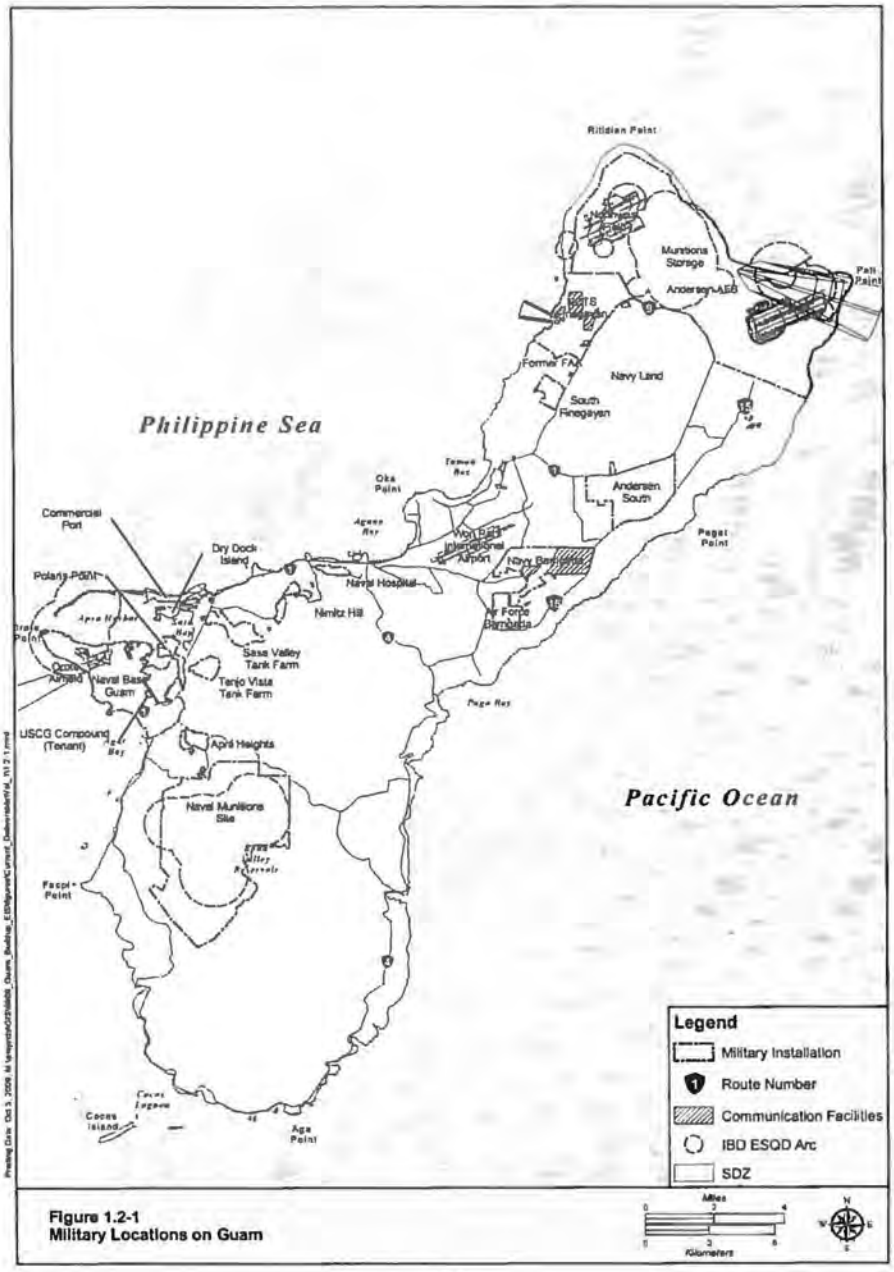


Figure 1.2-1
Military Locations on Guam

1-8

Attachment 3B – Proposed Military Facilities on Guam

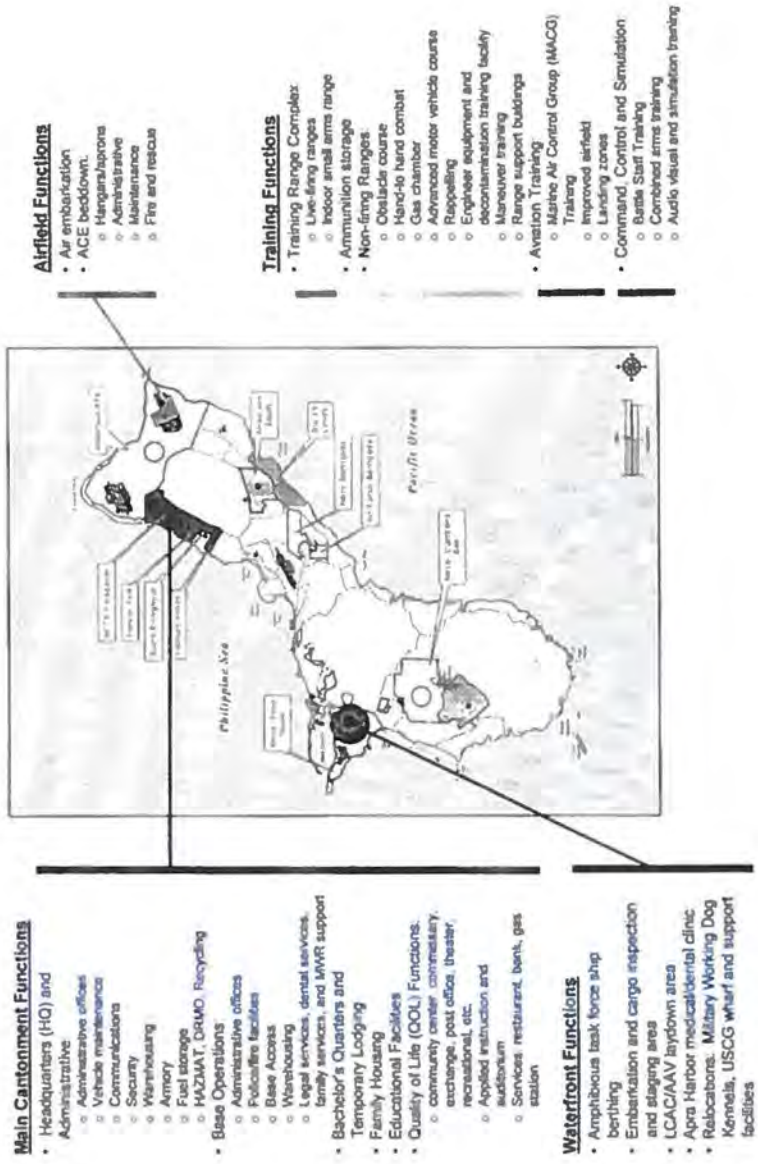


Figure 2.1-1 Overview of Proposed Facility Construction and Operations on Guam

2-4

Attachment 4 - Information Required by 40 CFR 122.21(f)

(1) The activities conducted by the applicant which require it to obtain an NPDES permit.

(2) Name, mailing address, and location of the facility for which the application is submitted.

(3) Up to four Standard Industrial Classification (SIC) codes which best reflect the principal products or services provided by the facility.

(4) The operator's name, address, telephone number, ownership status, and status as Federal, State, private, public, or other entity.

(5) Whether the facility is located on Indian lands.

