HAWAII ARMY NATIONAL GUARD

Storm Water Management Plan

NPDES Permit No. HI S000052

September 2017

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List of Acronyms

AMD	Asset Management Database
AASF	Army Aviation Support Facility
AO	Administrative Officer
AON	Act of Nature
ARNG	Army National Guard
AST	Aboveground Storage Tank
BMPs	Best Management Practices
CFR	Code of Federal Regulations
CISEC	Certified Inspector of Sediment and Erosion Control
COC	Chain of Custody
CWA	Clean Water Act
DMR	Discharge Monitoring Report
DoD	Department of Defense
DOT	Department of Transportation
EA	Environmental Assessment
ECO	Environmental Compliance Officer
EDOP	Effective Date of the Permit
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act

ENV	Environmental Office
EO	Environmental Officer
EPA	Environmental Protection Agency
EPAS	Environmental Performance Assessment System
EPCRA	Emergency Planning & Community Right-to-Know Act
EQCC	Environmental Quality Control Committee
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FMO	Facilities Management Office
GI	Grease Interceptor
GIS	Geographic Information System
HAR	Hawaii Administrative Rules
HAZMAT	Hazardous Materials
HDOH	Hawaii Department of Health
HEPCRA	Hawaii Emergency Planning and Community Right-to-Know Act
HIARNG	Hawaii Army National Guard
HIENG	Engineering Office
HMWMP	Hazardous Material and Waste Management Plan
HRS	Hawaii Revised Statute
IAW	In Accordance With
IDDE	Illicit Discharge Detection and Elimination
IOSC	Installation On-Site Coordinator
IWDP	Industrial Wastewater Discharge Permit

IPMP	Integrated Pest Management Plan
ISCP	Installation Spill Contingency Plan
LID	Low Impact Development
MEP	Maximum Extent Practicable
MCM	Minimum Control Measure
MILCON	Military Construction
MS4	Municipal Separate Storm Sewer System
NGB	National Guard Bureau
NG Pam	National Guard Pamphlet
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
OWS	Oil Water Separator
O&M	Operation and Maintenance
OSHA	Occupational Safety Hazardous Administration
PAO	Public Affairs Officer
PM	Project Manager
POL	Petroleum Oil Lubricant
QA/QC	Quality Assurance / Quality Control
RCRA	Resource Conservation and Recovery Act
REC	Record of Environmental Consideration
RTSM	Regional Training Site Maintenance
SDS	Safety Data Sheet

SJA	Staff Judge Advocate
SME	Subject Matter Expert
SOW	Scope of Work
SPCC	Spill Prevention, Control and Countermeasure
SRM	Sustainment, Restoration, and Modernization
STMP	State Transportation Motor Pool
SWMP	Management Plan
SWPCP	Pollution Control Plan
SWPPP	Pollution Prevention Plan
TAG	The Adjutant General
UFC	Unified Facilities Criteria
UIC	Underground Injection Control
USACE	United States Army Corps of Engineers
USAG-HI	United States Army Garrison, Hawaii
USPFO	U.S. Property and Fiscal Office
UST	Underground Storage Tank
UTES	Unit Training Equipment Site
WAAF	Wheeler Army Air Field

1 Introduction

The HIARNG has prepared this Storm Water Management Plan (SWMP) in accordance with the Federal Water Pollution Control Act as amended (33 U.S.C.1251) (also known as the Clean Water Act (CWA)); Hawaii Revised Statutes, Chapter 342D; Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55, and Part A.1 of HIARNG's Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) Permit No. HI S000052, effective August 17, 2014 (herein referred to as the Permit). A copy of the Permit can be found in Appendix A. This Plan supersedes the following:

- Storm Water Management Plan, April 2016

1.1 Objective

The objective of this SWMP is to address all requirements of the Permit, reduce the discharge of pollutants to and from HIARNG's MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act.

1.2 Minimum Control Measures

HIARNG's permit requires seven (7) minimum control measures (MCMs) designed to reduce discharge of pollutants to the MEP:

- Public Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post Construction Storm Water Management
- Pollution Prevention and Good Housekeeping
- Industrial and Commercial Activities Discharge Management

This SWMP describes the following information for each MCM:

- The Best Management Practices (BMPs), including the underlying rationale that will be implemented for each MCM.
- Measurable standards and milestones for each of the BMPs, including the underlying rationale and interim measures to aid in determining the level of effort and effectiveness of each program component.

- Personnel responsible for implementation of each program component.
- Monitoring program to determine effectiveness of the controls and overall storm water program.

1.3 Facility Description

The Permit is applicable to five HIARNG facilities on the island of Oahu which are listed below in Table 1.1. Maps of each permitted facility are included in Appendix B and depict storm water flow directions, storm water inlets, MS4 piping, storm water discharge points, bulk fuel and hazardous substance storage locations, and any other equipment that has the potential to impact storm water such as transformers, grease traps, oil water separators, and wash racks.

Table 1.1 Permitted Facilities

Facility	Address	Site activities with the potential to impact storm water
Ft. Ruger	3949 Diamond Head Rd. Honolulu, HI 96816	Vehicle Repair and Maintenance, Hazardous Materials Storage, Hazardous Waste Accumulation, Emergency Generators, Solvent Parts Washers, Grease Trap, Landscaping Debris, Construction, Repair, and Maintenance.
Waiawa Multi-Purpose Facility	96-1176 Waihona Street Pearl City, HI 96782	Vehicle Repair and Maintenance, Fuel Storage and Transfers , Hazardous Waste Accumulation, Hazardous Materials Storage, Solvent Parts Washers, Oil Water Separator, Grease Trap, Vehicle Washing, Erosion, Landscaping Debris, Construction, Repair, and Maintenance.
Army Aviation Support Facility (AASF1)	1935 Santos Dumont Rd. Bldg. 825, 829 & 832 Wheeler Army Airfield Wahiawa, HI 96854-2720	Aircraft Repair and Maintenance, Fuel Storage and Transfers, Hazardous Waste Accumulation, Hazardous Materials Storage, Solvent Parts Washers, Oil Water Separator, Grease Trap, Aircraft Washing, Erosion, Landscaping Debris, Construction, Repair, and Maintenance.
Wahiawa Armory and Field Maintenance Shop 2 (FMS2)	77-230 Kamehameha Hwy. Wahiawa, HI 96854-2720	Vehicle Repair and Maintenance, Fuel Storage and Transfers, Hazardous Waste Accumulation, Hazardous Materials Storage, Solvent Parts Washers, Oil Water Separator, Grease Trap, Vehicle Washing, Construction, Repair, and Maintenance.
Kalaeloa Multi-Purpose Facility and AASF-Kalaeloa	91-1227 Enterprise Ave Kapolei, HI 96707	Vehicle and Aircraft Repair and Maintenance, Fuel Storage and Transfers, Hazardous Waste Accumulation, Hazardous Materials Storage, Solvent Parts Washers, Oil Water Separators, Grease Traps, Landscaping Debris, Construction, Repair, and Maintenance.

2 Public Education and Outreach

HIARNG's Public Education and Outreach Program is committed to the goal of storm water pollution prevention through environmental awareness. Targeted audiences for public education and outreach include employees, contractors, and tenants working at facilities covered under the Permit.

2.1 Best Management Practices

2.1.1 Storm Water Training

Storm water training is provided for employees, contractors, and tenants working at facilities covered under the Permit regularly and as needed. The storm water training module provides an overview of water quality regulations, description of HIARNG's NPDES permit compliance requirements, effects of water quality degradation on receiving ecosystems, specific examples of HIARNG activities which have potential to impact storm water, BMPs to prevent storm water contamination, identification and reporting of illicit discharges, and oil and hazardous substance spill prevention and response.

2.1.2 Environmental Website

The HIARNG Environmental Branch maintains two websites; an intranet website available only to HIARNG personnel (http://nghihko/spec_staff/env/SitePages/Home.aspx), and a public website through the State of Hawaii, Department of Defense (DoD) (http://dod.hawaii.gov/env/). Both websites have a page specifically dedicated to storm water that provides the storm water compliance Subject Matter Expert (SME) contact information and protocols to report spills and illicit discharges. The HIARNG NPDES permit, SWMP, and educational factsheets and posters can be downloaded from both websites.

2.1.3 BMP Posters

HIARNG created a BMP poster that provides ten (10) visual examples and descriptions of military-related BMPs to prevent impacts to storm water. The posters are distributed to HIARNG maintenance shops and are available for download on the Environmental websites.

2.1.4 Storm Water Mascot, Logo, and Slogan

HIARNG created a storm water mascot, logo, and slogan to bring awareness about storm water protection to the public. HIARNG's storm water mascot (sea turtle) was chosen as a reminder that all storm water in Hawaii ultimately flows to the ocean. The mascot is included on the storm water logo along with the slogan "*Only Rain Down the Drain*". The logo and slogan are used on public outreach material and drain placards throughout the facility.

2.1.5 Storm Drain Placards

In accordance with Part D.1.f. (1) (iii) of the Permit, HIARNG installs drain placards of the storm water logo on highly visible drainage inlets. The intent is to create a culture of storm water awareness and remind facility users that storm water ultimately flows to and affects our ocean ecosystems.

2.2 Measureable Standards and Milestones

Public Education and Outreach to HIARNG employees and contractors is measured by their ability to identify and report potential storm water pollutants and illicit discharges, knowledge of applicable BMPs for their respective work function, and awareness of storm drain locations. Milestones for Public Education and Outreach are improvements in the behaviors of HIARNG employees and contractors to prevent storm water pollution exhibited by their selection and implementation of appropriate BMPs and reporting of spills and illicit discharges.

2.3 Roles and Responsibilities

In respect to Public Education and Outreach, the HIARNG storm water compliance SME is responsible for providing storm water training regularly and as needed to HIARNG personnel, maintaining the public outreach websites, distributing BMP posters and outreach material to facilities, and installing and maintaining storm drain placards.

2.4 Monitoring Effectiveness

Effectiveness of HIARNG's storm water Public Education and Outreach Program is measured by the successful implementation of storm water pollution prevention efforts observed during quarterly water quality facility assessments, and monthly construction inspections. All changes to the Public Education and Outreach Program as a result of monitoring effectiveness will be included in the annual report.

3 Public Involvement and Participation

A successful storm water Pollution Prevention Program greatly depends on the participation of facility users. HIARNG's target audience for public involvement and participation are all facility users that have potential to impact storm water quality including but not limited to maintenance shops, engineering staff, facility maintenance staff, and contractors working at facilities covered by the Permit. HIARNG encourages public participation during quarterly meetings and through a 24-hour environmental reporting hotline.

3.1 Best Management Practices

3.1.1 Public Review

The Draft SWMP was made available to the public and HIARNG personnel for review and comment for 30 days prior to finalization. The final SWMP is posted on the two HIARNG environmental websites for reference and download.

3.1.2 Environmental Quality Control Committee (EQCC)

Army Regulation (AR) 200-1 requires Army installations to establish an EQCC to develop policies and strategies that protect the environment, ensure full compliance with Federal, State, Army, and local laws, establish programs, continuously educate and train all HIARNG personnel to promote an elevated sense of environmental awareness, represent the interests of the soldiers, units, commanders and facilities in dealing with environmental programs, and assist and advise HIARNG in developing, maintaining and implementing the environmental programs. HIARNG has two EQCCs: EQCC I and EQCC II; both groups meet four (4) times per year. The EQCC I consists of leadership and command personnel, and EQCC II consists of appointed personnel from each HIARNG unit. The meetings are a forum to present pertinent environmental information, compliance status updates, and concerns. EQCC members are encouraged to interact with the HIARNG Environmental Office staff by asking questions and providing feedback.

3.1.3 Environmental Emergency Hotline

HIARNG has an Environmental Emergency Hotline (808) 672-1013 that allows callers to reach a point of contact in the Environmental Office twenty-four (24) hours a day, seven (7) days a week. The hotline phone number and spill response procedures are included in the storm water training and posted on the HIARNG websites. Facility personnel are trained to communicate environmental concerns such as spills and illicit discharges immediately to the Environmental Office.

3.2 Measureable Standards and Milestones

Public Involvement is measured by the amount of participation and feedback received on the draft SWMP, during EQCC meetings, and frequency that personnel use the Environmental Emergency Hotline to report storm water related events.

3.3 Roles and Responsibilities

The HIARNG storm water compliance SME is responsible for preparing and posting the draft and final SWMP on the environmental websites, providing storm water compliance updates during EQCC meetings, responding to storm water comments and questions, and investigating storm water issues and spills reported on the Environmental Emergency Hotline.

3.4 Monitoring Effectiveness

Effectiveness of HIARNG's storm water Public Involvement and Participation Program is measured by the level of awareness HIARNG personnel have of information and resources available to them, such as the existence of the Permit and SWMP on the website, the Environmental Emergency Hotline, and EQCC meetings. During quarterly water quality facility assessments, awareness of storm water information sources will be assessed by interviewing site personnel. Any changes to the public involvement and participation program as a result of monitoring effectiveness of the program will be included in the Annual Report.

4 Illicit Discharge Detection and Elimination (IDDE)

An illicit discharge is any discharge of water to an MS4 that is not composed entirely of storm water, with the exception of incidental non-storm water discharges allowed by Part B.2 of the Permit. Examples of illicit discharges include, but are not limited to: wastewater from a malfunctioning oil water separator (OWS), grease interceptor (GI), or septic system, Petroleum Oil or Lubricants (POL), chemicals, trash, vegetative debris, pesticides, fertilizers, and sediments. HIARNG implements IDDE by training personnel how to identify and report an illicit discharge, requiring permits for all MS4 connections, performing quarterly water quality facility assessments, investigating complaints, tracking the status and condition of the MS4, facilitating an enforcement policy, spill prevention and response, and used oil and hazardous substance handling and disposal policies.

4.1 Best Management Practices

4.1.1 Connection Permits for Private Drain Connections

A HIARNG-issued connection permit is required for all discharges and connections to HIARNG's MS4 from outside the facility. The entity discharging storm water must have proof of filing a Notice of Intent (NOI) or NPDES permit, if applicable, and must provide control measures to minimize pollutants being discharged. A copy of the connection permit application is provided in Appendix C. All connection permits are tracked in the Asset Management Database.

4.1.2 Quarterly Water Quality Facility Assessments

All facilities covered by the Permit are visited quarterly to assess and document conditions which could contribute to an illicit discharge or violate the conditions of the Permit and applicable water quality standards. The inspector observes all MS4 inlets, conveyances, outfalls, roadways, erosion prone areas, oil and chemical storage, GI, OWS, septic systems, wash racks, trash receptacles, and facility activities.

Records of all quarterly water quality facility assessments and corrective action resulting from deficiencies are maintained by the storm water compliance SME at the Environmental Office. A copy of the Water Quality Facility Assessment Checklist can be found in Appendix D.

4.1.3 Tracking

The HIARNG maintains a Geographic Information System (GIS) Asset Management Database for the entire permitted MS4 system. The database assigns a unique identifier to each MS4 feature and includes pertinent information, such as illicit discharges, spills, inspection and maintenance data, and global positioning system coordinates.

4.1.4 Complaint Investigation

HIARNG facility personnel are trained to notify the Environmental Office via the Environmental Emergency Hotline whenever there is a situation that poses a hazard to the environment or to report a spill of POL or other hazardous substance. Upon notification, the storm water compliance SME or other Environmental Office staff personnel visits the site to assess the incident further, gather pertinent information, and assists the responsible party in facilitating a corrective action. In the event of an illicit discharge, the Hawaii Department of Health (HDOH) will be notified immediately. All illicit discharges are recorded in the Asset Management Database

4.1.5 Enforcement

Any entity found with an unpermitted drain connection or discharging pollutants into HIARNG's MS4 will be contacted immediately by the HIARNG storm water compliance SME to initiate the connection permit application process and to discuss applicable BMPs to mitigate pollutants. The discharging entity will also be notified in writing of HIARNG's permit policy for connections and discharges to our MS4 and given a 30-day deadline to complete and return the permit application to the HIARNG Environmental Office storm water SME.

If the permit application is not completed and returned within 30 days, the HIARNG Environmental Office storm water SME will notify the discharging entity again in writing that the 30-day application deadline has been exceeded and that an additional 15 days will be allowed to submit the completed application before the situation is escalated for enforcement. If the entity does not respond with a corrective action within 15 days, the incident will be moved up the chain of command within HIARNG to the Facilities Management Officer (FMO), the Public Affairs Officer (PAO), and the Staff Judge Advocate (SJA) for guidance on a resolution.

4.1.6 Spill Prevention and Response

HIARNG implements Spill Prevention Control, and Countermeasures (SPCC) Plans for all facilities with POL containers 55 gallons or more that exceed aggregate shell capacity for those containers of 1,320 gallons in accordance with Chapter 40 of the Code of Federal Regulations (CFR), Part 112 *Oil Pollution Prevention*. The SPCC Plans provide guidance to facility personnel for the proper storage and handling of POL to prevent a release and respond to spills. Other types of spills originating from sanitary sewer systems, OWS, and or grease traps will be prevented with frequent inspection and maintenance.

4.1.7 Used Oil and Hazardous Substances Disposal

HIARNG's Hazardous Waste Management Plan (HWMP) regulates hazardous waste storage and disposal at all facilities and provides instruction for the storage, handling, and spill response for hazardous substances and wastes.

4.2 Measureable Standards and Milestones

IDDE is measured by the number of connection permits, complaints, illegal connections, and illicit discharges. The number of items tracked at each facility will allow the storm water compliance SME to identify high risk locations that may require additional assessments and BMPs.

4.3 Roles and Responsibilities

The HIARNG storm water compliance SME coordinates the issuance of connection permits, performs quarterly facility assessments of all permitted facilities, investigates complaints, and completes all tracking. Enforcement issues are escalated up the HIARNG chain of command to the FMO, PAO, and SJA. Spill prevention is the responsibility of all HIARNG personnel and contractors. Spill response is the responsibility of the parties who cause the spill. The HIARNG Environmental Office provides oversight over the spill cleanup. Used oil and hazardous substance disposal is the responsibility of the generator.

4.4 Monitoring Effectiveness

IDDE Program effectiveness is measured by the number of illicit discharges per year. When an illicit discharge occurs, the storm water compliance SME tracks the incident and uses site observations and inspection data to assess the underlying cause of the release. then implements BMPs and modifies the IDDE Program to prevent future incidents. All changes to the IDDE Program are captured in the Annual Report.

5 Construction Site Runoff Control

The HIARNG Construction Site Runoff Control Program is intended to reduce the discharge of pollutants to the MEP from all construction, maintenance, and repair projects at HIARNG facilities.

5.1 Best Management Practices

5.1.1 BMP Manuals

In accordance with Part D.1.d(1) of the Permit, HIARNG is required to prepare a BMP manual that specifies the requirements for storm water compliance while working at HIARNG facilities. The BMP manual references the applicable Department of Defense (DoD) guidance Unified Facilities Criteria (UFC) 03 210 10 *Low Impact Development* and gives step by step instructions for NPDES permitting and compliance at construction sites. The HIARNG *Construction, Repair, and Maintenance Storm Water BMP Manual* is located in Appendix E.

5.1.2 Inventory of Construction Sites

HIARNG's storm water compliance SME maintains an inventory spreadsheet of all construction, repair, and maintenance sites at HIARNG facilities that are subject to the requirements of HAR 11-55, Appendices A and C. Information tracked about each site includes: Name of Project, NPDES permit number, status of storm water pollution prevention plan (SWPPP) review and acceptance, and enforcement action (if any).

5.1.3 SWPPP Review and Acceptance

The HIARNG storm water compliance SME reviews all SWPPPs to verify they contain the content and planning information required by HAR 11-55, Appendices A and C. Any deficiencies found in a SWPPP will be corrected by the project contractor and recorded on the Log of Changes to SWPPP spreadsheet. Both the SWPPP Review Checklist, and Log of Changes to SWPPP Spreadsheet are included in the appendices of the *Construction, Repair, and Maintenance Storm Water BMP Manual*.

5.1.4 Construction Inspections

All construction, repair, and maintenance projects covered under a NPDES General permit for construction activities as required by HAR 11-55, Appendix A & C, are inspected prior to ground disturbing activities (except for activities associated with the installation of the BMPs) by an engineer or qualified inspector employed or retained by HIARNG or the contractor who reviews and becomes familiar with the project's SWPPP and/or other equivalent document(s). In addition to inspections required by the NPDES permit program, monthly inspections are conducted by a qualified construction inspector who is independent of the construction project being inspected (i.e., not involved in the day-to-day planning, design, or implementation). The inspector uses the HIARNG NPDES Construction Inspection Form located in the *Construction, Repair, and Maintenance Storm Water BMP Manual* to assess the contractor's adherence to applicable regulations and their SWPPP. At the end of each monthly inspection, the inspector and the site contractor representative review the inspection results together and discuss the cause of all deficiencies (if any). The site contractor is notified of the deadline for corrective action and a follow-up inspection is scheduled for the respective timeframe. The site contractor representative is required to sign the inspection form acknowledging the inspection results and the corrective actions required. A copy of the signed inspection form and photo documentation of all deficiencies is emailed to the contractor representative and the HIARNG Project Manager (PM). A follow-up inspection is performed to confirm all deficiencies have been corrected and the inspection form is signed and dated by both parties to verify the corrections are complete. The HIARNG storm water compliance SME retains copies of all construction inspections for five (5) years after the permit is closed.

5.1.5 Enforcement Response Plan

HIARNG's policy on storm water deficiencies identified during construction inspections are divided into two categories: Critical, and Non-Critical.

5.1.5.1 Critical Deficiency

A critical deficiency is any issue that poses an immediate threat of contamination to storm water and/or surface water, or any issue that could cause an illicit discharge if a storm event were to occur. Examples of critical deficiencies are: spills that haven't been cleaned up, lack of proper perimeter control, and unprotected storm drain inlets. All critical deficiencies must be corrected within the same business day.

5.1.5.2 Non-Critical Deficiency

A non-critical deficiency is any issue that does not pose an immediate threat of contamination to storm water and/or surface water. Examples of Non-Critical deficiencies are: administrative and recordkeeping violations. All non-critical deficiencies must be corrected within five (5) days.