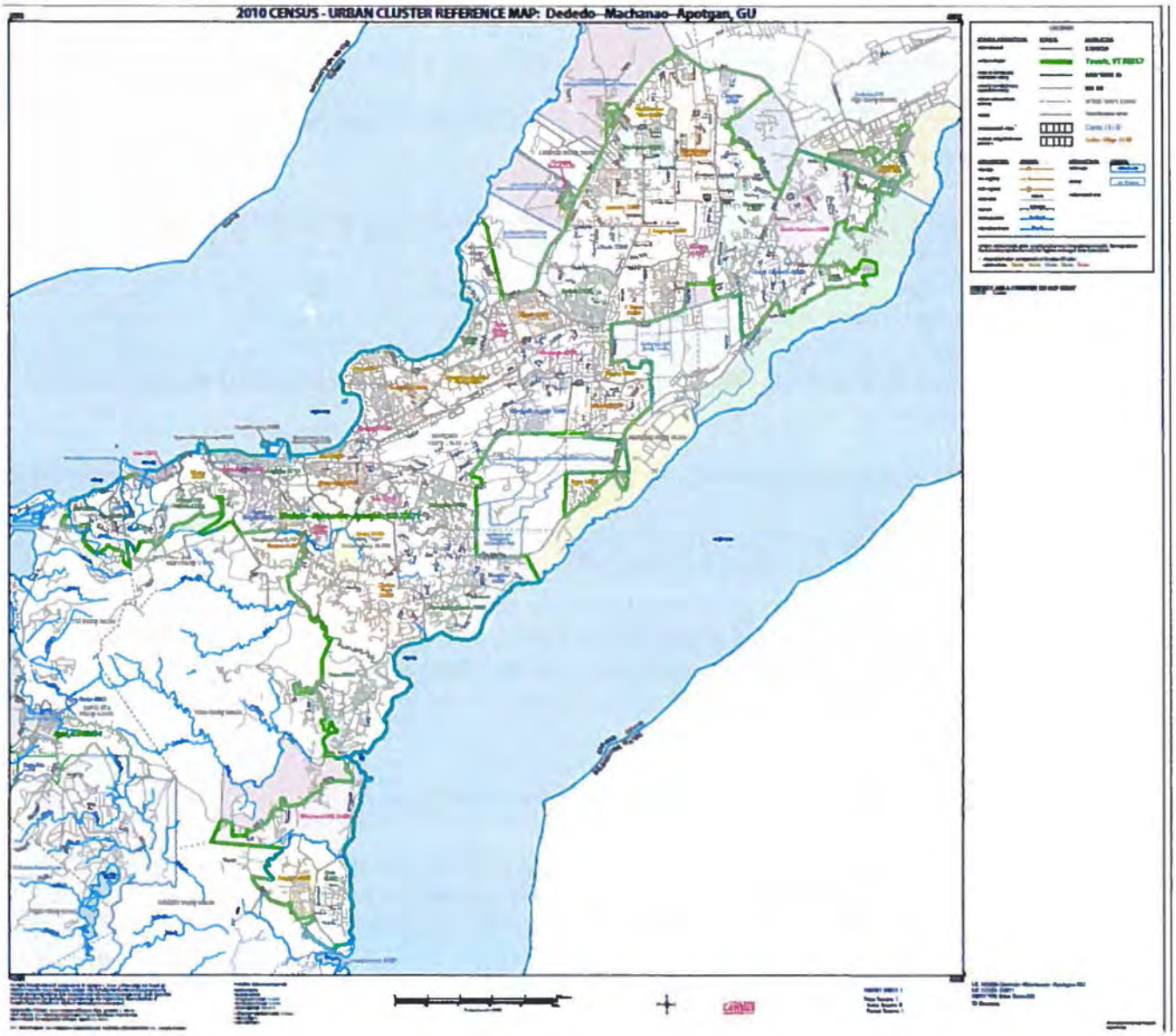
(6) A listing of all permits or construction approvals received or applied for under any of the following programs:

(i) Hazardous Waste Management program under the Resource Conservation and Recovery Act (RCRA).
(ii) Underground Injection Control (UIC) program under the Safe Drinking Water Act (SDWA).
(iii) NPDES program under the Clean Water Act (CWA).
(iv) Prevention of Significant Deterioration (PSD) program under the Clean Air Act (CAA)
(v) Nonattainment program under the CAA.
(vi) National Emission Standards for Hazardous Pollutants (NESHAPS) preconstruction approval under the CAA.
(vii) Ocean dumping permits under the Marine Protection Research and Sanctuaries Act.
(viii) Dredge or fill permits under section 404 of CWA.
(ix) Other relevant environmental permits, including State permits.

(7) A topographic map (or other map if a topographic map is unavailable) extending one mile beyond the property boundaries of the source, depicting the facility and each of its intake and discharge structures; each of its hazardous waste treatment, storage, or disposal facilities; each well where fluids from the facility are injected underground; and those wells, springs, other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant in the map area.

(8) A brief description of the nature of the business.