5.1.5.3 Enforcement of Non-Compliance

If a contractor does not correct a storm water deficiency within the prescribed time-frame, the HIARNG storm water compliance SME will escalate the issue to the HIARNG PM and Contracting Officer. If the PM and Contracting Officer cannot resolve the issue with contractual enforcement, the deficiency will be communicated to the HDOH, Clean Water Branch, Enforcement Section Supervisor within one (1) week of such determination.

5.1.6 Training

HIARNG storm water compliance SME provides training periodically and as needed to all HIARNG staff with construction responsibilities. The training provides an overview of the Construction Site Runoff Control Program, BMP manual, and enforcement of non-compliance.

5.1.7 Education

HIARNG educates contractors of NPDES permit requirements by providing a copy of the HIARNG *Construction, Repair, and Maintenance Storm Water BMP Manual* during the environmental review process of each project.

5.2 Measureable Standards and Milestones

HIARNG's Construction Site Runoff Control Program is measured by a contractor's compliance with the *Construction, Repair, and Maintenance Storm Water BMP Manual* by using the SWPPP Review Checklist, LID Design Review Checklist, and HIARNG NPDES Construction Inspection Form.

5.3 Roles and Responsibilities

The HIARNG Construction Site Runoff Control Program is coordinated through the HIARNG storm water compliance SME and FMO's Engineering Branch PMs. The storm water compliance SME maintains an inventory of construction sites, reviews the contractor design drawings, reviews each SWPPP, provides training, and performs inspections. Enforcement of the Permit and HIARNG *Construction, Repair, and Maintenance BMP Manual* begins with the storm water compliance SME communicating the issue to the PM and contractor; if the contractor does not resolve the issue within the prescribed timeframe, the PM and Contracting Officer will be notified. If the PM and Contracting Officer cannot resolve the issue with contractual enforcement, the deficiency will be communicated to the HDOH, Clean Water Branch, Enforcement Section Supervisor within one (1) week of such determination.

5.4 Monitoring Effectiveness

Effectiveness of the Construction Site Runoff Control Program is monitored by tracking a contractor's implementation and compliance with the contents of the *Construction, Repair, and Maintenance Storm Water Best Management Practices BMP Manual* using the SWPPP Review checklist and Monthly Site Inspection Checklist. The occurrence of deficiencies or non-compliance are indicators that communication and training should be improved.

6 Post-Construction Storm Water Management in Development and Redevelopment

The purpose of Post-Construction Storm Water Management is to minimize water quality impacts to the MEP at new development and redevelopment projects that have the potential to discharge pollutants into HIARNG's MS4 by installing permanent controls that mimic a site's predevelopment hydrology.

6.1 Best Management Practices

6.1.1 Standards Revision

The standards adopted for storm water management in new development and redevelopment originate from a Department of Defense (DoD) policy memorandum issued on 19 January 2010 which requires the implementation of storm water requirements under Section 438 of the Energy Independence and Security Act (EISA). The policy requires federal facility projects 5,000 square feet (ft^2) or more to "maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow." The policy refers users to Unified Facilities Criteria (UFC) 3-210-10 *Low Impact Development* (LID) which has been adopted as HIARNG's revised standard. Additional information on LID requirements for construction can be found in the *Construction, Repair, and Maintenance BMP Manual.*

6.1.2 Design Review

Project design drawings are generally reviewed by the storm water compliance SME at 30%, 60%, and 90% to assess potential storm water impacts and to verify the inclusion of LID. The storm water compliance SME uses the LID Design Review Checklist to verify project design compliance with the standard; the checklist is located in the appendices of the *Construction, Repair, and Maintenance BMP Manual*.

6.1.3 BMP Inspections and Operation and Maintenance Database

HIARNG's MS4 Assets Management Database tracks permanent BMPs at all facilities covered under the Permit. The database records inspection dates and results, maintenance of the permanent BMP, GPS coordinates in the North American Datum 83 datum, photographs, and Operation and Maintenance (O&M) specifications.

6.1.4 Education and Training

Training is provided regularly and as needed to FMO Engineering personnel involved in new development and redevelopment projects. The training focuses on the contents of the *Construction, Repair, and Maintenance BMP Manual* and requirements for NPDES permit compliance.

6.2 Measureable Standards and Milestones

HIARNG's Post-Construction Storm Water Management Program is measured by a contractor's compliance with the revised standard UFC 3-210-10, and the *Construction, Repair, and Maintenance BMP Manual* using the LID Design Review Checklist.

6.3 Roles and Responsibilities

FMO Engineering Branch is responsible for disclosing the requirement for compliance with UFC 3-210-10 and the *Construction, Repair, and Maintenance BMP Manual* to their contractors. The storm water compliance SME reviews design drawings using the LID Design Review Checklist, inspects permanent BMPs during quarterly water quality facility assessments, and maintains the Asset Management Database.

6.4 Monitoring Effectiveness

Effectiveness of post-construction management in new development and redevelopment is monitored by the level of compliance FMO's contractors exhibit with UFC 3-210-10 and the *Construction, Repair, and Maintenance BMP Manual* through the inclusion of LID in their projects. The occurrence of deficiencies or non-compliance are indicators that communication and training should be improved.

7 Pollution Prevention and Good Housekeeping

HIARNG's goal is to reduce and remove all pollutants in storm water before they enter our storm drain system. HIARNG implements a Pollution Prevention Program to assess facilities for pollutants such as debris, trash, chemicals, and erosion. Each facility implements site specific BMPs according to what type of hazards exist.

7.1 Best Management Practices

7.1.1 Debris Control Program Plan

HIARNG's goal is to prevent debris from entering the MS4 which could result in an illicit discharge. The Debris Control Program is implemented through a combination of assessment, tracking, awareness, and remedial action.

7.1.1.1 Asset Management System and Mapping

HIARNG uses an Asset Management Database and GIS Map to catalog all MS4 conveyances using a unique identifier. The database tracks the condition of each MS4 feature, and prioritizes the requirement for maintenance.

7.1.1.2 Inspection and Maintenance Schedule

Quarterly water quality facility assessments quantify vegetative debris observed in the MS4 by estimating the volume in cubic feet (ft^3); the inspection also documents any other conditions at the facility that could potentially discharge debris into the MS4.

7.1.1.3 Storm Drain Placards

HIARNG installs drain placards with the storm water logo and slogan on drain inlets and permanent BMPs throughout the facilities to increase awareness of storm water infrastructure locations. The condition of drain placards are assessed during the quarterly water quality facility assessments, and replaced, as needed.

7.1.1.4 Action Plan for Retrofitting Structural BMP's

HIARNG's action plan for retrofitting structural BMPs includes any facility improvement that is designed to protect water quality, infiltrate storm water on-site, or improve the quality of storm water discharges. Table 7.1 provides a list of prioritized retrofit projects and explanation on the basis for selection.

Table 7.1 Structural Retrofit Implementation

Priority	Facility	Existing Structural BMP	Planned Retrofit	Explanation of Basis for Selection	Estimated completion date
1	Waiawa	Storm Drain with no outlet	Install seepage pit	To prevent flooding and infiltrate water onsite rather than discharging to the Waiawa Stream	2018
2	Waiawa	Double Wall Aboveground Storage Tank and Spill Kit	Design and build an impervious concrete secondary containment around entire fueling operation	To contain leaks, drips, and spills originating from nearby storage and transfers of 3,500 Gallons of Diesel Fuel to prevent contaminants from reaching the nearby down gradient storm drains and subsequently Waiawa Stream.	2018
3	Kalaeloa	Double Wall Aboveground Storage Tank	Design and build an impervious concrete secondary containment around entire fueling operation	To contain leaks, drips, and spills originating from nearby storage and transfers of 4,000 Gallons of Diesel Fuel to prevent contaminants from reaching the nearby UIC wells and potentially Nimitz Beach through tidally influenced brackish groundwater.	2018

7.1.2 Trash Reduction Plan

HIARNG's goal is to reduce trash discharges to the MS4 by 50% from the baseline load within two (2) years, and five (5) year, long term goal of preventing all trash discharges from the MS4 completely. All trash data and reduction actions taken will be included in the Annual Report. This Trash Reduction Plan includes: Trash Assessments, Trash Control Measures, Trash Control Monitoring, and describes both short term and a long term plans for trash reduction

7.1.2.1 Trash Assessments

Quarterly water quality facility assessments document trash loads in the MS4 and around a facility by estimating the volume in ft^3 and the most likely source of the trash.

7.1.2.2 Trash Control Measures

Trash control measures are formulated on a site-specific basis using data collected during the quarterly water quality facility assessments. Control measures can be either be short term, or long term; examples of short term control measures include: placing filter fabric under drain grates, placing socks around drain grates, keeping dumpsters and trash can lids closed, and moving dumpsters and trash cans away from storm drains. Examples of long term control measures include: installing drain placards around all storm water inlets, posting signs around dumpsters, installing fine mesh inlet screens, and public education and outreach.

7.1.2.3 Trash Control Monitoring

Trash control monitoring consists of tracking trash volume and source data in the Asset Management Database, and comparing data with the baseline to determine if control measures are effectively reducing trash loads. Trash control monitoring will reveal which trash control measures are the most and least effective so that HIARNG can achieve the five (5) year long term goal of reducing trash completely.

7.1.3 Chemical Application Program Plan

This Chemical Application Program Plan is intended to reduce discharges of chemicals to HIARNG's MS4 to the MEP through training and implementation of pesticide and fertilizer management.

7.1.3.1 Pesticide Management

HIARNG facilitates an Integrated Pest Management Plan (IPMP) in accordance with the DoD directive 4150.7 *Pest Management Program*, AR 200-1, Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), and the Hawaii Pesticides Law (HRS 149A). HIARNG's IPMP applies to all personnel, tenants, and contractors on HIARNG installations, and provides guidance for the proper storage, handling, and application of pesticides to prevent impact to the environment, surface waters, and storm water. More information on the IPMP can be found on the HIARNG Environmental Intranet website.

7.1.3.2 Fertilizer Management

HIARNG discourages the use of fertilizers unless necessary to prevent the loss of essential vegetation. When fertilizers need to be used, the following BMPs are recommended to prevent and mitigate impacts to storm water:

- Test nutrient levels in soil and calculate minimum application rates to avoid over-feeding.
- Incorporate fertilizers into the soil to avoid loss from runoff.
- Do not apply fertilizer within 48 hours prior to rainfall.
- Store fertilizers in secondary containment.

7.1.4 Erosion Control Program Plan

This Erosion Control BMP Program Plan is intended to reduce discharges of sediment to HIARNG's MS4 to the MEP through training and implementation of erosion identification and reporting.

7.1.4.1 Identification of Erosion

Quarterly water quality facility assessments identify erosion-prone areas and document the severity by estimating the volume of sediment displacement by erosion, and the presence and severity of sloughing, rilling, and/or gullying. Other observations about the erosion prone area such as percent of vegetation cover, potential accelerators of the erosion, and down-gradient receptors at risk of being impacted are also documented. Storm water training teaches students how to identify and report erosion to the Environmental Office.

7.1.4.2 Prioritization of Sites

All erosion-prone areas are prioritized for repair, revegetation, and installation of permanent BMPs based on proximity to receiving waters listed as impaired by either sediment, siltation, or turbidity. Table 7.2 lists each HIARNG facility covered under the permit, the priority for erosion control improvements, the proximity to receiving waters, and impairment criteria for each receiving water. Impairment criteria was referenced from Chapters 2 and 3 of the *2014 State of Hawaii Water Quality Monitoring and Assessment Report*.

Table 7.2 Erosion Control Priority

Priority	HIARNG Facility	Receiving Water	Proximity to Receiving Waterway	Impaired Criteria*
1	Waiawa Multi-Purpose Facility	Waiawa Stream	< 500 ft	TSS, Trash
2	Ft. Ruger	Diamond Head Beach	< 1 mile	Turbidity
3	AASF1 – Wheeler Army Airfield	Waikele Stream	>1 mile	Nitrogen, Phosphorus, Turbidity
4	Wahiawa Armory	Waikele Stream	>1 mile	Nitrogen, Phosphorus, Turbidity
5	Kalaeloa	Nimitz Beach	>1 mile	Turbidity

**2014 State of Hawaii Water Quality Monitoring and Assessment Report*.

7.1.4.3 Temporary Erosion Control

When an erosion-prone area is identified, any soil that has already eroded onto a roadway or impervious surface will be cleaned up and temporary erosion control measures will be installed until a permanent solution can be implemented. Examples of temporary erosion control methods include: filter fabric under a storm drain grate, bio-socks around a drain grate or at the bottom of a slope, and silt fences installed to block sediment transport.

7.1.4.4 Vegetation Maintenance Plan

All vegetated areas including vegetated portions of the drainage system are maintained regularly by the Hawaii State Maintenance personnel and landscape contractors at HIARNG facilities statewide. If additional maintenance or revegetation is needed, a work order is submitted to the Facilities Management Office (FMO) for approval, and the status of the corrective action is tracked in the Asset Management Database.

7.1.5 Maintenance Activities Program Plan

The Maintenance Activities BMP Program Plan is implemented through the *Construction, Repair, and Maintenance BMP Field Manual*. HIARNG maintenance personnel and contractors are trained on the contents of the BMP manual. HIARNG's repair and maintenance PMs reference the manual in their contracts and provide a copy of the manual to all maintenance contractors working at HIARNG facilities.

7.2 Measureable Standards and Milestones

Pollution prevention and good housekeeping BMPs are measured by the amount of erosion, vegetation, debris, trash, and sediment observed in the MS4 and around HIARNG facilities during quarterly water quality facility assessments.

7.3 Roles and Responsibilities

HIARNG storm water compliance SME conducts quarterly water quality facility assessments, tracks inspection results, and provides training. The maintenance PMs are responsible for communicating the storm water requirements set forth in the *Construction, Repair, and Maintenance BMP Manual* to their contractors.

7.4 Monitoring Effectiveness

Effectiveness of pollution prevention and good housekeeping is monitored with quarterly water quality facility assessments, data comparison with the baseline, and tracking maintenance personnel's compliance with the contents of the *Construction, Repair, and Maintenance BMP Manual*.

8 Industrial Facilities

HIARNG has two facilities classified as an industrial activity under 40 CFR 122.26. Both AASF#1 and AASF-Kalaeloa are designated as Standard Industrial Classification (SIC) code 45, Transportation by Air. Aircraft maintenance is conducted at both facilities on a regular basis. Although primarily conducted indoors in the facility hangar, minimal maintenance is conducted on the tarmac, along with fueling operations. The Storm Water Pollution Control Plans (SWPCPs) for both AASFs are located in Appendix F.

8.1 AASF#1

AASF#1 is located at Wheeler Army Airfield (WAAF) at U.S. Army Garrison - Hawaii (USAG-HI), Schofield Barracks, HI. Storm water at the AASF#1 facility discharges into the USAG-HI MS4 (NPDES permit HI S000090) and eventually into the Waikele Stream from an outfall on the west side of WAAF.

8.2 AASF-Kalaeloa

AASF-Kalaeloa is located in Kalaeloa, Hawaii. Storm water at this facility discharges into drainage pits, underground injection control wells, and retention basins on-site, as well as overland flow towards the south in the general direction of the HIARNG/Hawaii Department of Transportation Airport (HDOT) UIC network.

Appendix A - Permit HI S000052

PERMIT NO. HI S000052

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. §1251 et. seq.; the "Act"); Hawaii Revised Statutes, Chapter 342D; and Hawaii Administrative Rules (HAR), Department of Health (DOH), State of Hawaii, Chapters 11-54 and 11-55;

STATE OF HAWAII
DEPARTMENT OF DEFENSE
HAWAII ARMY NATIONAL GUARD (HIARNG)

(hereinafter PERMITTEE)

is authorized to discharge storm water runoff and certain non-storm water discharges as identified in Part B.2. of this permit from the HIARNG Municipal Separate Storm Sewer System (MS4), Oahu, Hawaii from storm sewer outfalls identified in the Permittee's NPDES permit application, dated April 28, 2005, and additional storm sewer outfalls that may be identified from time to time by the Permittee,

into State Waters in and around the Island of Oahu, Hawaii,

in accordance with the general requirements, discharge monitoring requirements, and other conditions set forth herein, and in the attached DOH "Standard NPDES Permit Conditions," that is available on the DOH, Clean Water Branch (CWB) website at http://health.hawaii.gov/cwb/site-map/home/standard-npdes-permit-conditions.

All references to Title 40 of the Code of Federal Regulations (CFR) are to regulations that are in effect on July 1, 2013, except as otherwise specified. Unless otherwise specified herein, all terms are defined as provided in the applicable regulations in Title 40 of the CFR.

This permit will become effective on **August 17, 2014**.

This permit and the authorization to discharge will expire **July 16, 2019**.

Signed this 17th day of July, 2014.

(For) Director of Health

FINAL PERMIT
July 17, 2014

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Part A. GENERAL REQUIREMENTS

The Permittee shall:

Part A.1. Comply with the existing Storm Water Management Plan (SWMP) until submittal of the revised SWMP to DOH; and future activities as identified in its last submitted Annual Report. The revised SWMP shall be implemented upon submittal to DOH.

Part A.2. Retain a copy of this permit and all other related materials and the SWMP, with all subsequent revisions, at designated locations as identified in the SWMP.

Part A.3. Ensure that anyone working under this permit complies with the terms and conditions of this permit.

Part A.4. Include the permit number, **HI S000052**, and the following certification with all information required under this permit:

"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."

Part A.5. All "Plans" (e.g., SWMP Plan, Enforcement Response Plan, Trash Reduction Plan, Plan for Requiring Low Impact Development (LID) in its Standards; etc.) shall be available (e.g., on Permittee's website or other means) for a minimum of 30 calendar days for public review and comment. The Permittee shall notify DOH by email at cleanwaterbranch@doh.hawaii.gov of the availability of the plan within five (5) calendar days of the plan being available. The Permittee shall address all comments received within the 30-calendar-day period and provide both comments and responses to DOH with its submittal of the Plan in accordance with the deadline as specified in Part H. All Plans shall be implemented upon submittal regardless of DOH's review and acceptance. If any deficiencies are found by DOH after submittal, the

Permittee shall correct the deficiencies to DOH's satisfaction within 30 calendar days or such other time as agreed to in writing and resubmit the plan. In addition to the Plans being available for public comment, the current/existing plans shall also be accessible for public viewing.

Part A.6. All information and reports required under this permit and updates to information on file shall be submitted through the CWB Compliance Submittal Form for Individual NPDES Permits and Notice of General Permit Coverages (NGPCs). This form is accessible through the e-Permitting Portal website at: https://eha-cloud.doh.hawaii.gov/epermit/View/home.aspx. If not already registered, you will be asked to do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool to locate the form. Follow the instructions to complete and submit this form. All submissions shall include a CD or DVD containing the downloaded e-Permitting submission and a completed Transmittal Requirements and Certification Statement for e-Permitting NPDES/NGPC Compliance Submissions Form, with original signature and date.

Part B. DISCHARGE LIMITATIONS

Part B.1. The Permittee shall effectively prohibit non-storm water discharges through its separate storm sewer system into State Waters and from its facilities discharging directly to State Waters or through a non-Permittee-owned MS4. National Pollutant Discharge Elimination System (NPDES) permitted discharges and non-storm water discharges identified in Part B.2 of this permit are exempt from this prohibition.

Part B.2. The following non-storm water discharges may be discharged into the Permittee's MS4 provided that the discharge is identified below, and meets all conditions when specified by the Permittee. In the event that any of the non-storm water discharges listed below is determined to be a source of pollution by the Permittee, the discharge will no longer be allowed.

- Water line flushing;
- Landscape irrigation;
- Diverted stream flows;
- Rising ground waters;
- Uncontaminated ground water infiltration (as defined in 40 CFR §35.2005(20));
- Uncontaminated pumped ground water;
- Discharges from potable water sources and foundation drains;
- Air conditioning condensate;
- Irrigation water;
- Springs;
- Water from crawl space pumps and footing drains;
- Lawn watering runoff;
- Water from individual residential car washing;
- Water from charity car washes;
- Flows from riparian habitats and wetlands;
- Dechlorinated swimming pool discharges;
- Exterior building wash water (water only);
- Residual street wash water (water only), including wash water from sidewalks, plazas, and driveways, but excluding parking lots; and
- Discharges or flows from firefighting activities.

The Permittee may also develop a list of other similar occasional incidental non-storm water discharges (e.g., non-commercial car washes, etc.) that will not be addressed as illicit discharges. These non-storm water discharges must not be reasonably expected (based on the 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., non-commercial car wash with appropriate controls on frequency, proximity to sensitive water bodies, Best Management Practices (BMPs) for the wash water, etc.). The Permittee shall document in the SWMP any local controls or conditions placed on the discharges, and include a provision prohibiting any individual non-storm water discharge that is determined to be contributing pollutants to the MS4.

Part B.3. The discharge of pollutants from the Permittee's MS4 shall be reduced to the Maximum Extent Practicable (MEP), consistent with Section 402(p)(3)(B) of the CWA. The intent of this permit, and the provisions herein, is for the Permittee to develop, achieve, and implement a timely, comprehensive, cost-effective SWMP to reduce the discharge of pollutants to the MEP from the Permittee's MS4 to waters of the State. MEP is a dynamic performance standard and evolves as knowledge of urban runoff control measures increases.

Part B.4. The discharge of pollutants from the Permittee's facilities classified as Industrial in accordance with 40 CFR §122.26(b)(14) shall be reduced to the appropriate discharge limitations subject to the Best Available Technology currently available (BAT)/ Best Conventional Pollutant Control Technology (BCT) discharge requirement, consistent with the Act and other respective federal and state requirements for such facilities.

Part C. RECEIVING WATER LIMITATIONS, INSPECTIONS, AND CORRECTIVE ACTIONS

Part C.1. The discharge shall comply with the basic water quality criteria which states:

"All waters shall be free of substances attributable to domestic, industrial, or other controllable sources of pollutants, including:

Part C.1.a. Materials that will settle to form objectionable sludge or bottom deposits;

Part C.1.b. Floating debris, oil, grease, scum, or other floating materials;

Part C.1.c. Substances in amounts sufficient to produce taste in the water or detectable off-flavor in the flesh of fish, or in amounts sufficient to produce objectionable color, turbidity or other conditions in receiving waters;

Part C.1.d. High or low temperatures; biocides; pathogenic organisms; toxic, radioactive, corrosive, or other deleterious substances at levels or in combinations sufficient to be toxic or harmful to human, animal, plant, or aquatic life, or in amounts sufficient to interfere with any beneficial use of the water;

Part C.1.e. Substances or conditions or combinations thereof in concentrations which produce undesirable aquatic life; and

Part C.1.f. Soil particles resulting from erosion on land involved in earthwork, such as the construction of public works; highways; subdivisions; recreational, commercial, or industrial developments; or the cultivation and management of agricultural lands."

Part C.2. The discharge shall not cause or contribute to a violation of any of the applicable beneficial uses or water quality objectives contained HAR, Chapter 11-54, titled "Water Quality Standards."

Part C.3. During inspections/screenings as required by this permit, the Permittee shall also visually inspect the receiving state waters, effluent, and control measures and BMPs to detect violations of, and conditions which may cause violations of, the basic water quality criteria as specified in HAR, Section 11-54-4. (e.g., the Permittee shall look at effluent and receiving state waters for turbidity, color, floating oil and grease, floating debris and scum, materials that will settle, substances that will produce taste in the

water or detectable off-flavor in fish, and inspect for items that may be toxic or harmful to human or other life).

Part C.4. The Permittee shall immediately take action to stop, reduce, or modify the discharge of pollutants as needed to stop or prevent a violation of the basic water quality criteria as specified in HAR, Section 11-54-4.

Part D. STORM WATER MANAGEMENT PLAN (SWMP)

Part D.1. Development, Improvement, Implementation and Enforcement of SWMP

The Permittee shall further develop and improve, implement, and enforce a SWMP designed to address the requirements of this permit and reduce, to the MEP, the discharge of pollutants to and from its MS4 to protect water quality and to satisfy the appropriate water quality requirements of the Act. The SWMP shall include the following information for each of the SWMP components described in Part D.1.a. to Part D.1.g. below:

- The BMPs, including the underlying rationale that will be implemented for each of the program components.
- The measurable standards and milestones for each of the BMPs, including the underlying rationale and interim measures to aid in determining the level of effort and effectiveness of each program component.
- The name or position title and of the person or persons responsible for implementation or coordination of each program component.
- A monitoring program to determine effectiveness of the controls and the overall storm water program.

Submittal Date. The SWMP shall be: updated and modified per the requirements of this permit; consistent with the format of this permit; submitted to DOH in accordance with Part A.6. within 18 months after the effective date of this permit, or as otherwise specified; and fully implemented upon submittal. The Permittee shall implement the existing SWMP until submittal of the revision. The SWMP and any of its revisions, additions, or modifications are enforceable components of this permit.

Part D.1.a. Public Education and Outreach

The Permittee shall further develop and implement a comprehensive education and involvement program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water as well as enabling the public to identify and report a pollution-causing activity (i.e., spotting an illicit discharge) and the steps that the public can take to reduce pollutants in storm water runoff. The program should create: positive changes in attitude, knowledge, and

awareness; BMP implementation; pollutant load reduction; and an improvement in discharge and receiving water quality. The SWMP shall include a written public education plan for how the Permittee will reach all targeted audiences and implement the permit requirements described below. The Permittee may fulfill portions of this requirement by cooperating with other MS4 storm water public education programs.

Part D.1.a.(1) *Targeted Groups* - The Permittee shall address the following targeted groups in the public education plan with appropriate messages, and describe outreach activities and anticipated frequencies that each activity will be conducted over the permit term:

- Entities responsible for illicit discharges.
- Enlisted Army National Guard personnel and their dependents.
- Civilian Army National Guard personnel.
- Army National Guard consultants.
- Construction industry.
- Industrial facilities covered by the NPDES permit program.
- Commercial businesses such as landscape service and maintenance (e.g., to prevent the use of leaf blowers from blowing material into the drainage structures), automobile repair and maintenance, including those types of businesses highly ranked, according to relative risk of discharge of contaminated runoff to the Permittee's MS4. Refer to Part D.1.g.(4).
- Any other source that the Permittee determines may contribute a significant pollutant load to its MS4.

Part D.1.a.(2) *General Public* - The Permittee shall include in the public education plan, the following activities and subjects, with anticipated frequencies that each activity will be conducted over the permit term:

- Distribution of brochures.
- Participation in special events and exhibits.
- Web site.
- Pesticides, herbicides, and fertilizer use.
- Water conservation.
- Proper disposal of grass clippings, leaves, and other green waste.
- Proper disposal of household hazardous waste.

Part D.1.a.(3) *Evaluation Methods* - The Permittee shall evaluate the progress of the public education program based on the following:

- Annual survey of Army National Guard facility occupants and tenants to measure both behavior and knowledge relating to storm water. The surveys can be conducted in person at events, on the phone, or using Web-based survey tools. The results of the survey shall be compared to past surveys.
- Number of brochures distributed.
- Number of public outreach events.
- Number of volunteers who attend public outreach events.
- Any other methods that the Permittee determines to be effective.

The results of the evaluation shall be summarized in the Annual Report.

Part D.1.b. Public Involvement/Participation

The Permittee shall include Army National Guard Leaders, facility management, and facility occupants in developing, reviewing, and implementing the SWMP. The draft and final SWMP shall be made available to the public (e.g., on Permittee's website) and at the HIARNG Environmental Office. An informational meeting shall be scheduled and announced prior to finalizing the SWMP to solicit comments and answer questions from the public. Other activities to involve the public may include providing volunteer opportunities that improve water quality, organizing a citizen advisory group to solicit ongoing input from the public about changes to the SWMP and specific SWMP-related projects, or organizing clean-up events to educate the public about impacts of storm water.

Part D.1.c. Illicit Discharge Detection and Elimination

The Permittee shall implement the ongoing SWMP to detect and eliminate illicit connections and illegal discharges into its MS4 and shall include an improved program in the revised SWMP Plan. The program shall include:

Part D.1.c.(1) *Connection Permits for private drain connections* - Within one (1) year after the effective date of this permit the Permittee shall establish requirements for issuing connection permits and require obtaining the permit prior to allowing the drain connections. A database shall be maintained of all permitted connections to its MS4. Prior to issuing a connection permit, the Permittee shall ensure the following are met:

- the project has provided proof of filing a Notice of Intent (NOI) or NPDES application, if applicable; and
- control measures comply with its requirements to minimize pollutant discharge into its MS4.

Part D.1.c.(2) *Field Screening* - The Permittee shall implement an Outfall Field Screening Plan for observing major and minor outfalls to screen for improper discharges. The plan shall designate priority areas for screening, specify the frequency for screening, and identify the procedures to be followed if a discharge is observed. At a minimum, outfalls in priority areas shall be screened once per permit term.

Part D.1.c.(3) *Tracking* - The Permittee shall maintain a database of complaints, illicit connections, illegal discharges, and spills which tracks the location of the discharge by installation name and building number or TMK, type of discharge, responsible party, the Permittee's investigation and response of the discharge, follow-up activities, and the resolution of each discharge to the MS4.

Part D.1.c.(4) *Complaint Investigation* - The Permittee shall promptly investigate observed, suspected, or reported illicit flows and pursue enforcement actions, as appropriate. Complaints made to the CWB, which discharge to the Permittee's MS4 will be forwarded to the Permittee for action. The Permittee shall:

(i) Develop and implement a database to identify illicit discharge activities by installation name and building number or TMK. The database shall include information about each suspected improper discharge, the Permittee's investigation of that discharge, follow-up activities, and the resolution of each discharge as required in Part D.1.c.(3). above;

(ii) Implement a program to facilitate public reporting of illicit discharges (i.e., environmental hotline and/or website for reporting), including providing at least one (1) contact that the public can reach (including phone number and/or email address). This contact information shall be clearly posted on its website; and

(iii) Develop a response plan for the investigation of illicit discharges to be consistent with the requirements in this permit.

Part D.1.c.(5) *Enforcement* - Within one (1) year after the effective date of this permit, the Permittee shall:

(i) Establish policies for enforcement and penalties for entities found to be in noncompliance with requirements developed in accordance with Part D.1.c.(1), including for persons illegally discharging pollutants to its MS4, and

(ii) Pursue enforcement actions against entities in non-compliance with its requirements, with illegal drain connections, and illegally discharging pollutants to its MS4 without direct connections.

Part D.1.c.(6) *Spill Prevention and Response* - The Permittee shall implement its ongoing SWMP to prevent, respond to, contain, and clean up all wastewater and other spills that may enter its MS4 from any source (including private laterals and failing cesspools). This program shall be included in the SWMP. Spill response teams, which may consist of local, state, and/or federal agencies, shall prevent entry of spills into the Permittee's MS4 and contamination of surface water, ground water, and soil to the MEP.

The Permittee shall coordinate spill prevention, containment, and response activities throughout all appropriate departments, programs, and agencies to ensure maximum water quality protection at all times.

The Permittee shall notify DOH of all wastewater spills or overflows from private laterals and failing septic systems into its MS4. The Permittee shall prevent, respond to, contain, and clean up wastewater from any such notification.

Part D.1.c.(7) *Used Oil and Toxic Materials Disposal* - The Permittee shall implement its ongoing SWMP to facilitate the proper management and disposal or recycling of used oil, vehicle fluids, toxic materials, and other household hazardous wastes. Such a program shall include educational activities, public information activities, and identification of collection sites or methods.

Part D.1.c.(8) *Training* - The Permittee shall provide annual training to Environmental Officers (EO) and facility personnel on identifying and eliminating illicit connections, illegal discharges, and spills to its MS4. This training shall be specific to the Permittee's activities, policies, rules, and procedures.

Part D.1.d. Construction Site Runoff Control

The Permittee shall implement a construction site management program to reduce to the MEP the discharge of pollutants from both private and public construction projects (i.e., contract, in-house, maintenance, and encroachment). The construction site management program shall include the following minimum elements:

Part D.1.d.(1) *Requirement to develop BMPs Manuals* - Within two (2) years from the effective date of this permit, the Permittee shall develop and submit to the Director of Health (Director), the following types of manuals for construction projects:

- Construction Best Management Practices Field Manual.
- Maintenance Activities Best Management Practices Field Manual.
- Storm Water Permanent Best Management Practices Manual.

The Permittee shall review these standards annually and, as necessary, revise to include descriptions of new or modified BMPs, including permanent BMPs and LID practices. All revisions made during a calendar year shall be discussed in its corresponding Annual Reports and all documents included in the SWMP Plan. All documents shall be made available to the Permittee's staff, contractors, and consultants, as appropriate.

Part D.1.d.(2) *Requirement to implement BMPs* - Within three (3) years from the effective date of this permit, the Permittee shall establish policies to require proposed construction projects to implement BMPs and standards described in the following:

- Construction Best Management Practices Field Manual.
- Maintenance Activities Best Management Practices Field Manual.
- Storm Water Permanent Best Management Practices Manual.

Part D.1.d.(3) *Inventory of construction sites* - Within six (6) months from the effective date of this permit, the Permittee shall implement a system to track both private and public construction projects (i.e., contract, in-house, maintenance, and encroachment). This system shall track information on the project (including permit or file number, if available); status of plan review and approval, inspection dates, and if applicable, enforcement actions; and whether the project has applied for coverage under HAR, Chapter 11-55, Appendix C, NPDES General Permit

Authorizing the Discharge of Storm Water Associated with Construction Activity (a.k.a. General Construction Activity Storm Water permit) (unless the project will disturb less than one acre of land) and satisfied any other applicable requirements of the NPDES permit program (i.e., an individual NPDES permit).

Part D.1.d.(4) *Plan Review and Approval* - The Permittee shall:

(i) Review the appropriate Storm Water Pollution Prevention Plan (SWPPP) and other pollution prevention measures (e.g., for Erosion and Sediment Control, Grading, Post-construction BMP and Landscaping) or similar plans/documents prior to approval of the construction plans and specifications. The Permittee shall verify that the SWPPP meets the following requirements:

- HAR, Chapter 11-55, Appendix C, and any other requirements under the NPDES permit program, as applicable;
- Construction Best Management Practices Field Manual (after developed);
- Maintenance Activities Best Management Practices Field Manual (after developed);
- Storm Water Permanent Best Management Practices Manual (after developed); and
- Implementation of measures to ensure that the discharge of pollutants from the site will be reduced to the appropriate discharge limitations subject to the BAT/BCT discharge requirement, consistent with the Act and other respective federal and state requirements for such facilities and will not cause or contribute to an exceedance of water quality standards.

(ii) Require a permit or written equivalent approval for drainage connections to its MS4, discharge of surface storm water runoff of storm water associated with construction (i.e., from both private and public projects) or discharge permit (i.e., hydrotesting and dewatering effluent or other non-storm water, except those allowed under this permit) into their MS4 and maintain a database of the permits/approvals. Prior to issuing a drainage connection, discharge of surface runoff permit/approval, discharge permit, or encroachment permit, the Permittee shall ensure that the following are met:

- The project owner has provided proof of filing an NOI Form C or NPDES application for the discharge of storm water associated with construction activities that disturb one (1) acre or more;
- The project owner has provided proof of filing a NOI Form F and/or G or NPDES application for the discharge of hydrotesting effluent or construction dewatering effluent, respectively, if applicable; and
- A SWPPP or other documents (e.g., Erosion and Sediment Control, Grading, Post-construction BMP and Landscaping Plans, Dewatering Plan, and Hydrotesting Plan) relating to pollution prevention or similar document(s) have been reviewed and accepted by the Permittee;

(iii) Prohibit the commencement of construction on any private or public construction project (i.e., contract, in-house, maintenance, and encroachment) unless and until it has verified that the project has received from DOH a Notice of General Permit Coverage (NGPC) under HAR, Chapter 11-55, Appendix C, NPDES General Permit Authorizing the Discharge of Storm Water Associated with Construction Activity (General Construction Activity Storm Water permit) (unless the project will disturb less than one (1) acre of land) and satisfied any other applicable requirements of the NPDES permit program (i.e., an individual NPDES permit);

(iv) Update and submit for review and acceptance, a plan review checklist that its reviewers shall use in evaluating the plans and BMPs or other similar document(s) which have been implemented pursuant to this Part [i.e., Part D.1.d.] within 90 calendar days from the effective date of this permit. Copies of this plan review checklist shall be provided to applicants for connection, discharge, and encroachment permits; and to consultants and contractors for their use in developing the Plans or other similar document(s) for Permittee-contracted construction projects. The plan review checklist shall include at a minimum, but not be limited to, comments on any deficiencies and the date when comments were addressed to the satisfaction of the Permittee. A system shall be implemented to ensure all comments, identified during the review process has been properly addressed.

Part D.1.d.(5) *Inspections* – The Permittee shall:

(i) Prior to the initiation of ground-disturbing activities at any site, except for activities associated with the installation of BMPs at a site, an engineer or qualified inspector employed or retained by the Permittee who reviews and becomes familiar with the project's SWPPP and/or other equivalent document(s), shall inspect the site to verify BMPs as required by the BMP Plan and/or other documents have been installed correctly and in the correct locations prior to the commencement of ground-disturbing activity. Inspections shall include a review of site Erosion and Sediment Controls, good housekeeping practices, and compliance with Permittee-accepted erosion and sediment control plans, construction BMPs Plans, or other similar documents and Permittee-approved permits. The inspector shall also identify, document, and report any site conditions having the potential for erosion and sediment runoff, including other pollutant discharges which may occur as a result of the project's construction activities, to the owner, contractor, EO, and the party responsible for BMP maintenance.

(ii) In addition to inspections required by the NPDES permit program, all contract, in-house and maintenance construction projects shall be inspected at least monthly by a qualified construction inspector who is independent (i.e., not involved in the day-to-day planning, design, or implementation) of the construction projects to be inspected. The Permittee may use more than one (1) qualified construction inspector for these inspections. The reporting procedures shall include, at a minimum, notification of any critical deficiencies to the DOH. The Permittee shall further develop and implement written procedures for appropriate corrective actions and follow-up inspections when deficiencies had been identified at an inspected project. The corrective action procedures shall, at a minimum, require that 1) any critical deficiencies shall be corrected or addressed before the close of business on the day of the inspection at which the deficiency is identified, and 2) any major deficiencies shall be corrected or addressed as soon as possible, but in no event later than five (5) calendar days after the inspection at which the deficiency is identified or before the next forecasted precipitation, whichever is sooner.

(iii) All construction projects with a connection permit, encroachment permit, or discharge of surface runoff permit/approval shall be inspected monthly by a qualified construction inspector who is independent (i.e., not involved in the day-to-day planning, design, or implementation) of the construction projects to be inspected. The Permittee may use more than one (1) qualified construction inspector for these inspections. If the project has a SWPPP or other equivalent document(s), the inspection shall also verify that the BMPs were properly installed and at the locations specified in the Plan. The reporting procedures shall include, at a minimum, notification of any critical deficiencies to the DOH.

(iv) The Permittee shall develop and implement a standard inspection form(s); reporting and corrective procedures for inspections, including use of an inspection checklist, or equivalent; and a database or equivalent system to track inspection results. The inspection checklist shall include at a minimum, but not be limited to, identifying any deficiencies and the date of the corrective actions. Photos shall accompany the inspection checklist to document the deficiencies. The inspection form(s), inspection checklist, and reporting and corrective procedures shall be submitted to DOH for review and acceptance within 90 calendar days of the effective date of this permit.

Part D.1.d.(6) *Compliance* – Within one (1) year from the effective date of this permit, the Permittee shall:

(i) Establish policies for enforcement and penalties for those in non-compliance with Part D.1.d.(2) requiring the implementation of standards, and

(ii) Develop and implement an Enforcement Response Plan to include written procedures for appropriate corrective and enforcement actions, and follow-up inspections when an inspected project is not in full compliance with its requirements, other permits, and any other applicable requirements under the NPDES permit program.

Part D.1.d.(7) *Process to refer noncompliance and non-filers to DOH* - In the event the Permittee has exhausted its use of sanctions and cannot bring a construction site or construction operator into compliance with its policies, standards, or this permit, or otherwise deems the site poses

an immediate and significant threat to water quality, the Permittee shall provide an e-mail notification to cleanwaterbranch@doh.hawaii.gov, Attn: Enforcement Section Supervisor within one (1) week of such determination. E-mail notifications shall be followed by written notification in accordance with Part A.6. and include a copy of all inspection checklists, notes, and related correspondence in pdf format (300 minimum dpi) within two (2) weeks of the determination. In instances where an inspector identifies a site that has not applied for permit coverage under the NPDES permit program, the Permittee shall provide written notification in accordance with Part A.6. to DOH within two (2) weeks of the discovery.

Part D.1.d.(8) *Training* - The Permittee shall provide annual training on the Construction BMPs Program Plan to all staff with construction storm water responsibilities, including construction engineers, construction and maintenance inspectors, and plan reviewers. This training shall be specific to the Permittee's activities (including the proper installation and maintenance of accepted BMPs), policies, rules and procedures.

Part D.1.d.(9) *Education* - The Permittee shall implement an education program as part of its ongoing SWMP to ensure that project applicants, contractors, developers, property owners, and other responsible parties have an understanding of the storm water requirements they need to implement.

Part D.1.e. Post-Construction Storm Water Management in New Development and Redevelopment

The Permittee shall further develop, implement, and enforce a program to address storm water runoff from all (i.e., both private and public) new development and redevelopment projects that result in a land disturbance of one (1) acre or more and smaller projects that have the potential to discharge pollutants to the Permittee's MS4. The Permittee's program must ensure that permanent controls are in place to prevent or minimize water quality impacts to the MEP. The Permittee shall review and update, as necessary, the criteria defining when and the types of permanent post-construction BMPs, including, among other measures, LID techniques, that must be included in a project design to address storm water impacts and pollutants of concern. For State waters on the State CWA Section 303(d) list or State established and EPA approved Total Maximum Daily Loads (TMDLs), the pollutants of concern to be targeted shall include the parameters causing impairment. The Permittee shall

consider trash reduction techniques to comply with short and long term plans as required in Part D.1.f.(1)(v). The program shall include, at a minimum, the following elements:

Part D.1.e.(1) *Standards Revision* – The Permittee shall revise its standards for addressing post-construction BMPs to LID requirements. Within six (6) months of the effective date of this permit, the Permittee shall submit to DOH for review and acceptance, a plan for requiring LID in the standards to the MEP, including revisions to the plan review and inspection checklist to include LID. LID refers to storm water management practices which seek to mimic a site's predevelopment hydrology by minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiring, and/or biotreating storm water runoff close to its source. The standards shall ensure that the management practices are prioritized to favor infiltration, evapotranspiration, or harvesting/reuse of stormwater followed by other practices that treat and release stormwater. The standards shall be applicable to all construction projects disturbing at least one (1) acre and smaller projects that have the potential to discharge pollutants to the Permittee's MS4. LID employs principles such as preserving and recreating natural landscape features and minimizing imperviousness to create functional and appealing site drainage that treats storm water as a resource, rather than a waste product. LID treatment measures include harvesting and use, infiltration, evapotranspiration, or biotreatment. The plan for the implementation of LID provisions shall include at a minimum the following:

- Criteria for requiring implementation.
- Investigation into the development of quantitative criteria for a specific design storm to be managed by LID techniques. Examples of design storm requirements include: 24-hour, 85% storm through infiltration; on-site management of the first inch of rainfall within a 24-hour period; retention of the 100-year, 2-hour storm; or on-site management of the 24-hour, 95% storm.
- Feasibility criteria for circumstances in which a waiver could be granted for the LID requirements.
- When a LID waiver is granted, alternatives such as offsite mitigation and/or non-LID treatment control BMPs could be required.

A draft of the revised standards shall be submitted to the DOH in accordance with Part A.6. for review and acceptance within 12 months

from the effective date of this permit and include, at a minimum, the above. Within 18 months after the effective date of this permit, subject to adoption by rulemaking or other equivalent process, the revised standards shall be submitted to the DOH in accordance with Part A.6. To the extent that the revised standards have not been adopted, the Permittee shall submit a compliance schedule for adoption, which shall not exceed 24 months after the effective date of this permit.