Appendix B – Guam Urban Cluster (2010 Census)



Appendix C – DoD Existing Facilities on Guam

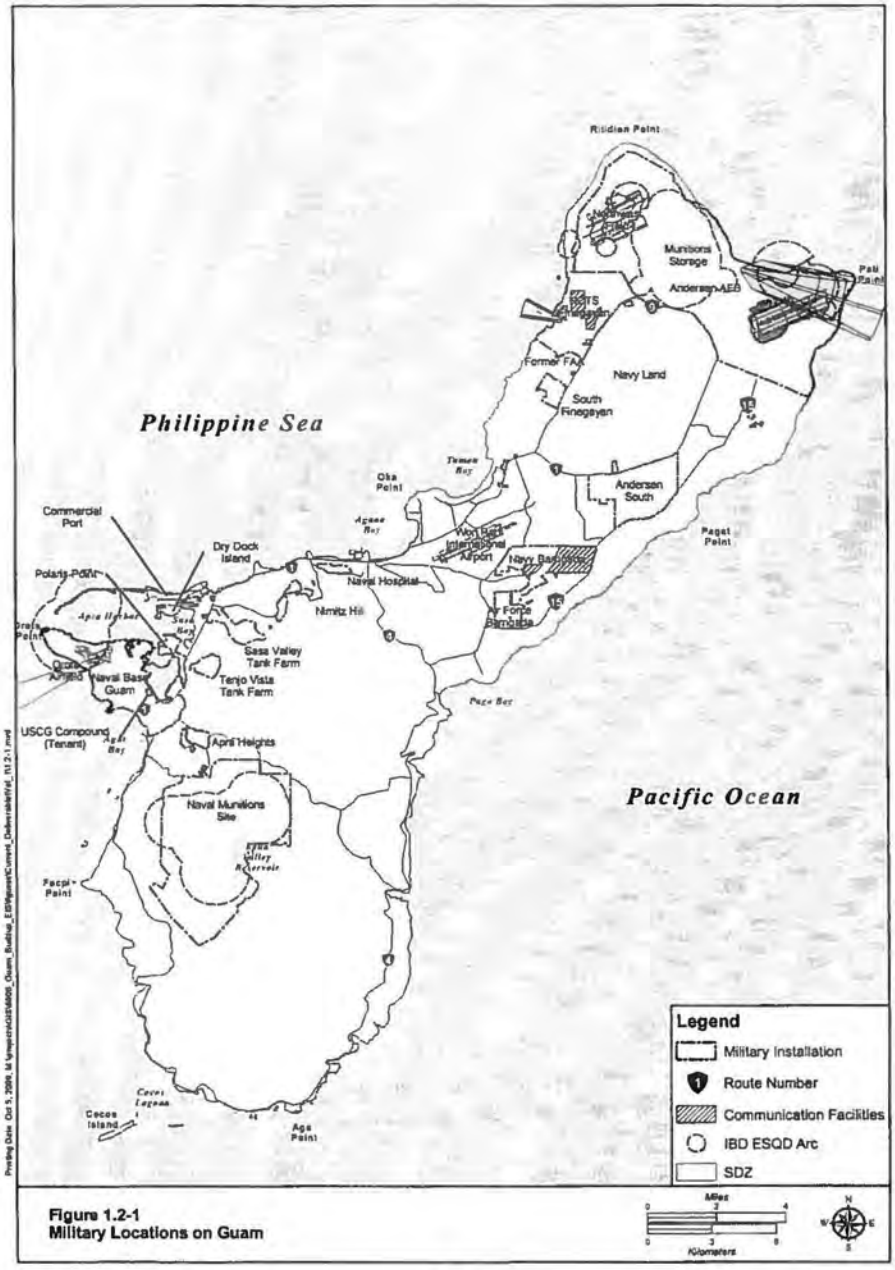


Figure 1.2-1
Military Locations on Guam

1-8

Appendix D – MS4 Permit Area

The DON MS4 permit area includes the following watersheds: Agat, Apra, Cetti, Dandan, Fonte, Geus, Hagåtña, Inaranjan, Mannell, Pago, Piti-Asan, Talayag, Talafolo, Toguan, Ugum, Umatac, and Ylig. In addition, the village limits of the village of Tamuming are included to the extent these limits extend northward beyond the boundaries of the Hagåtña watershed. The western tip of Navy Barrigada (shown in Appendix C) in the Hagåtña watershed is not included.