Part D.1.e.(2) *Review of Plans for Post-Construction BMPs* – For design-bid-build projects, the Permittee shall not advertise any construction project nor award any construction contract until the project design has been reviewed and accepted to ensure that appropriate permanent post-construction BMPs, which include LID practices upon adoption into its standards, have been included in the project design and are included in the bid package to ensure compliance with this part of the permit. For design-build projects, the Permittee shall review and approve the project design the same as for design-bid-build projects prior to implementation. No project shall proceed without the inclusion of appropriate permanent post-construction BMPs unless a waiver is granted by the Permittee based on specific documentation demonstrating that such post-construction BMPs are not feasible. Project documents for projects that will include installation of permanent post-construction BMPs shall also include appropriate requirements for their future continued maintenance.

Part D.1.e.(3) *BMP, Operation and Maintenance, and Inspection Database* - The Permittee shall implement its Asset Management System to track the frequency of inspections and maintenance of the Permanent BMPs. In addition to the standard information collected for all projects (e.g., project name, owner, location, start/end date, etc.), the database shall also include, at a minimum:

- Type and number of LID practices.
- Type and number of Source Control BMPs.
- Type and number of Treatment Control BMPs.
- Latitude/Longitude coordinates of controls using Global Positioning Systems and NAD83 or other Datum as long as the datum remains consistent.
- Photographs of controls.
- Operation and maintenance requirements.
- Frequency of inspections.
- Frequency of maintenance.

All stormwater treatment and LID BMPs shall be inspected at least once a calendar year for proper operation; maintenance shall be performed as necessary to ensure proper operation.

Part D.1.e.(4) *Education* and *Training*

(i) *Project Proponents* - The Permittee shall provide education and outreach material for those parties who apply for permits (i.e., developers, engineers, architects, consultants, construction contractors, excavators, and property owners) on the selection, design, installation, operation and maintenance of storm water BMPs, structural controls, post construction BMPs, and LID practices. The outreach material may include a simplified flowchart for thresholds triggering permits and requirements, a list of required permits, implementing agencies, fees, overviews, timelines and a brief discussion of potential environmental impacts associated with storm water runoff.

(ii) *Inspectors* - All Permittee staff and contractors responsible for inspecting permanent post-construction BMPs and LID practices shall receive annual training.

Part D.1.f. Pollution Prevention/Good Housekeeping

The Permittee shall further develop and implement a system maintenance program to reduce to the MEP the discharge of pollutants from all Permittee-owned facilities, roads, parking lots, maintenance facilities, and the Permittee's MS4. The program shall include:

Part D.1.f.(1) *Debris Control BMPs Program Plan*

(i) *Asset Management System and Mapping* - The Permittee shall implement a comprehensive asset management system and map of its MS4, including structural and vegetative BMPs and an inventory of related appurtenances, including maintenance equipment, to ensure appropriate debris removal and system maintenance. The asset management system shall, at a minimum, assign an identification number for each drain inlet, outfall, and BMPs, and map their location on the Geographic Information System. The Permittee shall use this asset management system to establish priorities and to schedule and track efforts of appropriate system maintenance and debris

removal program activities such as street sweeping, catch basin cleaning, and green waste and accumulated soil removal. The SWMP shall include justification of its priorities applied to the asset management system on the basis of potential impacts to water quality.

(ii) *Inspection/Maintenance Schedule* - The Permittee shall include in its SWMP procedures, a schedule for inspections of:

a) All roadways for the purpose of identifying if sweeping of roadways, shoulders, and/or medians is needed; and

b) All storm drainage system catch basins, gutters and open ditches, trenches, and BMPs for the purpose of identifying if maintenance/cleaning of such structures are needed.

In both cases, the need for sweeping and/or maintenance/cleaning shall, at a minimum, be determined based upon material accumulation rates and/or potential threat of discharge to State waters that may have an effect on water quality. The schedule shall provide that each roadway mile, storm drainage feature, and BMP is inspected at least once during the term of this permit (maintenance/cleaning may be conducted in lieu of inspections to satisfy this requirement). The adopted procedures shall provide for the identification of roadway segments and their associated storm drainage features and BMPs that may require more frequent sweeping and/or structure cleaning based upon material accumulation rates and potential threat of discharge to State waters that may have an effect on water quality. The procedures shall establish debris accumulation thresholds above which sweeping and/or structure cleaning must occur. The priority-based schedule shall be annually reviewed; updated as necessary; and the changes, along with explanations of the changes submitted within the Annual Report.

(iii) *Storm Drain Placards* - The Permittee shall install placards on its drainage inlets and post-construction BMPs; evaluate the effectiveness of the placards; and revise as necessary to meet its purpose. The purpose of the placards shall be discussed within the SWMP. A minimum of 50 new placards shall be installed per year. Priority shall be given to the Permittee's industrial and commercial areas and areas with pedestrian traffic. The

Permittee shall implement its system to track placement of placards and procedures for maintenance staff to inspect and replace, as necessary, placards during routine maintenance activities.

(iv) *Action Plan for Retrofitting Structural BMPs* – The Permittee shall provide the DOH with an Action Plan for Retrofitting Structural BMPs within one (1) year from the effective date of this permit, which shall identify retrofits to be implemented, and include an explanation of the basis for their selection and an implementation schedule. The implementation schedule shall cover a five (5) year period and be updated annually to include additional retrofit projects with water quality protection measures. The annual updates to the implementation schedule shall be included in the Annual Report with a description of the projects status. The Action Plan may include, but not be limited to projects in compliance with any TMDL implementation and monitoring plan.

(v) *Trash Reduction Plan* - Within three (3) years from the effective date of this permit, the Permittee shall develop and submit to DOH for review and acceptance, a trash reduction plan which assesses the issue, identifies and implements control measures, and monitors the control measures to reduce trash loads from the MS4. The plan shall include, at a minimum and be formatted consistent with the following:

- Quantitative estimate of the debris currently being discharged (baseline load) from the MS4, including methodology used to determine the load.
- Description of control measures currently being implemented as well as those needed to reduce debris discharges from the MS4 consistent with short-term and long-term reduction targets.
- A short-term plan and proposed compliance deadline for reducing debris discharges from the MS4 by 50% from the baseline load.
- A long-term plan and proposed compliance deadline for reducing debris discharges from the MS4 to zero.
- Geographical targets for trash reduction activities with priority on waterbodies listed as impaired for trash on the State's CWA Section 303(d) list.

- Trash reduction-related education activities as a component of Part D.1.a.
- Integration of control measures, education and monitoring to measure progress toward reducing trash discharges.
- An implementation schedule.
- Monitoring plan to aid with source identification and loading patterns as well as measuring progress in reducing the debris discharges from the MS4.
- The Annual Report shall include a summary of its trash load reduction actions (control measures and best management practices) including the types of actions and levels of implementation, the total trash loads and dominant types of trash removed by its actions, and the total trash loads and dominant types of trash for each type of action.

The plan shall provide for compliance with the above short-term and long-term discharge limits in the shortest practicable timeframe.

Part D.1.f.(2) *Chemical Applications BMPs Program Plan*

(i) *Certification* – All employees or contractors or employees of contractors applying chemicals (e.g., pesticides, herbicides, fertilizers) shall have current and possess commercial certification by the State of Hawaii, Department of Agriculture or Department of Defense Certificate of Competency in the appropriate EPA-approved state categories. Certification information shall be provided to the Pest Management Coordinator prior to the application of chemicals. The Permittee shall develop an Approved Pesticide Use List of chemicals used. Employees or contractors or employees of contractors shall not deviate from the Approved Pesticides Use list of chemicals without prior approval from the Pest Management Coordinator. The Permittee shall not permit the application of fertilizers, pesticides, or herbicides unless the applier has provided proper certification.

(ii) *Implement appropriate requirements for pesticide, herbicide, and fertilizer applications* - The Permittee shall implement BMPs to reduce the contribution of pollutants associated with the application, storage, and disposal of pesticides, herbicides, and fertilizers from Permittee-owned areas and activities to its MS4.

Permittee-owned areas and activities include, at a minimum, federal facilities, right-of-ways, and landscaped areas.

Such BMPs shall include, at a minimum: 1) educational activities, permits, certifications and other measures for applicators, including training regarding sensitive areas and water pollution control; 2) integrated pest management measures that rely on non-chemical solutions; 3) the use of native vegetation; 4) chemical application, as needed; and 5) the collection and proper disposal of unused pesticides, herbicides, and fertilizers.

(iii) *Records and Reports* – The Permittee shall require the reporting of all chemical (e.g., pesticides, herbicides, fertilizers) applications on DD Form 1532-1. All employees or contractors or employees of contractors shall prepare, submit, and maintain daily pest management records and reports for each pest management service provided to include surveillance, non-chemical controls and chemical applications. All DD Form 1532-1 records shall be submitted monthly to the Pest Management Coordinator.

The Permittee shall ensure that their employees or contractors or employees of contractors applying registered pesticides, herbicides, and fertilizers work under the direction of a certified applicator, follow the pesticide label, and comply with any other State, City, or Federal regulations for pesticides, herbicides, and fertilizers. All Permittee employees or contractors applying pesticides, herbicides or fertilizers shall receive training on the BMPs annually.

Part D.1.f.(3) *Erosion Control BMPs Program Plan* - The Permittee shall:

(i) Implement permanent erosion control improvements, ensuring that erosion-prone areas with the potential for significant water quality impact, but with limited public safety concerns, are also considered a high priority for remediation. Identification of erosion-prone areas with the potential for significant water quality impact shall include areas where there is evidence of rilling, gullying, and/or other evidence of significant sediment transport, and areas in close proximity to receiving waters listed as impaired by either sediment, siltation and/or turbidity. The Permittee shall include procedures to identify and implement erosion control projects based on water quality concerns while continuing to address high profile public safety projects.

(ii) Require the implementation of temporary erosion control measures (e.g., erosion control blankets and/or fabrics, gravel bag placement and silt fencing/fiber rolls) on erosion-prone areas with the potential for significant water quality impact if a permanent solution is not immediately possible. Notwithstanding any other implementation provisions, the SWMP shall require the implementation of such temporary erosion control measures on all applicable areas within 18 months from the effective date of this permit. For projects which require a CWA Section 401 Water Quality Certification (WQC), the WQC application shall be submitted to DOH within one (1) year from the effective date of this permit and be implemented with six (6) months of the WQC or other regulatory permit(s) issuance date.

(iii) Develop a maintenance plan for vegetated portions of the drainage system used for erosion and sediment control, and LID features; including controlling any excessive clearing/removal, cutting of vegetation, and application of herbicide which affects its usefulness.

(iv) Provide the DOH with an Action Plan to address erosion at its storm drain system outlets with significant potential for water quality impacts to be completed within one (1) year from the effective date of this permit, which shall identify outfalls to be addressed, explanation on the basis of their selection and an implementation schedule. The implementation schedule shall cover a five (5) year period. A status report on implementation of the plan shall be included in the Annual Report. The Permittee shall install velocity dissipators or other BMPs to reduce erosion at locations identified by periodic required inspections.

(v) Submit a list of projects and an implementation schedule for permanent erosion control improvements as described in Part D.1.f.(3)(i). of this permit to DOH within one (1) year from the effective date of this permit.

Part D.1.f.(4) *Maintenance Activities BMPs Program Plan*

(i) *Maintenance Activities Best Management Practices Field Manual* - The Permittee shall develop and implement a BMPs Field Manual for Maintenance Activities for all Army National Guard maintenance activities within three (3) years from the

effective date of this permit. Examples of such activities include, but are not limited to: paving and road repairs, street cleaning, saw cutting, concrete work, curb and gutter replacement, buried utility repairs and installation, vegetation removal, painting and paving, debris and trash removal, spill cleanup, etc. The Field Manual shall be updated as necessary or at least once per permit term and include written procedures to minimize pollutant discharge for maintenance activities which have the potential to discharge pollutants to its MS4.

(ii) *Training* - The Permittee shall further develop and provide annual training to staff on proper maintenance activities to prevent storm water pollution. The training shall cover the Field Manual, identify potential sources of pollution, general BMPs that can be used to reduce and/or eliminate such sources, and specific BMPs for their activities. The training shall incorporate components of the public education campaign and educate staff that they serve a role in protecting water quality. Staff shall be made aware of the NPDES permit, the overall SWMP, and the applicable BMPs Program(s).

Part D.1.g Industrial and Commercial Activities Discharge Management Program

The Permittee shall develop and implement an industrial and commercial discharge management program to reduce to the MEP the discharge of pollutants from all industrial and commercial facilities and activities which discharge into the Permittee's MS4. At a minimum, the program shall include:

Part D.1.g.(1) *Requirement to Implement BMPs* - Require a permit or written equivalent approval for drainage connections and discharge of surface runoff into the Permittee's MS4 and maintain a database of the permits/approvals. The permit/approval shall obligate the facility to implement BMPs.

Part D.1.g.(2) *Inventory and Map of Industrial Facilities and Activities* - The Permittee shall update and submit, in electronic portable document format (pdf - minimum 300 dpi), the industrial facilities and activities inventory (industrial inventory), sorted by TMK, and map of such facilities and activities discharging, directly or indirectly, to its MS4 within its Annual Report.

The industrial inventory shall include the facility name, street address, TMK, nature of business or activity, Standard Industrial Classification (SIC) code(s) that best reflect the facility product or service, principal storm water contact, receiving State water, and whether an NGPC under HAR, Chapter 11-55, Appendix B, NPDES General Permit Authorizing the Discharge of Storm Water Associated with Industrial Activities (General Industrial Storm Water permit) or any other applicable NPDES permit has been obtained, including a permit or file number and issuance date.

At a minimum, the industrial inventory shall include facilities and activities such as:

- Municipal Landfills (open and closed).
- Hazardous waste recovery, treatment, storage and disposal facilities.
- Facilities subject to Section 313 of the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. 11023.
- Findings from follow-up investigations of the industrial facilities identified in the Questionnaire Survey.
- Facilities subject to NPDES permit coverage which is adjacent to the Permittee's facilities or discharge to the MS4.
- And any other industrial facility that either the Permittee or DOH determines is contributing a substantial pollutant loading to the MS4.

Part D.1.g.(3) *Enforcement Policy for Industrial and Commercial Facilities and Activities* - Within one (1) year of the effective date of this permit, the Permittee shall establish and implement its own policies for enforcement and penalties for industrial and commercial facilities which have failed to comply. The policy shall be part of an overall escalating enforcement policy and must consist of the following:

- Conducting inspections.
- Issuance of written documentation to a facility representative within 30 calendar days of storm water deficiencies identified during inspection. Documentation must include copies of all field notes, correspondence, photographs, and sampling results, if applicable.
- A timeline for correction of the deficiencies.
- Provisions for re-inspection and pursuing enforcement actions, if necessary.

In the event the Permittee has exhausted all available sanctions and cannot bring a facility or activity into compliance with its policies and this permit, or otherwise deems the facility or activity an immediate and significant threat to water quality, the Permittee shall provide e-mail notification to cleanwaterbranch@doh.hawaii.gov, Attn: Enforcement Section Supervisor within one (1) week of such determination. E-mail notification shall be followed by written notification and include a copy of all inspection checklists, notes, photographs, and related correspondence in pdf format (300 minimum dpi) in accordance with Part A.6. within two (2) weeks of the determination. In instances where an inspector identifies a facility that has not applied for the General Industrial Storm Water permit coverage or any other applicable NPDES permit, the Permittee shall provide email notification to DOH within one (1) week of such determination.

Inventory and Map of Commercial Facilities and Activities - The Permittee shall update and submit, in pdf format (minimum 300 dpi), the commercial facilities and activities inventory (commercial inventory), sorted by priority areas, and map of such facilities and activities discharging, directly or indirectly, to its MS4 within its Annual Report. The commercial inventory update may be based on the collection of new information obtained during field activities or through other readily available intra-agency informational databases (e.g., business licenses, pretreatment permits, sanitary sewer hook-up permits).

The commercial inventory shall include, by priority area, the facility name, street address, TMK, nature of business or activity, SIC code(s) that best reflect the facility product(s) or service(s), principal storm water contact, and receiving State water.

At a minimum, the commercial inventory shall include facilities and activities such as:

- Findings from investigations of the commercial facilities identified in the Questionnaire Survey.
- Retail Gasoline Outlets.
- Retail Automotive Services, including Repair Facilities.
- Restaurants.
- Any other commercial facility that either the Permittee or DOH determines is contributing pollutants to the MS4 that may cause or contribute to an exceedance of State water quality standards.

Part D.1.g.(4) *Prioritized Areas for Industrial and Commercial Facility and Activity Inspections* - The Permittee shall implement the Prioritized Areas for Industrial and Commercial Facility and Activity Plan. Under that Plan, the Permittee is to designate priority areas for industrial and commercial facility and activity inspections, based on the relative risk that any discharge might be contaminated with pollutants.

Within 60 calendar days from the effective date of this permit, the Permittee shall submit a status report to DOH. The status report shall identify the numbers of industrial and commercial facilities discharging into the Permittee's MS4 and the number of inspections that have been completed during the prior permit term. The status report shall be organized by priority area. On an annual basis, the Permittee shall modify the Plan based on updated information from its industrial and commercial inventory, findings from previous inspections, the number of industrial and commercial facilities in the area, the density of these facilities, previous storm water violations in the area, and water quality impairments in the area. The modified Plan shall set a schedule that ensures inspections will be completed in accordance with the schedule in Part D.1.g.(5). This Plan shall be submitted with the Permittee's Annual Report.

Part D.1.g.(5) *Inspection of Industrial and Commercial Facilities and Activities* - The industrial/commercial inspection program shall be implemented and updated as appropriate to reflect the outcomes of the investigations.

The Permittee shall ensure industrial and commercial facilities and activities identified in the industrial and commercial inventories required under Parts D.1.g.(2) and D.1.g.(3) are inspected and re-inspected as often as necessary based on its findings to ensure corrective action was taken and the deficiency was resolved.
At a minimum, the Permittee shall inspect each industrial facility that does not have NPDES permit coverage under the NPDES permit program at least twice every five (5) years, and each industrial facility that does have such NPDES permit coverage at least once every five (5) years. Any industrial facility discharging Industrial Storm Water (as defined by 40 C.F.R. Part 122.26(b)(14)) that does not have NPDES Permit coverage shall be reported to DOH within 30 calendar days of the inspection. Commercial dischargers are to be ranked according to relative risk of discharge of contaminated runoff to

the MS4. The highly ranked commercial facilities shall be inspected at least once every five (5) years.

All inspections shall be in accordance with the applicable portions (e.g., Chapter 11 – Storm Water) of the "NPDES Compliance Inspection Manual" (EPA 305-X-04-001), dated July 2004. Inspectors shall be trained to identify deficiencies, assess potential impacts to receiving waters, evaluate the appropriateness and effectiveness of deployed BMPs, and require controls to minimize the discharge of pollutants to the MS4. The inspectors shall use an inspection checklist, or equivalent, and photographs to document site conditions and BMP conditions. Records of all inspections shall be maintained for a minimum of five (5) years, or as otherwise indicated.

The Permittee shall submit records and results of all inspections to the DOH in the Annual Report for the previous fiscal year.

Part D.1.g.(6) *Storm Water Pollution Control Plan (SWPCP) Review and Acceptance for Industrial Facilities* - The Permittee shall:

(i) Verify the facility owner has received NPDES permit coverage for the discharge of storm water associated with industrial activity or provided proof of filing an NOI, or NPDES application; and

(ii) Review and accept a SWPCP or other plans relating to pollution prevention or similar document(s).

Part D.1.g.(7) *Training* - The Permittee shall provide training to staff on how to conduct industrial and commercial inspections, the types of facilities requiring NPDES permit coverage for storm water permit associated with industrial activity or any other applicable NPDES permit, components in a SWPCP for industrial facilities, BMPs and source control measures for industrial and commercial facilities, and inspection and enforcement techniques. This training shall be specific to the Permittee's activities, policies, rules, and procedures. Any updates to the training shall be submitted to DOH for review and acceptance within 90 calendar days of the change. Permittee inspectors shall receive annual training.

Part D.2. SWMP Modifications

The Permittee shall modify the SWMP as required when any of the following occur:

- Exceedance of any discharge limitation or water quality standard established in HAR, Section 11-54-4. The revisions shall include BMPs and/or other measures to reduce the amount of pollutants found to be in exceedance from entering State Waters.
- Change in conditions and incorporation of more effective approaches to pollutant control.
- System modifications, including any planned physical alterations or additions to the permitted MS4 and any existing outfalls newly identified over the term of the permit.

The Permittee shall properly address all modifications, concerns, requests, and/or comments to the satisfaction of the DOH and/or EPA. Minor changes may be proposed by the Permittee or requested by DOH or the EPA. Proposed changes that imply a major reduction in the overall scope and/or level of effort of the SWMP must be made for cause and in compliance with 40 CFR §122.62 and Part 124. A written report shall be submitted to the DOH for acceptance at least 30 calendar days prior to the initiation date of the major modification. The Permittee shall report and justify all other modifications made to the SWMP in its Annual Report for the year in which the modification was made.

Part E. INDUSTRIAL FACILITIES

Part E.1. The industrial facilities covered under this permit shall comply with the requirements in HAR, Chapter 11-55, Appendix B.

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Wheeler AAF, Oahu, Hawaii

Part E.2. An individual at each facility (e.g., yard foreman) shall be charged with ensuring implementation of the SWPCP. This individual shall be trained to implement the SWPCP, including but not limited to, conducting inspections, identifying deficiencies and performing corrective actions.

Part E.3. This permit may cover new or currently existing industrial facilities not currently identified in the Permittee's application upon submission of the "MS4 NPDES Individual Permit - Industrial Storm Water Discharge Notification Form" by the Permittee using the "CWB Compliance Submittal Form for Individual NPDES Permits and NGPCs" through the DOH's e-Permitting Portal. Along with the submission of the form, the Permittee shall submit a SWPCP for the industrial facility, and other attachments to the DOH for review and comment, including updating its SWMP Plan. Upon acceptance of the information, the DOH will acknowledge by letter NPDES permit coverage under this permit for the added facility. The SWPCP must be implemented upon the start-up of the facility or for an existing industrial facility; the SWPCP must be implemented upon submittal of the written request.

To request coverage of a facility's industrial storm water discharges under this NPDES permit:

- Open the e-Permitting Portal website at: https://eha-cloud.doh.hawaii.gov/epermit. Enter your login and password. If you do not have a login and password you will be asked to do a one-time registration.

- Click on the e-Permitting Application Finder tool and locate the "CWB Compliance Submittal Form for Individual NPDES Permits and NGPCs."

- Under Additional Links, download the "MS4 NPDES Individual Permit – Industrial Storm Water Discharge Notification Form."

- You are required to complete the "MS4 NPDES Individual Permit -Industrial Storm Water Discharge Notification Form" for each facility that discharges industrial storm water. All sections of this form MUST be completed for NPDES Permit compliance.

- Follow the instructions to complete and submit this form.

- Attach the completed "MS4 NPDES Individual Permit – Industrial Storm Water Discharge Notification Form" in Section 7 of the "CWB Compliance Submittal Form for Individual NPDES Permits and NGPCs."

Part E.4. The SWPCP shall contain all information required under HAR, Chapter 11-55, Appendix B, Section 6.

Part E.5. If the industrial facilities listed in Part E.1. above qualify for Conditional "No Exposure" Exclusion from NPDES Storm Water Associated with Industrial Activity permitting, the Permittee may submit the "MS4 NPDES Individual Permit – Industrial Storm Water No Exposure Notification Form", following the procedure listed in Part E.3. above.

The Permittee will not be required to sample storm water runoff according to Part F.2. of this permit upon submittal of the "MS4 NPDES Individual Permit – Industrial Storm Water No Exposure Notification Form".

Part F. MONITORING REQUIREMENTS

Part F.1. Annual Monitoring Plan

Part F.1.a. The Permittee shall submit the Annual Monitoring Plan to the DOH by June 1st of each year for review and acceptance. The Annual Monitoring Plan shall be implemented over the coming fiscal year.

The monitoring program must be designed and implemented to meet the following objectives:

Part F.1.a.(1) Assess compliance with this permit (including TMDL Implementation & Management (I&M) Plans and demonstrating consistency with wasteload allocations (WLAs), if required);

Part F.1.a.(2) Measure the effectiveness of the Permittee's SWMP;

Part F.1.a.(3) Assess the overall health based on the chemical, physical, and biological impacts to receiving waters resulting from storm water discharges and an evaluation of the long term trends;

Part F.1.a.(4) Characterize storm water discharges;

Part F.1.a.(5) Identify sources of specific pollutants;

Part F.1.a.(6) Detect and eliminate illicit discharges and illegal connections to the MS4; and

Part F.1.a.(7) Assess the water quality issues in watershed resulting from storm water discharges to receiving waters.

Part F.1.b. The plan shall, at a minimum, include the following items:

Part F.1.b.(1.) Written narrative of the proposed monitoring plan's objectives, including but not limited to the objectives identified in Part F.1.a., and description of activities;

Part F.1.b.(2.) For each activity, a description of how the results will be used to determine compliance with this permit.

Part F.1.b.(3.) Identification of management measures proven to be effective and/or ineffective at reducing pollutants and flow.

Part F.1.b.(4.) Written documentation of the following:

(i) Characteristics (timing, duration, intensity, total rainfall) of the storm event(s);

(ii) Parameters for measured pollutant loads; and

(iii) Range of discharge volumes to be monitored, as well as the timing, frequency, and duration at which they are identified;

Part F.1.b.(5.) Written documentation of the analytical methods to be used;

Part F.1.b.(6.) Written documentation of the Quality Assurance/Quality Control procedures to be used; and

Part F.1.b.(7.) Estimated budget to be implemented over the coming fiscal year.

Part F.2. Storm Water Associated with Industrial Activities

The Permittee shall annually monitor the storm water runoff for the parameters specified below, for each of the Permittee's industrial facilities, including any additional parameters which the Permittee also believes to be present in the storm water runoff.

Effluent Parameter (units)	**Effluent Limitation {1}**	**Type of Sample {2}**
Flow (gallons)	{3}	Calculated or Estimated
Biochemical Oxygen Demand (5-Day) (mg/l)	{3}	Composite {4}
Chemical Oxygen Demand (mg/l)	{3}	Composite {4}
Total Suspended Solids (mg/l)	{3}	Composite {4}
Total Phosphorus (mg/l)	{3}	Composite {4}
Total Nitrogen (mg/l) {5}	{3}	Composite {4}
Nitrate + Nitrite Nitrogen (mg/l)	{3}	Composite {4}
Oil and Grease (mg/l)	15	Grab {6}

Effluent Parameter (units)	Effluent Limitation {1}	Type of Sample {2}
pH Range (Standard Units)	5.5-8.0 {7} 7.6-8.6 {8}	Grab {9}
Ammonia Nitrogen (mg/l)	{3}	Composite
Turbidity (0.1 NTU)	{3}	Grab
Dissolved Oxygen (0.1 mg/l)	{3}	Grab
Oxygen Saturation (1%)	{3}	Grab
Temperature (0.1 ºC)	{3}	Grab
Salinity (0.1 ppt)	{3}	Grab
Toxic Pollutants (mg/l) {10}	{11}	{12}

mg/l = milligrams per liter = 1000 micrograms per liter (µg/l)

NOTES:

{1} Pollutant concentration levels shall not exceed the storm water discharge limits or be outside the ranges indicated in the table. Actual or measured levels which exceed those storm water discharge limits or are outside those ranges shall be reported to the CWB required in HAR, Chapter 11-55, Appendix B, Section 10(c).

{2} The Permittee shall collect samples for analysis from a discharge resulting from a representative storm. A representative storm means a rainfall that accumulates more than 0.1 inch of rain and occurs at least 72 hours after the previous measurable (greater than 0.1 inch) rainfall event.

"Grab sample" means a sample collected during the first 15 minutes of the discharge.

"Composite sample" means a combination of at least two (2) sample aliquots, collected at periodic intervals. The composite shall be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to the total flow of storm water discharge flow since the collection of the previous aliquot. The Permittee may collect aliquots manually or automatically.

Samples for analysis shall be collected during the first 15 minutes of the discharge and at 15-minute intervals thereafter for the duration of the discharge, as applicable. If the discharge lasts for over an hour, sample collection may cease.

{3} Monitor and Report. The value shall not exceed the applicable limit as specified in HAR, Chapter 11-54 for the applicable classification of the receiving state waters. If no limitation is specified in HAR, Chapter 11-54, then the Permittee shall monitor and report the analytical result. The Department may include discharge limitations specified in HAR, Section 11-55-19 and discharge limitations based on Federal Register, Vol. 73, No. 189, Pages 56572–56578, dated September 29, 2008.

{4} If the duration of the discharge event is less than 30 minutes, the sample collected during the first 15 minutes of the discharge shall be analyzed as a grab sample and reported toward the fulfillment of this composite sample specification. If the duration of the discharge event is greater than 30 minutes, the Permittee shall analyze two (2) or more sample aliquots as a composite sample.

{5} The Total Nitrogen parameter is a measure of all nitrogen compounds in the sample (nitrate, nitrite, ammonia, dissolved organic nitrogen, and organic matter present as particulates).

{6} The Permittee shall measure Oil and Grease using EPA Method 1664, Revision A.

{7} This limitation applies to discharge into state waters classified as inland streams.

{8} This limitation applies to discharge into state waters classified as marine open coastal waters.

{9} The Permittee shall measure pH within 15 minutes of obtaining the grab sample.

{10} The Permittee shall measure for toxic pollutants, as identified in Appendix D of 40 CFR Part 122; in the Federal Register, Vol. 73, No. 189, pages 56572-56578, dated September 29, 2008; or in HAR, Section 11-54-4. The Permittee shall measure for the total recoverable portion of all metals. If monitoring results indicate that the discharge limitation was equaled or exceeded, the SWPCP shall be amended to include additional BMPs targeted to reduce the parameter which was in excess of the discharge limitation.

{11} Storm water discharge limitations are the acute water quality standards established in HAR, Section 11-54-4, for either fresh or saline waters. For pollutants which do not have established acute water quality standards, the Permittee shall report any detected concentration greater than 0.01 µg/l.

{12} The Permittee shall measure for cyanide and the volatile fraction of the toxic organic compounds using a grab sample. The Permittee shall measure for all other pollutants, as identified in Appendix D of 40 CFR Part 122; in the Federal Register, Vol. 73, No. 189, pages 56572-56578, dated September 29, 2008; or in HAR, Section 11-54-4 using a composite sample.

The sampling locations shall be representative of storm water discharging from the industrial facility and consist of storm water runoff from industrial activities.

Part F.3. TMDLs

As TMDLs are adopted by DOH and approved by the EPA that identify the Permittee as a source, the Permittee shall develop I&M Plans for a minimum of one (1) additional TMDL per year within one (1) year of the approval date. The Permittee shall include within each I&M Plan a compliance schedule with a final deadline to demonstrate consistency with the WLAs consistent with the assumption of the associated TMDL document. The schedule shall provide for the implementation of the BMPs, monitoring to evaluate its performance, and time to make adjustments necessary to demonstrate consistency with the WLAs consistent with the assumption of the associated TMDL document at the earliest possible time. If the schedule extends beyond a year, interim dates and milestones shall be included in the schedule with the time between interim dates not to exceed one (1) year.

Part F.4. Re-opener

In accordance with 40 CFR Parts 122 and 124, this permit may be modified (i.e., to include compliance schedules, permit conditions, etc.) to address additional or revised TMDLs as adopted by DOH and approved by the EPA.

Part G. REPORTING REQUIREMENTS

All submittals to DOH shall be in a format consistent with first satisfying the requirements of this permit.

Part G.1. Annual Report

PartG.1.a. The Permittee shall submit the Annual Report by January 1st of each year in pdf format (minimum 300 dpi) in accordance with Part A.6. The Annual Report shall cover the past fiscal year. The Annual Report for the fiscal year prior to the expiration date of the permit shall serve as the permit's renewal application. Submittal of the renewal application shall include a $1,000 filing fee.

PartG.1.b. The Permittee shall revise its SWMP to include a description of reporting procedures and activities, including schedules and proposed content of the Annual Reports such that, at a minimum, the following is reported for each storm water program component in each Annual Report:

Part G.1.b.(1) *Requirements* - Describe what the Permittee was required to do (describe status of compliance with conditions of this permit and other commitments set forth in the SWMP).

Part G.1.b.(2) *Past Year Activities* - Describe activities over the reporting period in comparison to the requirements, including, where applicable, progress accomplished toward meeting specific measurable goals, standards and milestones or other specific performance requirements. When requirements were not fully met, include a detailed explanation as to why the Permittee did not meet its commitments for the reporting period. Also describe an assessment of the SWMP, including progress towards implementing each of the SWMP program components.

Part G.1.b.(3) *Future Activities* - Describe planned activities, including, where applicable, specific activities to be undertaken during the next reporting period toward accomplishing specific measurable goals, standards and milestones or other specific performance requirements.

Part G.1.b.(4) *Resources* - Report on the status of the Permittee's resource base for implementing this NPDES permit during the applicable reporting period and an estimate of the resources over and above those required in the current reporting period that will be required in the next reporting period.

PartG.1.c. *Modifications* - In each Annual Report, the Permittee shall describe any modifications made to the SWMP and implementation schedule during the past year, including justifications. The Permittee shall also describe major modifications made to the Permittee's MS4, including, but not limited to, addition and removal of outfalls, drainage lines, and facilities.

PartG.1.d. *Program Effectiveness Reporting* - Within one (1) year from the effective date of the permit, the Permittee shall submit to DOH a written strategy for determining effectiveness of its SWMP. The strategy shall include water quality monitoring efforts as well as program implementation information and other indicators. The Permittee shall include an assessment of program effectiveness and identification of water quality improvements or degradation beginning with the 2nd Annual Report.

Part G.2. Annual Monitoring Report.

Part G.2.a. The Permittee shall submit the Annual Monitoring Report with the Annual Report by October 31st of each year in pdf format (minimum 300 dpi) in accordance with Part A.6. The Annual Monitoring Report shall cover the past fiscal year.

Part G.2.b. The monitoring report shall at a minimum, include the following items:

Part G.2.b.(1) Discussion on the activities/work implemented to meet each objective, as outlined in Part F.1.a., including any additional objectives identified by the Permittee, and the results [e.g., assessment of the water quality issues in each watershed resulting from storm water discharges, refer to Part F.1.a.(7)] and conclusions.

Part G.2.b.(2) Written narrative of the past fiscal year's activities, including those coordinated with other agencies, objectives of activities, results and conclusions.

Part G.2.b.(3) Data gathered on levels of pollutants in non-storm water discharges to the Permittee’s MS4; and

Part G.2.b.(4) Using rainfall data collected by the Permittee and other agencies, the Permittee shall relate rainfall events, measured pollutant loads, and discharge volumes from the watershed and other watersheds that may be identified from time to time by the DOH or Permittee.

Part G.2.b.(5) Dates when monitoring occurred for each industrial facility covered under this permit. The monitoring event shall be of a representative storm event, where results were available for all required parameters following the QA/QC measures as described in the Annual Monitoring Plan.

Part G.2.b.(6) Discharge Monitoring Reports (DMRs) for industrial facilities shall be included in the Annual Monitoring Report and be submitted via NetDMR once established by the DOH. NetDMR is a Web-based tool that allows NPDES permittees to electronically sign and submit their DMRs to EPA's Integrated Compliance Information System (ICIS-NPDES) via the Environmental Information Exchange Network. A DMR must be submitted for the facility which is scheduled to be monitored even if sampling was not conducted. An explanation as to why sampling was not conducted shall be explained with the submittal.

Part H. SUMMARY OF DEADLINES

Deadline	Description	Part	Submit to DOH
18 months after the Effective Date of Permit (EDOP)	Revised SWMP Plan.	D.1.	Yes
1 year after EDOP	Establish requirements for issuing connection permits and require obtaining the permit prior to allowing the drain connection.	D.1.c.(1)	No
1 year after EDOP	Establish policies for enforcement and penalties for non-compliance with Part D.1.c.(1) and for persons illegally discharging pollutants to its MS4; and pursue enforcement actions.	D.1.c.(5)	No
2 year after EDOP	Establish BMP Manuals.	D.1.d.(1)	Yes
3 year after EDOP	Establish policies to require construction projects to implement BMPs and standards.	D.1.d.(2)	No
6 months after EDOP	Implement a system to track both private and public construction projects.	D.1.d.(3)	No
90 calendar days after EDOP	Plan review checklist.	D.1.d.(4)(iv)	Yes
90 calendar days after EDOP	Inspection form(s), inspection checklist, and reporting and corrective procedures.	D.1.d.(5)(iv)	Yes
1 year after EDOP	Establish policies for enforcement and penalties for non-compliance with Part D.1.d.(2); and develop and implement an Enforcement Response Plan.	D.1.d.(6)	No
6 months after EDOP	Plan for requiring LID in its Standards.	D.1.e.(1)	Yes

Deadline	Description	Part	Submit to DOH
12 months after EDOP	Draft of the revised Standards.	D.1.e.(1)	Yes
18 to 24 months after EDOP dependent on adoption by rulemaking	Final of the revised Standards.	D.1.e.(1)	Yes
1 year after EDOP	Action Plan for Retrofitting Structural BMPs	D.1.f.(1)(iv)	Yes
1 year after EDOP	Trash Reduction Plan	D.1.f.(1)(v)	Yes
18 months after EDOP	Require the implementation of temporary erosion control measures on erosional areas within the right-of-ways.	D.1.f.(3)(ii)	No
1 year after EDOP	WQC application(s) for temporary erosion control measures.	D.1.f.(3)(ii)	Yes
1 year after EDOP	Action Plan to address erosion at its storm drain system outlets.	D.1.f.(3)(iv)	Yes
1 year after EDOP	List of projects and implementation schedule for permanent erosion control improvements.	D.1.f.(3)(v)	Yes
4th Year Annual Report	Industrial facilities and activities inventory information.	D.1.g.(2)	Yes
4th Year Annual Report	Commercial facilities and activities inventory information	D.1.g.(3)	Yes
60 calendar days after EDOP	Prioritized areas for industrial and commercial facility and activity inspection status report.	D.1.g.(4)	Yes

Deadline	Description	Part	Submit to DOH
October 31st and April 30th of each year	Semi-Annual Industrial and Commercial Inspection Reports.	D.1.g.(5)	Yes
1 year after EDOP	For Industrial and Commercial Facilities, establish and implement policies for enforcement and penalties.	D.1.g.(7)	No
90 calendar days of the change	Updates to the industrial and commercial inspection training	D.1.g.(8)	Yes
30 calendar days prior to the initiation date of the major modification	SWMP Modification Report	D.2.	Yes
As needed	MS4 NPDES Individual Permit - Industrial Storm Water Discharge Notification Form and SWPCP for each industrial activity. (For those that have not yet been submitted.)	E.3.	Yes
June 1st of each year	Annual Monitoring Plan	F.1.a.	Yes
Various	TMDL Compliance, refer to Schedules of Compliance	F.3.c.	Yes
October 31st of each year	Annual Report, to include but not limited to: • Progress evaluation results of the public education program [Part D.1.a.(3)], • Description and reason for any revision to its Standards and copy of the revised Standards [Part D.1.d.(2)],	G.1.	Yes

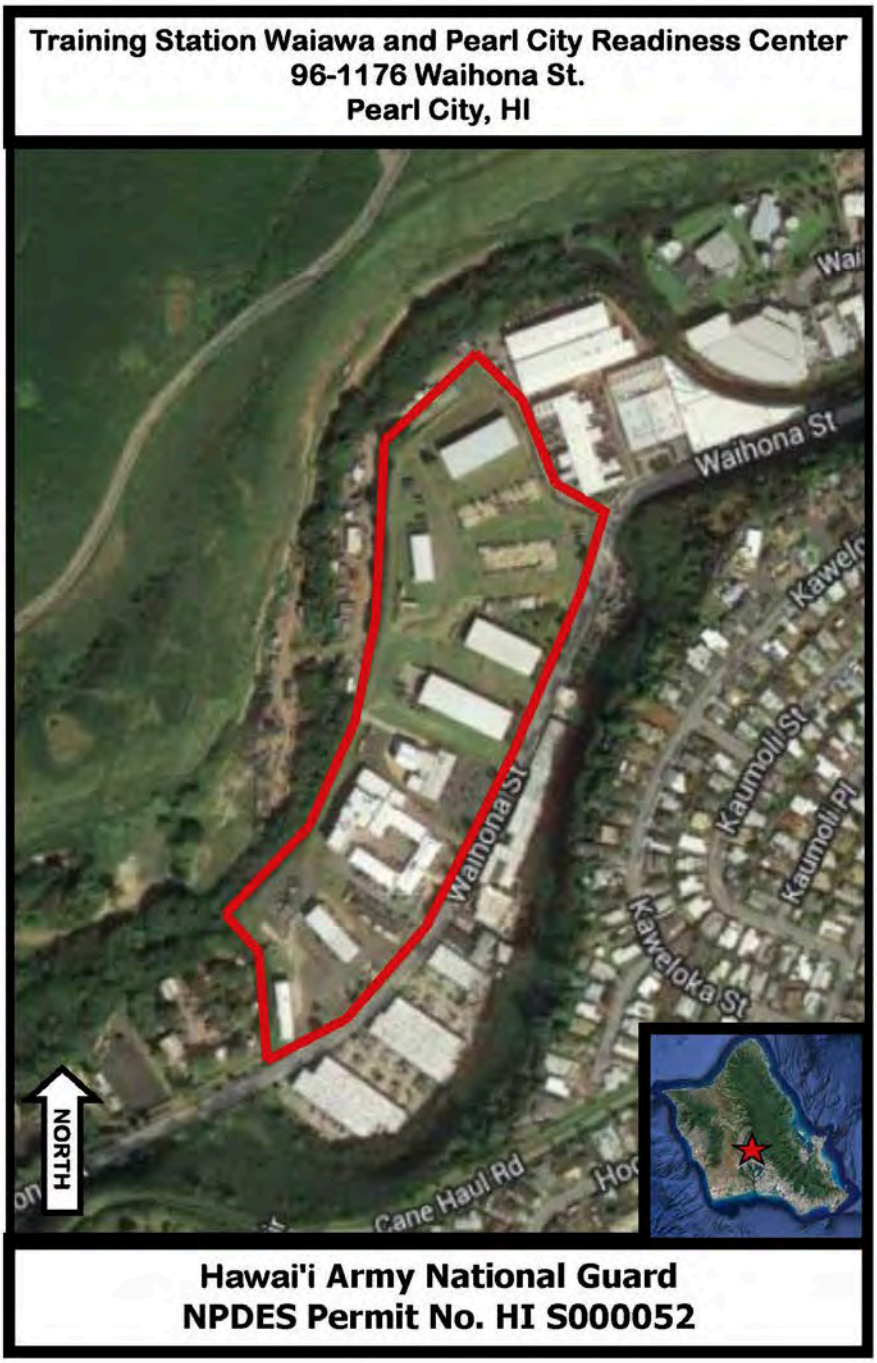
Deadline	Description	Part	Submit to DOH
	• Updates to its inspection/maintenance schedule, including explanation of the changes [Part D.1.f.(1)(ii)], • Updates to its implementation schedule for retrofitting structural BMPs [Part D.1.f.(1)(iv)], • Summary of its trash load reduction actions [Part D.1.f.(1)(v), • Status report on implementation of erosion control measures at its storm drain system outlets [Part D.1.f.(3)(iv)], • Updated industrial inventory information (4th Annual Report)[Part D.1.g.(2)] • Updated commercial inventory information (4th Annual Report)[Part D.1.g.(3)] • Modified Prioritized Areas for Industrial and Commercial Facility and Activity Plan [Part D.1.g.(4)], • SWMP Modifications [Part D.1.a.] • System Modifications [Part D.3.b.], • Annual Report requirements [Part G.1.], and • Amendments to MOUs [Parts G.3.a. and G.3.b.].		
1 year after EDOP	Written strategy for determining effectiveness of its SWMP	G.1.d.	Yes

Deadline	Description	Part	Submit to DOH
January 1st of each year	Annual Monitoring Report with Discharge Monitoring Reports	G.2.	Yes