Guam Coastal Management Program
Forms

ENCLOSURE 3

GUAM COASTAL MANAGEMENT PROGRAM ASSESSMENT FORM

Date of Application:

July 24, 2018

Name of Applicant: Commanding Officer, U.S. Naval Base Guam

Address: U.S. Naval Base Guam
PSC 455, Box 152
FPO AP, Guam 96540-1000

Telephone No.:
671-339-4100

Title of Proposed Project:

Federal Consistency Concurrence Request for the Issuance of U.S. Naval Base Guam's Municipal Separate Stormwater Sewer System (MS4) NPDES Permit No. GUS040000

Other applicable area(s) affected, if appropriate:

N/A

Est. Start Date: Ongoing Est. Duration: Ongoing

AGENCY REPRESENTATIVE INFORMATION

Name & Title:
Eugene Bromley, Environmental Engineer

Agency/Organization: United States Environmental Protection Agency

Address: EPA, Region IX, WTR-2-3
75 Hawthorne St.
San Francisco, CA 94105

Telephone No. during business hours:
(415) 972-3510
Fax (415) 972-3549

CATEGORY OF APPLICATION (check one only)
( ) I Federal Agency Activity
(**X**) II Permit or License
( ) III Grants & Assistance

ENCLOSURE 3

TYPE OF STATEMENT (check one only)
(**X**) Consistency
( ) General Consistency (Category I only)
( ) Negative Determination (Category I only)
( ) Non-Consistency (Category I only)

FEDERAL AUTHORITY FOR ACTIVITY
__40 CFR 122_____

OTHER TERRITORIAL APPROVALS REQUIRED

Agency	Type of Approval	Application Date	Status
Guam EPA	401 Certification		

COMPLETE FOLLOWING PAGES FOR BUREAU OF PLANNING ONLY:

DATE APPLICATION RECEIVED:
_____

OCRM NOTIFIED: _____ LC. AGENCY NOTIFIED:_____

APPLICANT NOTIFIED: _____PUBLIC NOTICE

GIVEN:_____

OTHER AGENCY REVIEW REQUESTED:
_____

DETERMINATION: ( ) CONSISTENT ( ) NON-CONSISTENT ( ) FURTHER INFORMATION REQUESTED

OCRM NOTIFIED: _____ LIC. AGENCY NOTIFIED: _____
APPLICANT NOTIFIED: _____

ACTION LOG:
1._____
2._____
3._____
4._____
5._____
6._____

DATE REVIEW COMPLETED:
_____

ENCLOSURE 3

Project Description

The U.S. Environmental Protection Agency (EPA) Region IX is proposing to issue a National Pollutant Discharge Elimination System (NPDES) permit authorizing discharges from the municipal separate storm sewer system (MS4) serving the Department of the Navy (DON) facilities on U.S. Naval Base Guam. The facilities covered by permit are located generally in central to southern Guam in areas that have a direct connection to a water of the U.S. The enclosed NPDES Permit Factsheet contains essential background information and permit details. The discharges regulated by the permit would consist primarily of stormwater runoff, but could also include certain specified non-stormwater discharges as well. The receiving waters would be the coastal and inland waters of Guam.

On September 28, 2016, Region 9 provided public notice in the *Pacific Daily News* of its intent to issue the permit. The draft permit requires the implementation of a stormwater management program to control pollutants in the discharges as required by the Clean Water Act. Discharge monitoring is required as well as annual reporting to provide information on the status of the implementation of the stormwater management program. Again, further information concerning the permit can be found in the NPDES Permit Factsheet.

Summary of Findings

This activity is subject to review by the Guam Bureau of Statistics and Plans for consistency with the Guam Coastal Management Program. The applicant has reviewed Guam Coastal Management policies; discussion for each policy may be found below:

DEVELOPMENT POLICIES (DP):

DP1. Shore Area Development

Intent: To ensure environmental and aesthetic compatibility of shore area land uses.

Policy: Only those uses shall be located within the Seashore Reserve which:

- enhance, are compatible with or do not generally detract from the surrounding coastal area's aesthetic and environmental quality and beach accessibility;

- can demonstrate dependence on such a location and the lack of feasible alternative sites.