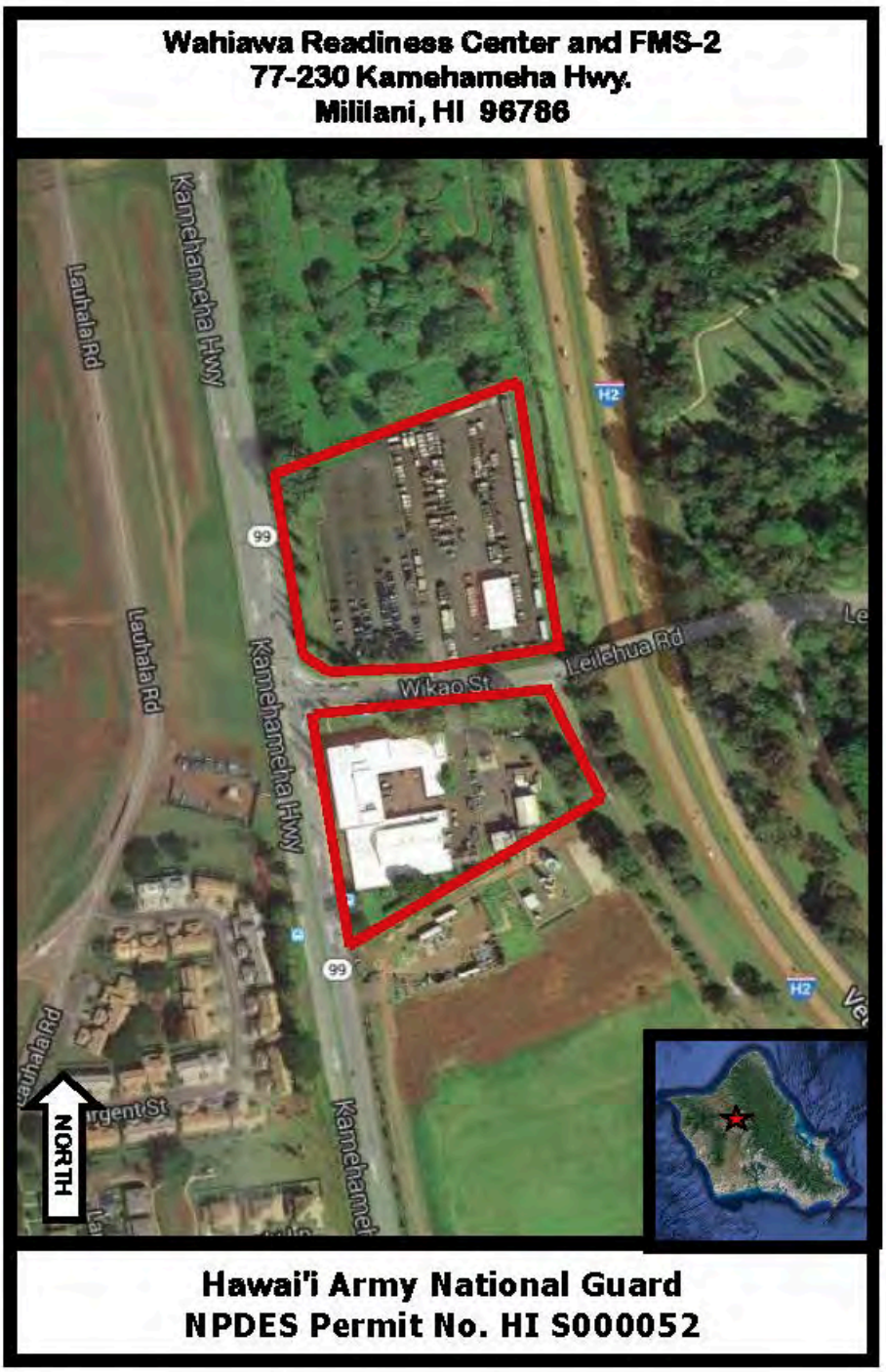
Part I. Maps

1. Fort Ruger

2. Waiawa


Training Station Waiawa and Pearl City Readiness Center
96-1176 Waihona St.
Pearl City, HI
Waihona St
Waihona St
Kaumoli St
Kaumoli Pl
Kaweloka St
Cane Haul Rd
NORTH
Hawai'i Army National Guard
NPDES Permit No. HI S000052

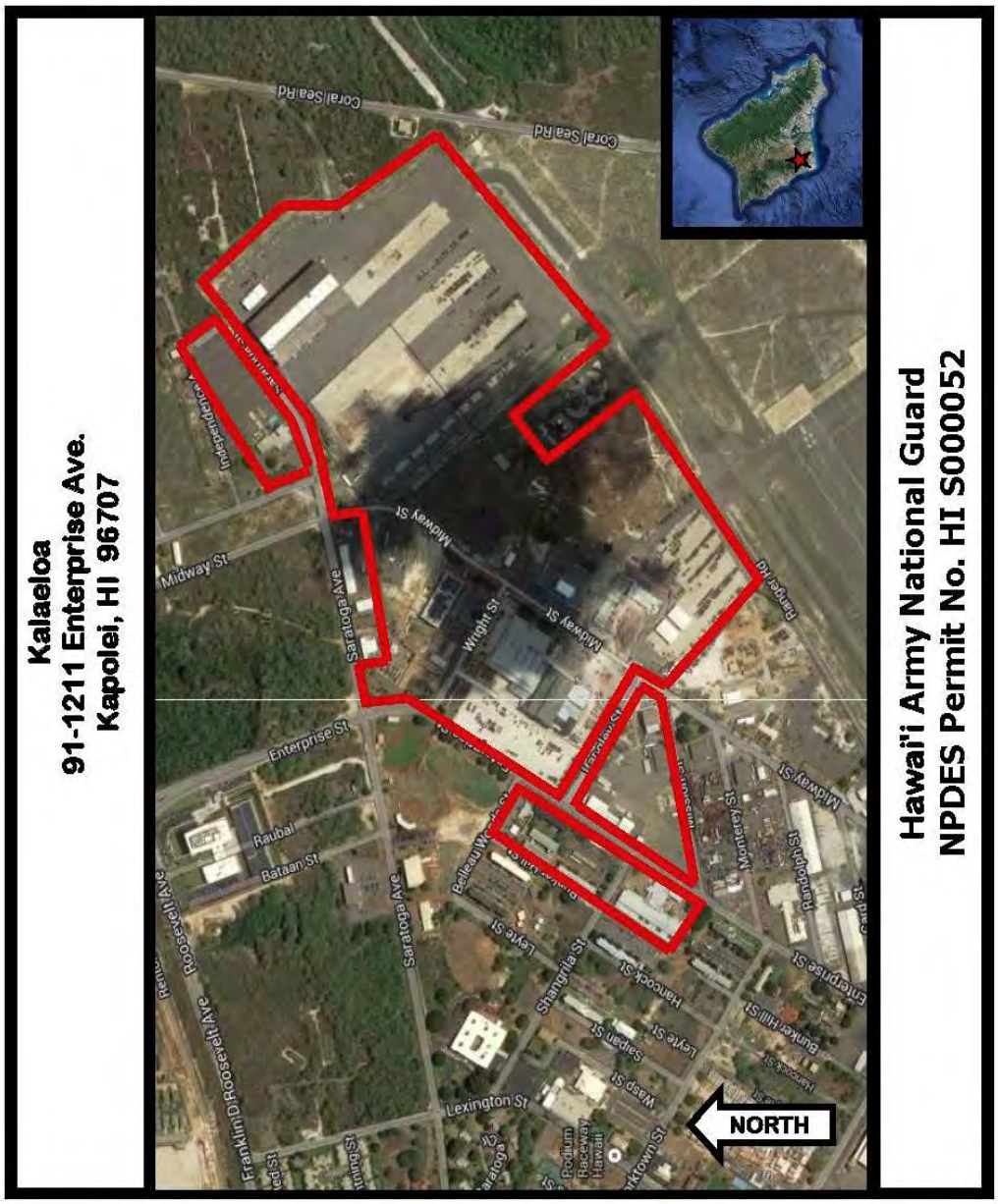
3. Wahiawa


Wahiawa Readiness Center and FMS-2
77-230 Kamehameha Hwy.
Mililani, HI 96786
Kamehameha Hwy
Lauhala Rd
Lauhala Rd
Kamehameha Hwy
Wikao St
Leilehua Rd
H2
99
99
NORTH
Hawai'i Army National Guard
NPDES Permit No. HI S000052

4. AASF #1

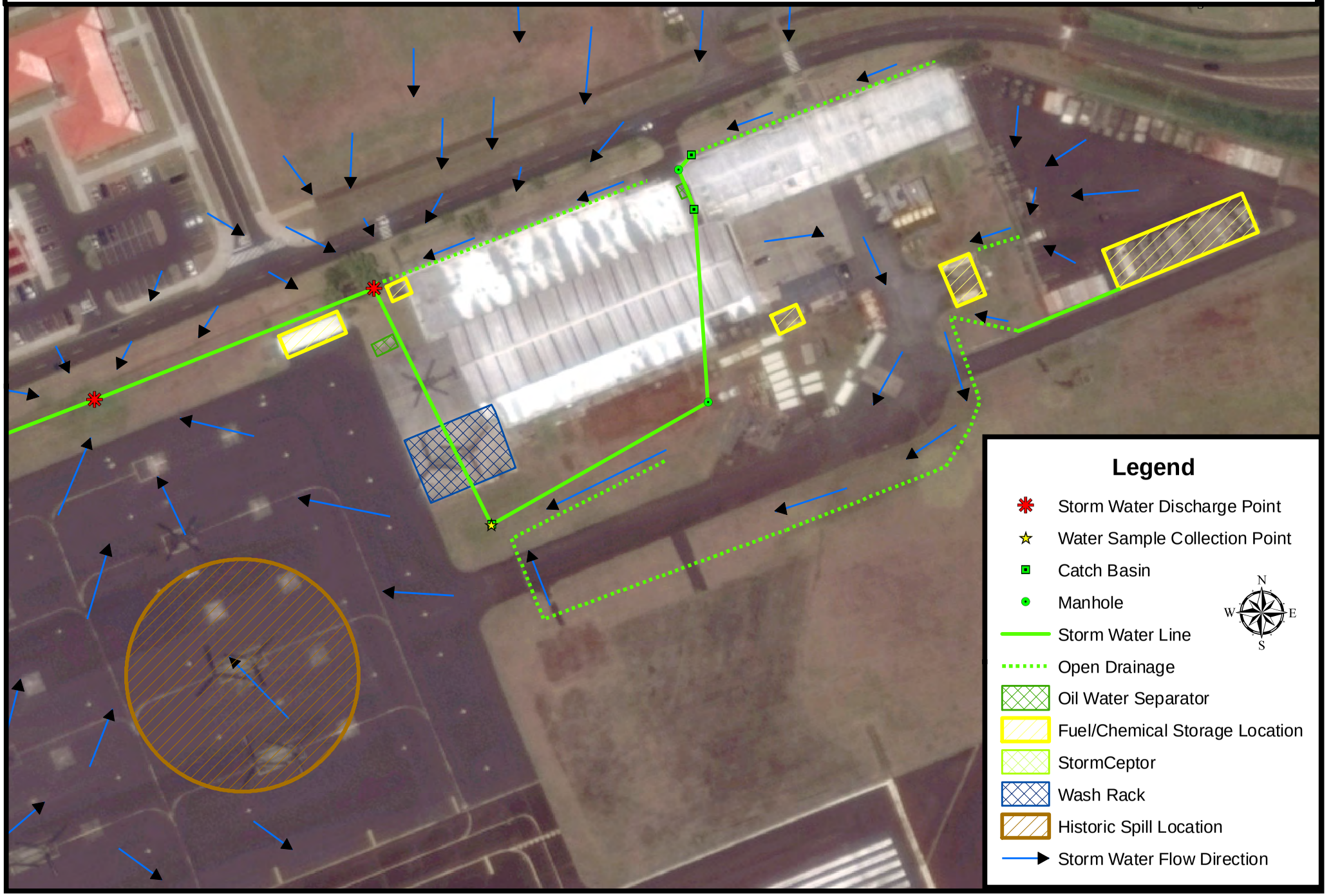

Army Aviation Support Facility - 1
1935 Santos Dumont Rd.
Schofield Barracks, HI 96854
Spery Loop
Curtis Loop
Vought Ave
Wright Ave
Warhawk Pl
Kamehameha Hwy
Santos Dumont Ave
Robbins Rd
Lauhala Rd
99
NORTH
Hawai'i Army National Guard
NPDES Permit No. HI S000052

5. Kalaeloa

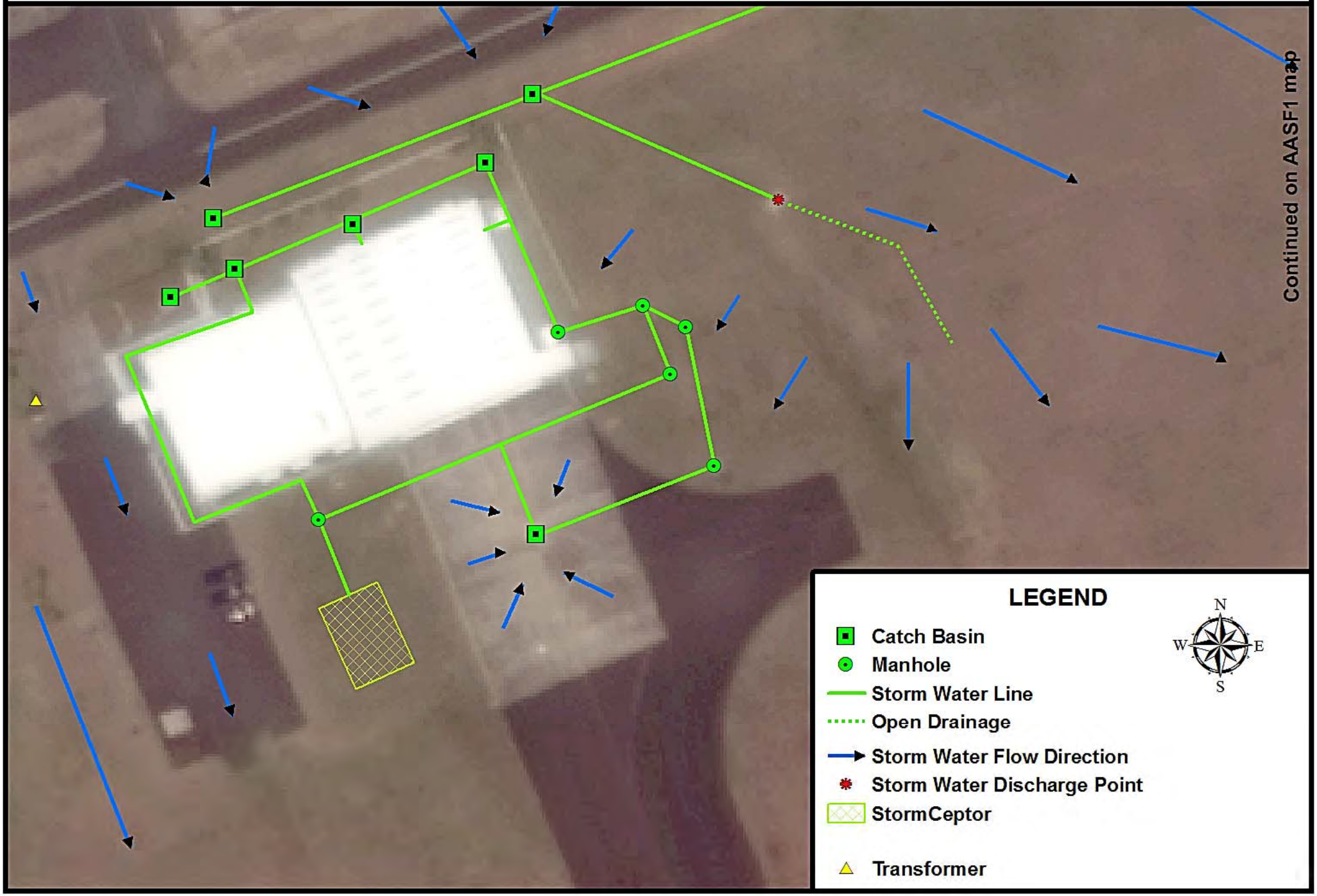

Kalaeloa
91-1211 Enterprise Ave.
Kapolei, HI 96707
Hawai'i Army National Guard
NPDES Permit No. HI S000052
Coral Sea Rd
Midway St
Saratoga Ave
Enterprise St
Raubal
Bataan St
Roosevelt Ave
Lexington St
Wasp St
Shangrila St
Hancock St
Monterey St
Randolph St
Bunker Hill St
Midway St
NORTH

Appendix B - Site Maps

Hawaii Army National Guard
Army Aviation Support Facility 1
NPDES Permit HIS000052



DET 55
Storm Water Map
NPDES Permit No. HI S000052



Ft. Ruger - North
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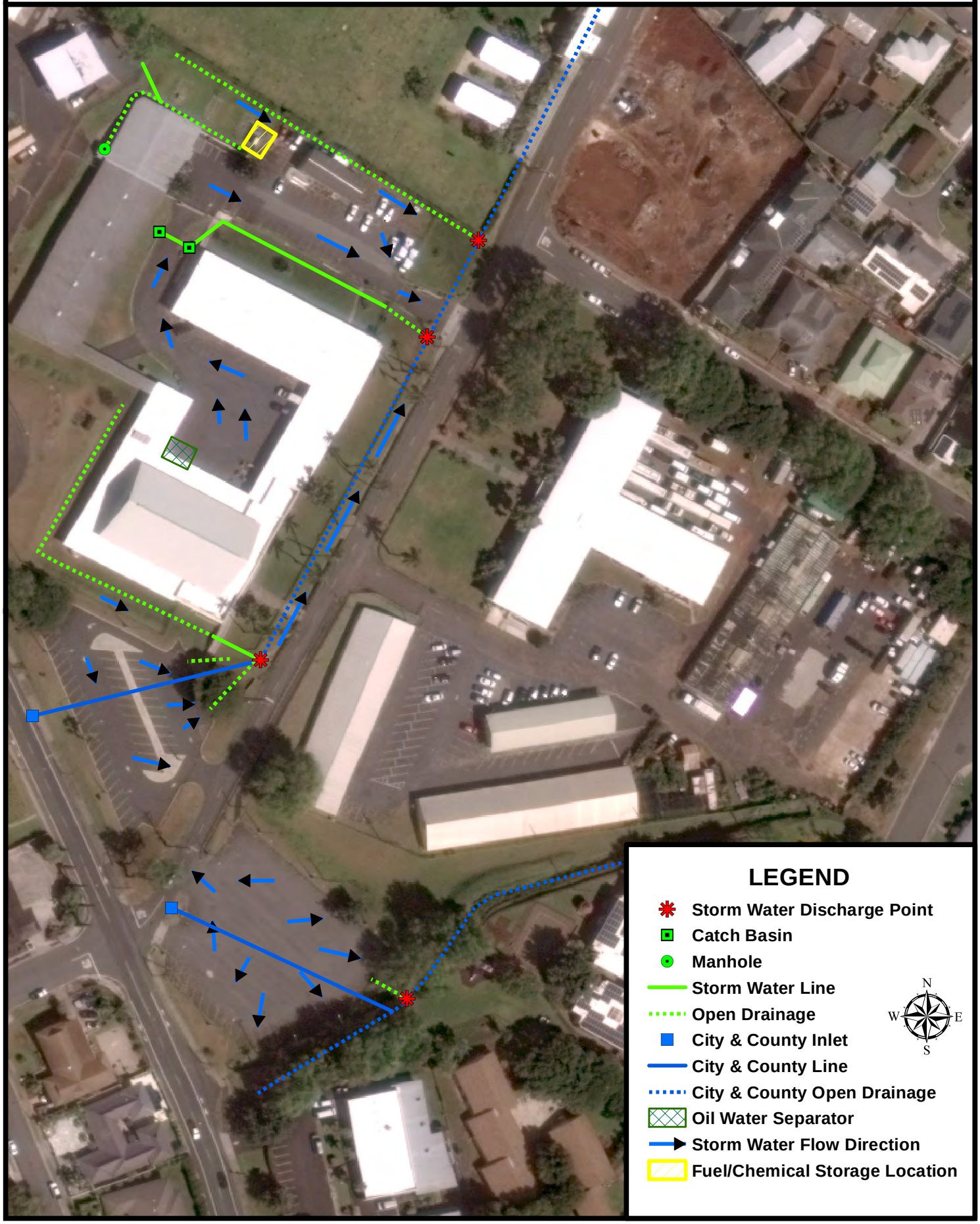
NPDES Permit No. HI S000052



Ft. Ruger - South
Storm Water Map
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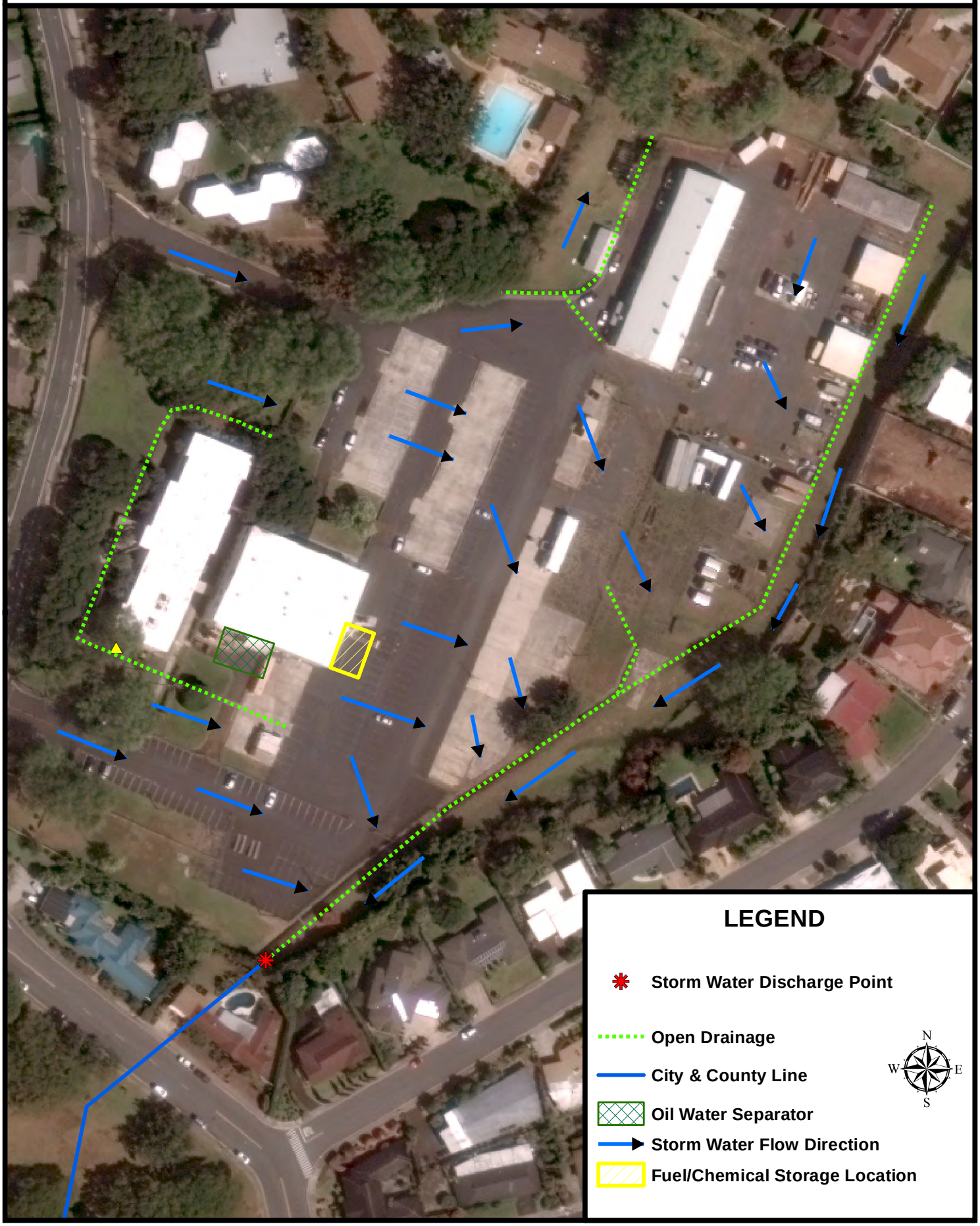
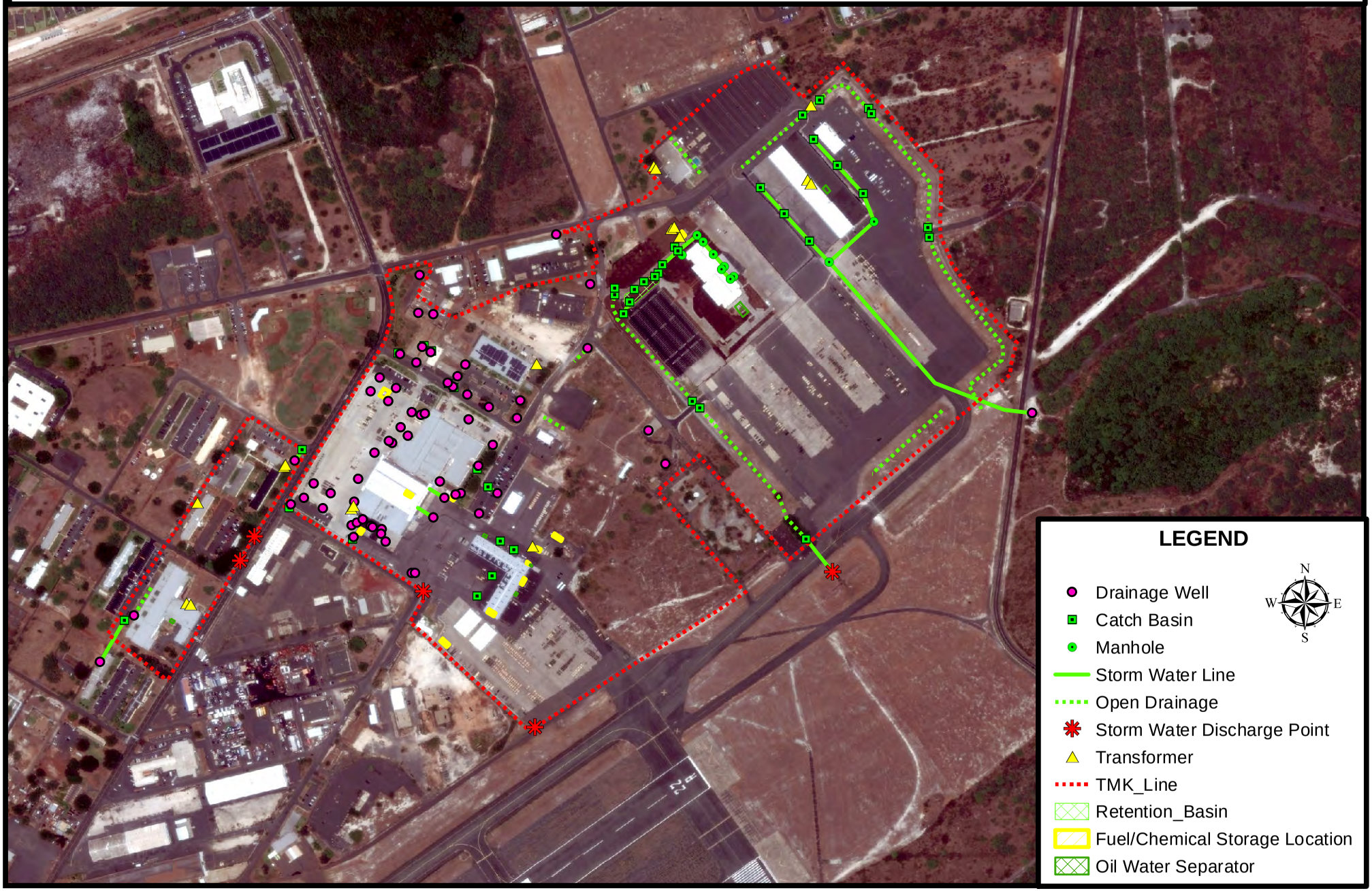
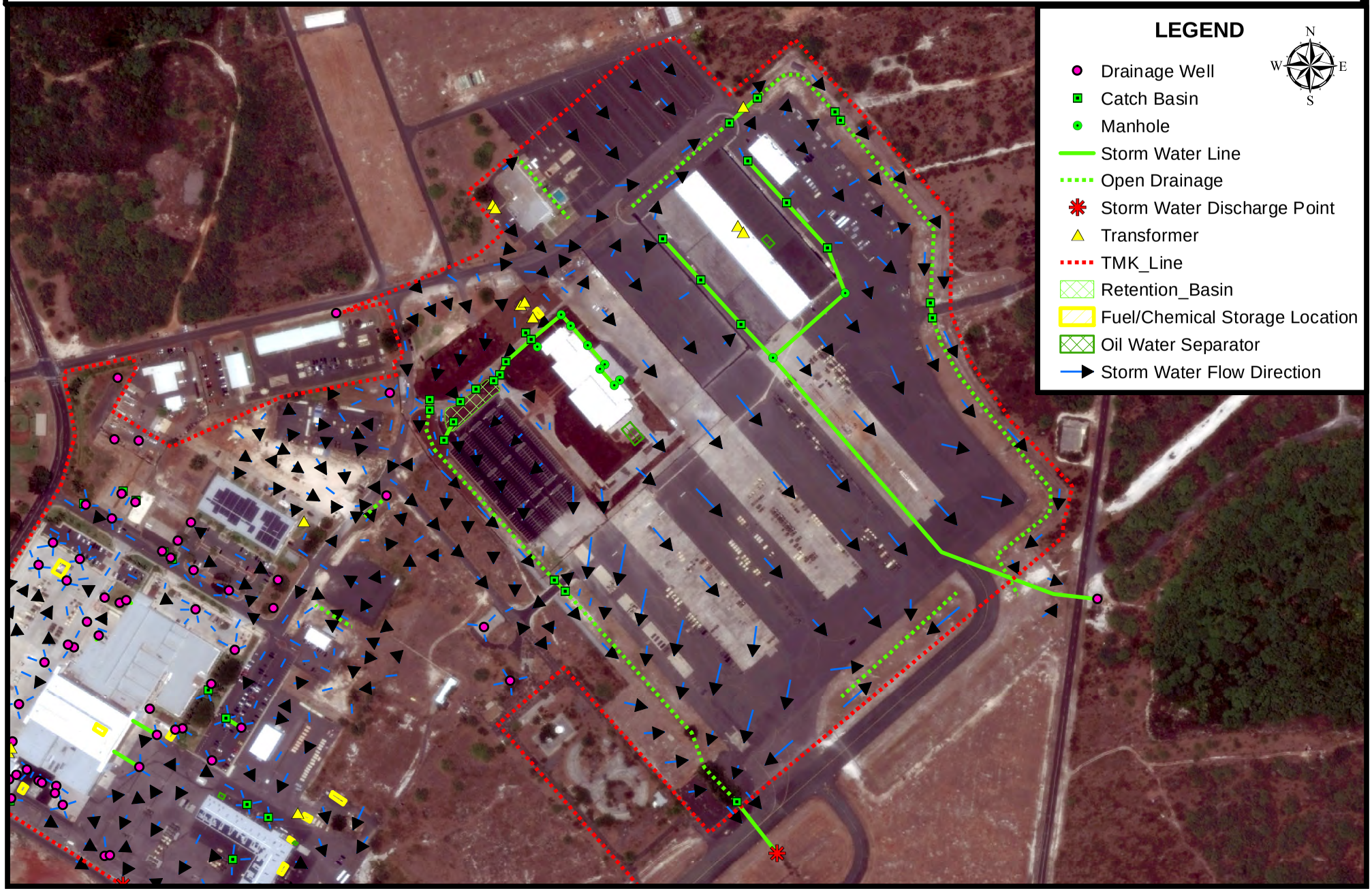


Kalaeloa - Overview
Storm Water Map
NPDES Permit No. HI S000052



Kalaeloa - East
Storm Water Map
NPDES Permit No. HI S000052



Stormwater Map

Kalaeloa - Army Aviation Support Facility - Kalaeloa
NPDES Permit HI S000052

15001 - Kalaeloa

County: Honolulu State: Hawaii
Address: Diamond Head Zip Code: 96816

Scale 1:2,400 1 inch = 200 feet

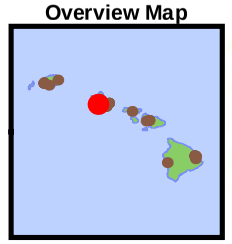
0 50 100 200
Feet

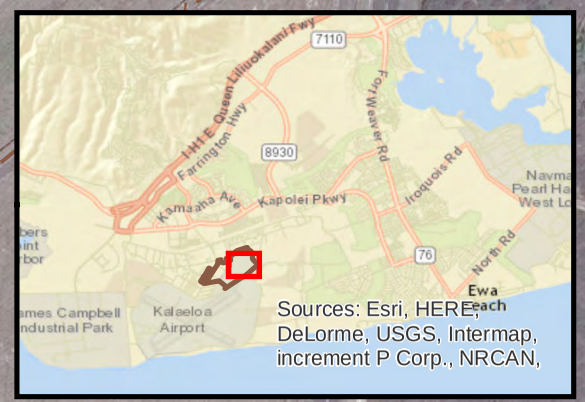
N
W E
S

- Catch Basin
- Seepage Pit
- UIC Wells
- Discharge Point
- HAZMAT Storage (AST)
- HAZMAT Storage
- Hazardous Waste Storage
- Generators
- Substations
- Transformer
- Storm Drainage
- Storm Flow
- Fences
- Detention Basin
- Mobile Tanker Parking
- HIARNG Sites

Published: HIARNG Environmental Office
Wednesday, August 16, 2017
Imagery Date: 18 May 2017
Coordinate System: GCS WGS 1984

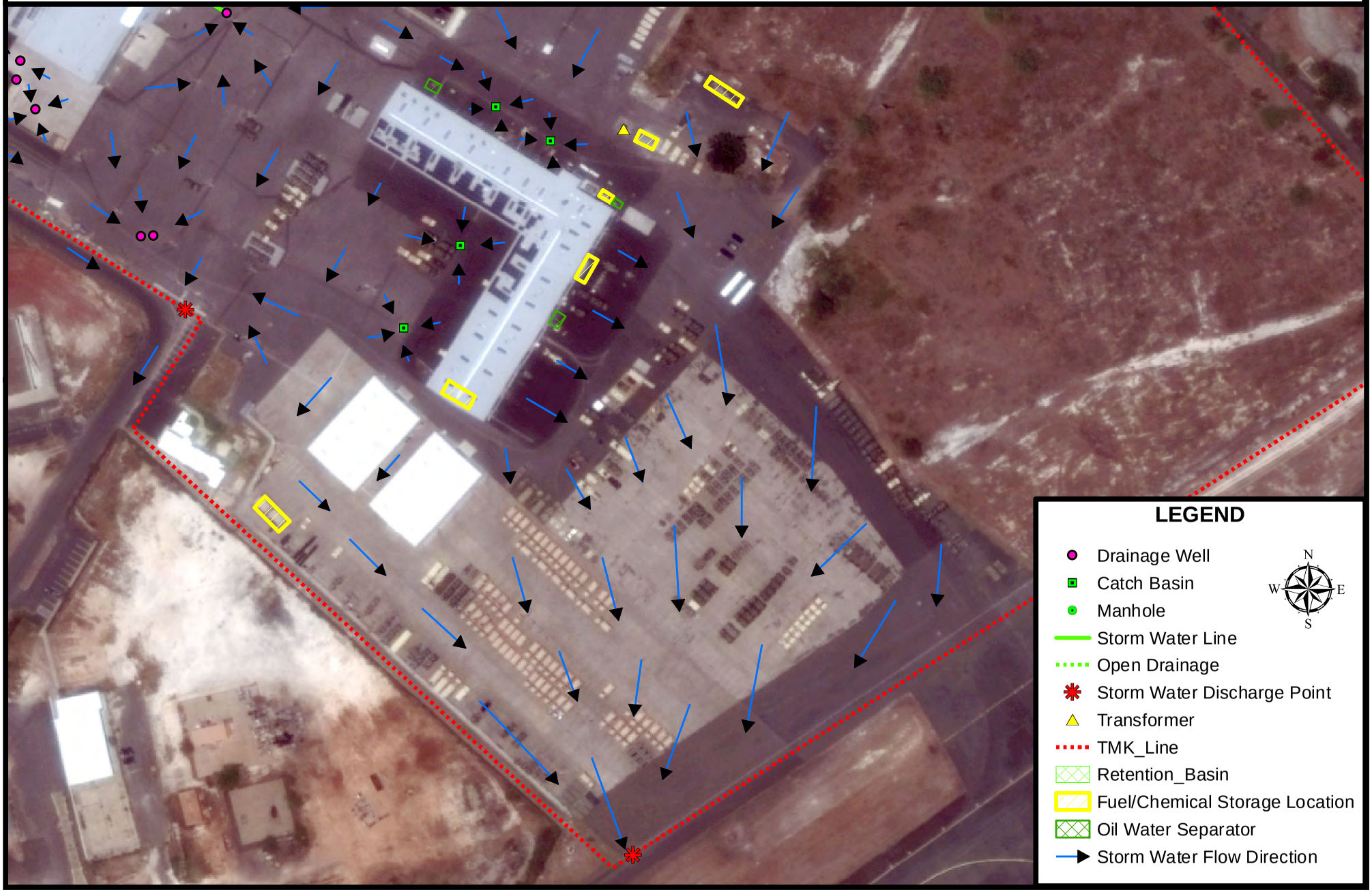
Overview Map



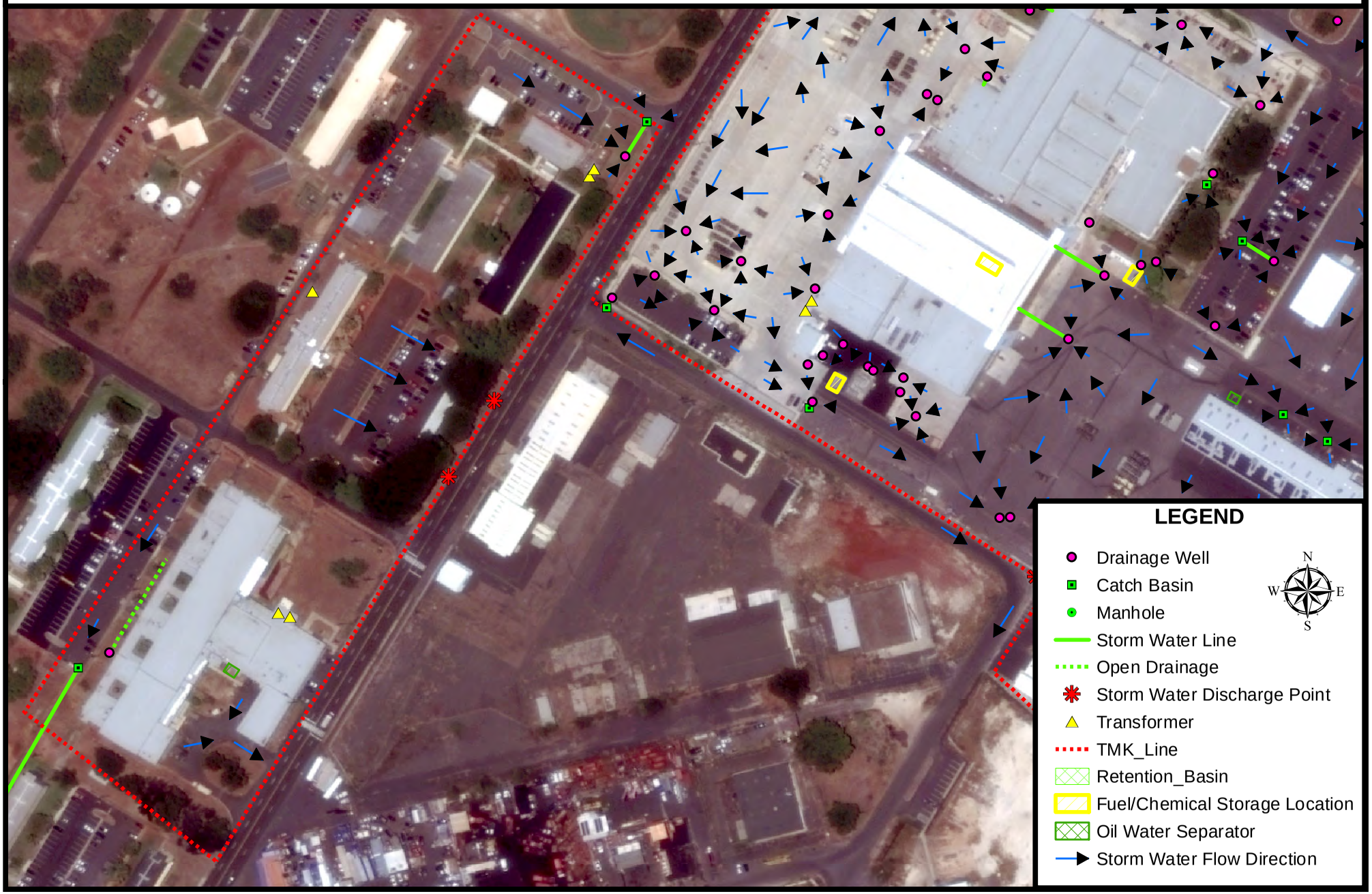


For Official Use Only
This illustrative conceptual plan is not intended as a design document.