Discussion: In complying with the MS4 permit requirements additional structural stormwater pollutant controls or other infrastructure may need to be constructed at locations that remain to be determined. However, the permit does not specify the locations where any such infrastructure would need to be constructed, and the permittee would have the flexibility to avoid or minimize the siting of such infrastructure in the Seashore Reserve, thereby ensuring consistency with the policy.

DP2. Urban Development

Intent: To cluster high impact uses such that coherent community design, function, infrastructure support and environmental compatibility are assured.

Policy: Commercial, multi-family, industrial and resort-hotel zone uses and uses requiring high levels of support facilities shall be concentrated within urban districts as outlined on the Land Use Districting Map.

Discussion: The requirements of the permit do not directly affect this aspect of urban development. However, the EPA stormwater program encourages consideration of the principles laid out in EPA's smart growth program (https://www.epa.gov/smartgrowth), which are consistent with the GCMP policy and would promote implementation of the policy.

DP3. Rural Development

Intent: To provide a development pattern compatible with environmental and infrastructure support suitability and which can permit traditional lifestyle patterns to continue to the extent practicable.

Policy: Rural districts shall be designated in which only low density residential and agricultural uses will be acceptable. Minimum lot size for these uses should be one-half acre until adequate infrastructure including functional sewering is provided.

Discussion: The MS4 permit requirements do not interfere with the development pattern that is intended by this policy.

DP4. Major Facility Siting

Intent: To include the national interest in analyzing the siting proposals for major utilities, fuel, and transport facilities.

Policy: In evaluating the consistency of proposed major facilities with the goals, policies, and standards of the Comprehensive Development and Coastal Management Plans, the Territory shall recognize the national interest in the siting of such facilities including those associated with electric power production and transmission, petroleum refining and transmission, port and air installations, solid waste disposal, sewage treatment and major reservoir sites.

Discussion: The siting of such facilities is not affected by the MS4 permit.

DP5. Hazardous Areas

Intent: Development in hazardous areas will be governed by the degree of hazard and the land use regulations.

Policy: Identified hazardous lands, including flood plains, erosion-prone areas, air installations, crash and sound zones and major fault lines shall be developed only to the extent that such development does not pose unreasonable risks to the health, safety or welfare of the people of Guam, and complies with the land use regulations.

Discussion: The MS4 permit could require construction of new structural stormwater pollutant controls or other infrastructure at locations that remain to be determined. However, the permit does not specify any required locations for such infrastructure, and the permittee would have the flexibility to implement the permit requirements in a manner consistent with the policy.

DP6. Housing

Intent: To promote efficient community design placed where the resources can support it.

Policy: The government shall encourage efficient design of residential areas, restrict such development in areas highly susceptible to natural and manmade hazards, and recognize the limitations of the island's resources to support historical patterns of residential development.

Discussion: The MS4 permit requirements do not directly affect the location of residential development. However, the EPA stormwater program encourages consideration of the principles laid out in EPA's smart growth program, which are consistent with the GCMP policy and would promote implementation of the policy.

DP7. Transportation

Intent: To provide transportation system while protecting potentially impacted resources.

Policy: The Territory shall develop an efficient and safe transportation system, while limiting adverse environmental impacts on primary aquifers, beaches, estuaries and other coastal resources.

Discussion: The MS4 permit requires that post-construction stormwater controls be consistent with 2010 Guam Transportation Stormwater Drainage Manual. This would ensure consistency with the policy.

DP8. Erosion and Siltation

Intent: To control development where erosion and siltation damage is likely to occur.

Policy: Development shall be limited in areas of 15% or greater slope by requiring strict compliance with erosion, sedimentation, and land use districting guidelines, as well as other related land use standards for such areas.

Discussion: The MS4 permit does not directly affect the location where development would occur. However, any construction projects resulting from the MS4 permit requirements that disturb one or more acres would be subject to the requirements of EPA's construction general permit (CGP) for Guam (NPDES permit No. GUR100000). The CGP requires that disturbance be minimized on steep (15% or greater) slopes, consistent with the policy. As such, the permit requirements would be consistent with the policy.

RESOURCES POLICIES (RP):

RP1. Air Quality

Intent: To control activities to insure good air quality.

Policy: All activities and uses shall comply with all local air pollution regulations and all appropriate Federal air quality standards in order to ensure the maintenance of Guam's relatively high air quality.

Discussion: No significant air pollution will be released as a result of the permit.

RP2. Water Quality

Intent: To control activities that may degrade Guam's drinking, recreational, and ecologically sensitive waters.

Policy: Safe drinking water shall be assured and aquatic recreation sites shall be protected through the regulation of uses and discharges that pose a pollution threat to Guam's waters, particularly in estuaries, reef, and aquifer areas.

Discussion: The MS4 permit would, for the first time, regulate pollutants in stormwater discharges into inland and coastal waters from the DON facilities that are covered by the permit on Guam. The permit would require that pollutants in the discharges be controlled as necessary to comply with Guam Water Quality Standards and other applicable requirements of the Clean Water Act. In this respect, the MS4 permit is fully consistent with the intent of the policy, and would further the goals of the policy. Further discussion of the permit and its requirements can be found in the accompanying draft permit and fact sheet.

RP3. Fragile Areas

Intent: To protect significant cultural areas, and natural marine and terrestrial wildlife and plant habitats.

Policy: Development in the following types of fragile areas shall be regulated to protect their unique character:

- historical and archeological sites
- wildlife habitats
- pristine marine and terrestrial communities
- limestone forests
- mangrove stands and other wetlands

Discussion: The MS4 permit could require construction of new structural stormwater pollutant controls or other infrastructure at locations that remain to be determined.

Construction projects disturbing one or more acres that may be necessary would be subject to the requirements of EPA's CGP. The CGP includes provisions to protect historical sites and sensitive areas such as habitat for listed endangered and threatened species. The MS4 permit would also require that pollutants in the discharges be controlled as necessary to comply with Guam Water Quality Standards and other applicable requirements of the Clean Water Act. In so doing, the permit would help to protect the above areas and resources.

RP4. Living Marine Resources

Intent: To protect marine resources in Guam's waters.

Policy: All living resources within the territorial waters of Guam, particularly corals and fish, shall be protected from over harvesting and, in the case of marine mammals, from any taking whatsoever.

Discussion: The MS4 permit does not affect the degree of harvesting of marine resources. The permit would require that pollutants in the discharges be controlled as necessary to comply with Guam Water Quality Standards and other applicable requirements of the Clean Water Act. In so doing, the permit would help to protect marine resources.

RP5. Visual Quality

Intent: To protect the quality of Guam's natural scenic beauty.

Policy: Preservation and enhancement of, and respect for the island's scenic resources shall be encouraged through increased enforcement of and compliance with sign, litter, zoning, subdivision, building and related land-use laws. Visually objectionable uses shall be located to the maximum extent practicable so as not to degrade significant views from scenic overlooks, highways and trails.

Discussion: The MS4 permit requirements would not affect visual resources.

RP6. Recreation Areas

Intent: To encourage environmentally compatible recreational development.

Policy: The Government of Guam shall encourage development of varied types of recreational facilities located and maintained so as to be compatible with the surrounding environment and land uses, adequately serve community centers and urban areas and protect beaches and such passive recreational areas as wildlife and marine conservation areas, scenic overlooks, parks and historical sites.

Discussion: The MS4 permit would not affect the type of recreational facilities that could be constructed. The permit would, however, require that pollutants in the discharges be

controlled as necessary to comply with Guam Water Quality Standards and other applicable requirements of the Clean Water Act. In so doing, the permit would help to ensure that Guam water resources are protected for recreation.

RP7. Public Access

Intent: To ensure the right of public access.

Policy: The public's right of unrestricted access shall be ensured to all non-federally owned beach areas and all Territorial recreation areas, parks, scenic overlooks, designated conservation areas and their public lands; and agreements shall be encouraged with the owners of private and federal property for the provision of releasable access to and use of resources of public nature located on such land.

Discussion: The MS4 requirements of the permit would not affect the public's right of access to areas covered by the policy.

RP8. Agricultural Lands

Intent: To stop urban types of development on agricultural land.

Policy: Critical agricultural land shall be preserved and maintained for agricultural use.

Discussion: The MS4 permit does not directly affect the location where urban development would occur. However, the EPA stormwater program encourages consideration of the principles laid out in EPA's smart growth program, which are consistent with the GCMP policy and would promote implementation of the policy.