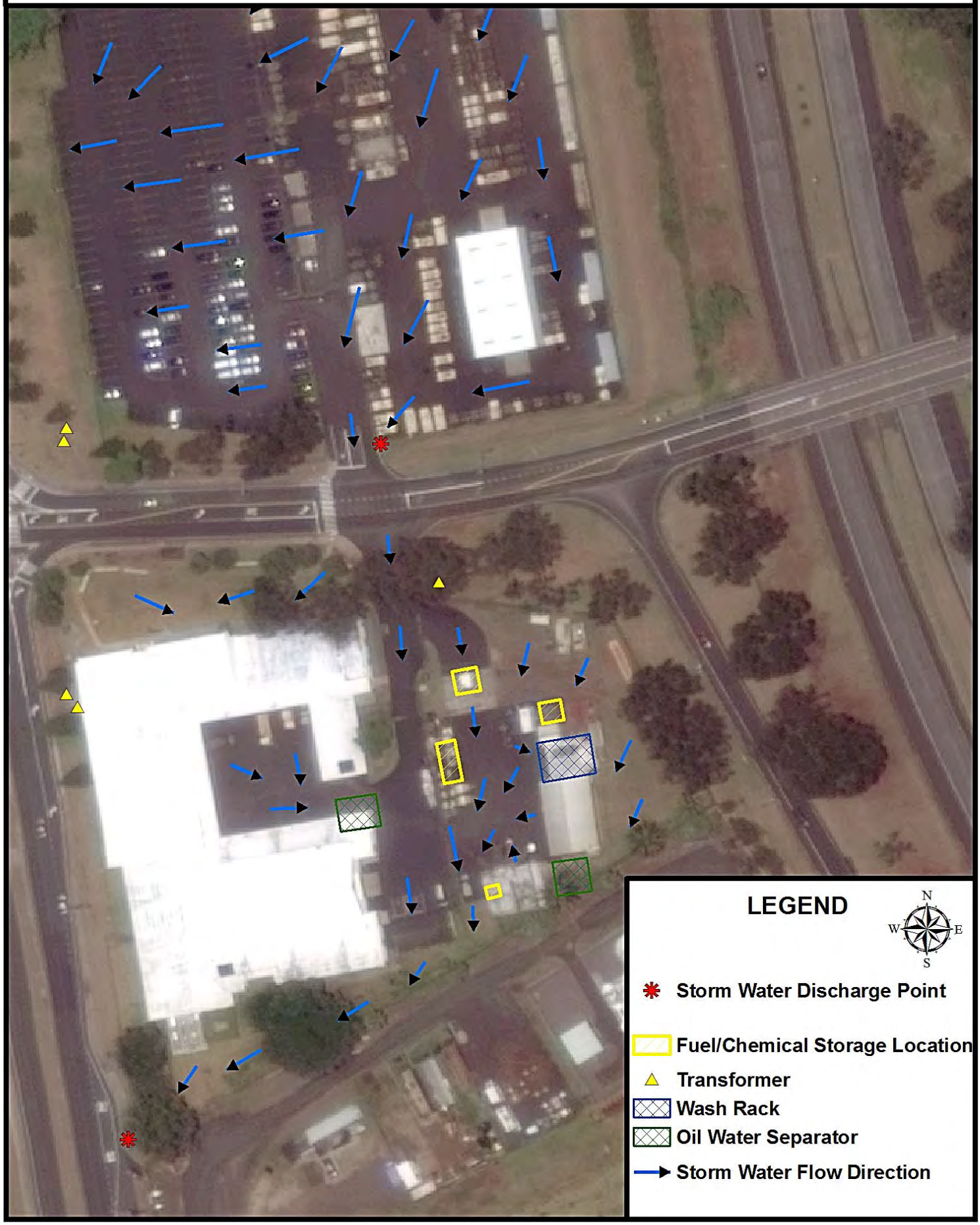
Kalaeloa - South
Storm Water Map
NPDES Permit No. HI S000052



Kalaeloa - West
Storm Water Map
NPDES Permit No. HI S000052



Wahiawa Armory & FMS2
Storm Water Map
NPDES Permit No. HI S000052



Waiawa Facility
Storm Water Map
NPDES Permit No. HI S000052

Appendix C - Connection Permit Application

Hawaii Army National Guard

Application for Discharge to Municipal Storm Sewer System (MS4)

In accordance with Part D.1.c.(1) of Hawaii Army National Guard's (HIARNG's) MS4 National Pollutant Discharge Elimination System (NPDES); Permit HI S000052; All connections and discharges to HIARNG's MS4 require permit approval. Within 30 days of notification, submit completed applications to:

HIARNG Environmental Office
91-1211 Enterprise Ave, Bldg. 1903 Kapolei, HI 96707
Water Quality Program Manager: (808) 672-1274

1	**Applicant Name:**	**Phone Number:**
2	**Address:**	**Email Address:**
3	**Describe Discharge/Connection Point:**	
4	**Describe Activities at Site:**	
5	**Is Discharge New, Existing, Temporary, or Permanent?**	**If Temporary, Provide Start and End Date:**
6	**Describe Water Source(s) Contributing to Discharge:**	
7	**Is there an existing NPDES permit for the discharge?**	**If so, Provide Permit Number:**
8	**Describe Best Management Practices (BMPs) used to protect water quality at the site:**	
9	**Provide Discharge Volume in Gallons per Year (GPY):**	
	Runoff Calculation	
	(Surface Area (ft2)) X (Surface Coefficient) X (Annual Rainfall (ft)) = (Volume (ft3))(7.48 G/ft3)= Gallons Per Year	

10	**Required Attachments:**
10.a.	Site Map that includes: 1. Drainage Flow Directions, 2. Connection/Discharge point to HIARNG's MS4, 3. Location of any Hazardous Substances, Fuel Storage, and Non-Stormwater discharge sources.
10.b.	Copy of NPDES Permit and Stormwater Pollution Prevention Plan (If applicable)

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 information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering 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.

Applicant Signature:	**Date:**
Environmental Office Approval:	**Date:**

Appendix D – Water Quality Facility Assessment Checklist

Hawaii Army National Guard

Water Quality Assessment Checklist

Facility Name:	**Date:**
Assessor Name:	**Assessor Signature:**

Administrative Record Keeping

	Yes	No	NA	Comments
Is a copy of the SWMP is readily available on site at all Oahu Maintenance Shops (applicable only to AASF1, FMS1, FMS2, CSMS1, STMP, UTES)				
Facility personnel responsible for site environmental activities have received periodic stormwater training?				

Structural Best Management Practices

	Yes	No	NA	Comments
Are all structural BMP's in good condition?				List ID of Structural BMPs
Are the type and quantity of structural BMPs successful at mitigating impacts to stormwater to the maximum extent practicable? If not, explain.				

Pollution Prevention and Good Housekeeping

	Yes	No	NA	Comments
Does the facility practice general good housekeeping?				
Is facility free of trash and vegetative debris?				
Are all dumpsters and trash bins closed and stored away from storm drain inlets?				
Is maintenance being performed under cover when possible?				

Spill Prevention and Response

	Yes	No	NA	Comments
Are all sanitary wastewater systems operational and maintained to prevent a discharge of wastewater?				
Are pre-treatment devices operational and maintained to prevent a discharge of wastewater? (Oil level is no more than 25% of total level)				

Spill Prevention and Response				
	Yes	**No**	**NA**	**Comments**
Is a copy of the permit and log of operation and maintenance available on site for all City and County of Honolulu IWDP?				
Have all spills been cleaned up?				
Do all leaking vehicles have drip pans?				
Are spill kits stocked and placed near POL storage areas?				
Is secondary containment being used for all hazadous substances stored outside?				
Erosion and Sediment Control				
	Yes	**No**	**NA**	**Comments**
Is erosion occuring at the facility in the form of rills, gullies, or sloughing? If yes, identify where.				
If erosion is occuring, has immediate action been taken to mitigate impacts to storm water until a permanent fix can be imlemented?				
Are roadways free of sediment?				
Is vegetation at the facility being maintained to prevent erosion?				
MS4				
	Yes	**No**	**NA**	**Specify amount in ft3 and location**
Are catch basins, storm drains, and MS4 conveyances free of trash? If not, specify quantity in ft3				
Are catch basins and storm drains free of debris and vegetation? If not, specify quantity in ft3				
Are all MS4 features in tact, free of damage, and functional?				
MS4 Effluent				
	Yes	**No**	**NA**	**Comments**
Is the MS4 effluent free of materials that will settle to form objectionable sludge or bottom deposits?				
Is the MS4 effluent free of floating debris, oil, grease, scum, or other floating materials?				
Is the MS4 effluent free of turbidity and suspended solids ?				

Receiving Water				
	Yes	**No**	**NA**	**Comments**
Is the receiving water free of materials that will settle to form objectionable sludge or bottom deposits, turbidity, floating debris, oil, grease, scum, or other floating materials? Identify receiving water in comments.				

Identify location and extent of all deficiencies found during inspection:

Describe corrective action taken to address deficiencies:

Appendix E - Construction, Repair, and Maintenance BMP Field Manual

HAWAII ARMY NATIONAL GUARD

Construction, Repair, and Maintenance Storm Water Best Management Practices (BMP) Manual

NPDES Permit No. HI S000052

September 2017

Prepared By:
Hawaii Army National Guard
Environmental Office
3949 Diamond Head Rd.
Honolulu, HI 96816

Table of Contents

List of Appendices

List of Acronyms

BMPs	Best Management Practices
CFR	Code of Federal Regulations
CISEC	Certified Inspector of Sediment and Erosion Control
CWB	Clean Water Branch
DOH	Department of Health
ECB	Erosion Control Blanket
ENV	Environmental Office
FMO	Facilities Management Office
HAR	Hawaii Administrative Rules
HIARNG	Hawaii Army National Guard
LID	Low Impact Development
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NOC	Notice of Cessation
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
PM	Project Manager
POL	Petroleum, Oil, and Lubricant
RCRA	Resource Conservation and Recovery Act
RECP	Rolled Erosion Control Product

SECP	Sediment and Erosion Control Plan
SME	Subject Matter Expert
SOW	Scope of Work
SPCCP	Spill Prevention, Control and Countermeasure Plan
SWPPP	Storm Water Pollution Prevention Plan
TRM	Turf Reinforcement Matting
UFC	Unified Facilities Criteria
UIC	Underground Injection Control

1 Introduction

The Hawaii Army National Guard (HIARNG) has prepared this *Construction, Repair, and Storm Water Maintenance Best Management Practices (BMP) Manual* in accordance with National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit HIS000052 (herein referred to as *The Permit*) Part D.1.d. (1) to provide guidance to all personnel, tenants, employees, and contractors involved in construction, repair or maintenance activities at HIARNG facilities regardless of project size and scope. This Plan supersedes the following:

- Construction, Repair, and Maintenance Storm Water Best BMP Manual, August 2016

1.1 Applicability

The contents of this BMP Manual are herein considered to be minimum requirements for all construction, repair, and maintenance activities conducted on HIARNG facilities. Failure to comply with the requirements of this manual will be considered a violation of The Permit and will be enforced through the chain of command, contracting officer, and the Hawaii Department of Health (DOH). Table 1.1 provides a summary of the minimum requirements and Section 7 of this plan describes the HIARNG corrective action policy.

Table 1.1 Regulatory Requirements

Qualifying Criteria	Applicable Regulation	Requirements
All Projects	HIARNG NPDES MS4 Permit HIS000052, HIARNG SWMP, HIARNG Construction, Repair, and Maintenance Storm Water BMP Manual, August, 2016	• Minimize storm water pollution to the Maximum Extent Practicable (MEP).
Project footprint 5,000 ft^2 or greater	Unified Facilities Criteria (UFC) 3-210-10 *Low Impact Development (LID)*	• Maintain or restore pre-development hydrology using Low Impact Development.
Projects disturbing 1 acre or more or which are part of a larger common plan totaling 1 acre or more.	Hawaii Administrative Rule (HAR) 11-55, *Water Pollution Control*, Appendix C, December 6, 2013	• Submit Notice of Intent (NOI) • Prepare a Storm Water Pollution Prevention Plan (SWPPP) • Notify DOH 7 days prior to construction • Submit Notice of Cessation (NOC)

2 Project Planning

Compliance with federal and state storm water regulations begins during the preliminary planning stages of each project; communication between the Facility Management Office (FMO) and the HIARNG Environmental Office (ENV) prior soliciting projects is imperative to prevent NPDES permit violations, legal liabilities, and change orders.

2.1 FMO Project Planning

All HIARNG Project Managers (PMs) shall implement the following three (3) steps to assure all applicable storm water regulations are communicated during the planning stages of each project:

1. FMO shall include language in all Scopes of Work (SOWs) which contractually requires contractors to comply with *the HIARNG Construction, Repair, and Maintenance Storm Water BMP Manual*, August 2016; HAR 11-55 *Water Pollution Control*, Appendix C, December 6, 2013; and UFC 3-210-10 *Low Impact Development*, November 15, 2010.

2. For projects disturbing one (1) acre or more, provide ENV with a Draft SWPPP and Draft NOI for review and acceptance at least thirty (30) days prior to submittal to the Hawaii DOH, Clean Water Branch (CWB).

3. For projects disturbing one (1) acre or more, provide ENV with a Final SWPPP and a copy of the time-stamped NOI submittal to DOH.

2.2 Contractor Project Planning

Contractors, engineers, and consultants are encouraged to visit the project site prior to preparation of their bid proposals, SWPPP, and Sediment and Erosion Control design drawings to assess site conditions, storm water flow patterns, project discharge points, soil types, measure project foot prints, plan for staging areas, and determine the appropriate BMP's for erosion and sediment control.

2.3 ENV Project Planning

The ENV Water Quality Subject Matter Expert (SME) reviews the project SOW, design drawings, NOI, and SWPPP to assess compliance with federal and state storm water requirements and to ensure LID and appropriate BMPs have been included. ENV uses the SWPPP Review Checklist (Appendix A) and the LID Project Review Checklist (Appendix B) to document and communicate regulatory deficiencies.

2.4 Training

ENV provides training annually and as needed to all HIARNG staff with construction, repair, or maintenance responsibilities. The training provides an overview of project planning, permit and regulatory requirements, storm water BMP selection, required inspections, and the corrective action policy.

3 Non-Permitted Projects

Construction, repair, and maintenance activities conducted on HIARNG facilities that do not require a NPDES permit are still required to prevent storm water pollution to the MEP. Often times the impact small projects can have on storm water is underestimated. All project SOW should be provided to ENV for review and comment prior to solicitation for bid. Site specific BMPs for each project will be recommended by ENV during SOW review and should be incorporated into the project's contract requirements.

Examples of work activities that require BMPs

- Concrete
- Dry Wall
- Pressure Washing
- Cleaning
- Painting and Paint Removal
- Waste Water Pumping
- Landscaping
- Earth Work
- Equipment Maintenance
- Refueling Equipment
- Vehicle Washing
- Paving
- Dewatering
- Stockpiling

4 NPDES Permitted Projects

4.1 Required Compliance Submittals

In accordance with HAR 11-55, C, projects that require a NPDES permit must notify and submit compliance documents to the Hawaii DOH at the following three (3) points during a project.

Milestone	Required Action
30 days before start of construction	Submit NOI via e-Permitting Portal
7 days before the start of construction	Verbal or Written Notification to CWB
7 days after end of construction	Submit NOC via e-Permitting Portal

4.2 NPDES Permit Reporting

Contractors and the FMO PM must notify HIARNG ENV immediately or as soon as practicable at the 24 hour a day, 7 days a week Emergency Hotline at (808) 672-1013 if any of the following occurs at their construction, repair, or maintenance project site:

- A spill of Petroleum Oil Lubricant (POL), hazardous material, or hazardous waste
- An illicit discharge of anything other than pure storm water from a NPDES permitted construction site (i.e. trash, debris, soil, chemicals, petroleum in stormwater)

Contractors and FMO PM shall not report illicit discharges or spills to HDOH on behalf of HIARNG without first notifying and receiving guidance from HIARNG ENV.

5 Storm Water Pollution Prevention Plan

For projects that require NPDES permit coverage (see Table 1.1), a SWPPP shall be developed in accordance with HAR 11-55, Appendix C, Section 7 and retained on site throughout the project. A draft SWPPP must be reviewed and accepted by FMO and ENV prior to finalization and submittal of the NOI to DOH. ENV uses the SWPPP checklist (Appendix A) to evaluate each plan. A SWPPP template is included in Appendix C; contractors are encouraged to use the template when practicable.

The contractor responsible for architecture and engineering (A/E) shall prepare the SWPPP which includes sediment and erosion control drawings for each phase of construction per Army National Guard *General Facilities Information Design Guide* 415-5, Chapter 6, Section 1, Division 1, dated June 1, 2011.

6 Best Management Practices

Storm water BMPs are methods or devices designed to minimize impacts to storm water. There are two main types of BMPs: structural and non-structural. Structural BMPs are devices or equipment used to minimize pollutants in storm water. Non-structural BMPs are changes in protocol, approach, and management practices used to minimize pollutants in storm water. Contractors must install all storm water BMPs in accordance with good engineering practices, manufacturer's instructions, and design drawing specifications.

6.1 Selecting Best Management Practices

Contractors must select the most appropriate and effective BMPs for their project based on site-specific conditions. Items to be taken into consideration when evaluating a site for BMP selection include, but are not limited to:

- Storm water flow patterns
- Existing storm water infrastructure
- Soil types
- Annual precipitation
- Seasonal rainfall intensity
- Grade and slope
- Impervious and pervious surface types
- Nearby surface waters and impairment classifications
- Chemical use
- Hazardous material storage

BMPs at construction and maintenance sites can be summarized into two categories:

1. Sediment and Erosion Control
2. Waste and Hazardous Materials Management

6.2 Sediment and Erosion Control

All projects that disturb soil, regardless of project size and NPDES permit status are required to minimize erosion and migration of soil from their project site to the MEP. Wind and water are responsible for the majority of erosion typically found at construction and maintenance sites. Sites disturbing one (1) acre or more that require NPDES permit coverage must develop a sediment and erosion control plan (SECP) per HAR 11-55, Appendix C.

6.2.1 Erosion Prevention

Erosion can be prevented by minimizing disturbed areas and preserving existing vegetation on site. When practicable, contractors should plan their project in phases to minimize the total area of exposed soil at any one time. Contractors must mark areas of vegetation to be preserved.

6.2.2 Perimeter Control

Prior to soil disturbing activities, contractors must install sediment controls around the perimeter of their sites to prevent illicit discharges. Dependent on site specific conditions, sediment can be retained using one, some, or all of the following structural BMPs. Contractors must maintain perimeter controls and shall remove sediment before it accumulates to one-half of the aboveground height of any perimeter control.

6.2.2.1 Silt Fence

Silt fences are designed to contain storm water on site and cause ponding to allow deposition of sediments. Silt fences should not be used where concentrated flows occur unless reinforced with additional support. Silt fences should be installed with the posts on the downstream side of the flow; on the upstream side of flow, the bottom tail of the silt fence should be trenched six inches down and six inches out then backfilled with soil.

6.2.2.2 Vegetated Buffer Strip

Vegetation surrounding a site may be used as a form of perimeter control as long as the vegetated buffer strip proves to be effective at reducing runoff velocity and removing sediment to prevent an illicit discharge. The minimum width allowed for a vegetated buffer when used as a primary perimeter control is 15 feet, the vegetated buffer strip shall not have a slope greater than 15%, and shall have a stand of dense vegetation maintained to a height of 3-12 inches. The vegetated buffer must be distinguished by flagging or other identifier to prevent disturbance from vehicles, machines, and use as a storage area.

6.2.2.3 Compost Socks

Compost socks create a very small sediment containment system to allow for deposition of suspended particles. Compost socks should not be used where concentrated flows of runoff are anticipated such as drainage ditches, around inlets, or above/below culvert discharge. Compost socks should be installed to prevent runoff from flowing beneath and between socks by staking socks into the ground or anchoring and must overlap the ends of each sock by at least six (6) inches.

6.2.3 Inlet Protection

Existing storm water infrastructure such as storm drains, catch basins, underground injection control (UIC) wells, curb inlets, and culverts should all be protected to prevent a discharge of sediment into the MS4. Depending on the type of inlet, a site specific device should be designed to prevent an illicit discharge. Typical methods include installing filter fabric under the grate of a storm drain or catch basin, and preventing flow to the inlet altogether using other barriers such as silt fencing or sand bags. Contractors are free to choose which inlet protection BMP will work best for their site as long as it effectively prevents illicit discharges.

6.2.4 Dust Control

Application of water to minimize wind erosion shall be used on all exposed soils or any construction, repair, or maintenance activity generating dust.

6.2.5 Stockpile Management

Stockpiles of soil that are not being actively used shall be protected from erosion with a form of perimeter control (see section 5.2.2).

6.2.6 Soil Stabilization

Exposed soil should be stabilized with vegetation as soon as practicable during and after construction, repair, and maintenance activities.

6.2.6.1 Rolled Erosion Control Products (RECPs)

RECPs such as Turf Reinforcement Matting (TRM) and Erosion Control Blankets (ECBs) limit soil erosion, retain soil moisture, promote seed germination and protect seedlings during heavy rainfall or winds. RECPs are most appropriately used on sloped areas, however can be used anywhere exposed soil exists. Before installing RECPs, all rills and gullies need to be smoothed and rocks need to be removed. When installing RECPs on a hillside, the uphill edge of the material needs to be secured by trenching and/or anchoring and secured to the slope with an adequate amount of anchors. Seeding should be performed prior to installation of RECPs.

6.2.6.2 Seeding

When seeding an area to be stabilized, ensure success by preparing an appropriate seed bed, by incorporating fertilizer into the top soil, and irrigate until seed is established. In accordance Army National Guard General Facilities Information Design Guide 415-5 projects shall only use vegetation that is native, low maintenance, and drought tolerant.

6.2.6.3 Mulch

Hydraulic mulch, straw, or hay can all be used to reduce soil erosion and to provide temporary cover of newly planted seed until established. Mulch must be applied at a density to cover 80%-100% of the ground.

6.2.7 Tracking Control

Contractors must minimize the track out of sediment onto off site streets, sidewalks, and other paved surfaces by restricting vehicles to a designated egress designed to remove sediment from vehicles prior to exiting the site. If sediment is tracked off site, the contractor must remove the sediment by the end of the same work day. Contractors using stabilized construction entrance/exit to control tracking must meet the following specifications:

- Dimensions of the entrance/exit must be at least 50 ft. long and 30 ft. wide
- A geotextile filter fabric must be used under the aggregate
- Aggregate must be 2-4 inches in size and cannot be crushed asphalt
- Depth of aggregate must be 12 inches thick

6.3 Waste and Hazardous Materials Management

Contractors must manage waste and hazardous materials at their site to minimize pollutants to storm water.

6.3.1 Housekeeping

General good housekeeping is required at all project sites. Contractors should keep their site free of trash and debris that could be swept away by storm water. Contractors are encouraged to consolidate equipment storage and staging areas to one location.

6.3.2 Portable Toilets

All portable toilets must be located away from storm water drainage features and vehicle traffic and secured to the ground when practicable.

6.3.3 Concrete Waste

Projects using concrete as a construction material or demolition activities generating concrete dust and debris must use BMPs to minimize contact with storm water. When washing concrete pump trucks and equipment, contractors must designate an impervious washout basin that allows wash water to evaporate so that concrete debris can be properly disposed. Concrete washouts must be identified with a sign and cleaned out when volume reaches 50% of capacity.

6.3.4 Hazardous Materials and POL

All hazardous materials and POL must be stored in leak-proof containers and either have secondary containment or be stored under cover to prevent contact with rain water.

Fueling on-site is permitted only with the approval of the HIARNG ENV. If the aggregate shell capacity of POL containers 55 gallons or more exceeds 1,320 gallons at the project site, contractor shall prepare a site specific Spill Prevention Control and Countermeasures Plan (SPCCP) to comply with title 40 of the code of federal regulations (CFR) Part 112 *Oil Pollution Prevention* 40 CFR 112, and provide ENV a copy of the plan. .

Any time hazardous materials and POL are used, stored, or transferred on HIARNG property, contractors must have spill supplies readily available. All spills must be cleaned up immediately using dry cleanup methods; hosing/pressure washing surface is not allowed without HIARNG ENV approval. All waste, including used absorbent material, contaminated soil, etc., shall be disposed of in accordance with applicable Resource Conservation and Recovery Act (RCRA) and Toxic Substances Control Act (TSCA) regulations.

Contractors must call the HIARNG ENV Emergency Hotline at (808) 672-1013 and the FMO PM immediately to notify of all hazardous materials and POL spills that occur on their job site.

6.3.5 Hazardous Wastes

Contractors shall keep ENV apprised of the generation, accumulation, and disposal of hazardous waste and other regulated waste prior to and throughout construction, repair or maintenance activities. Contractors shall store all such waste in sealed containers which are constructed of suitable materials to prevent leakage and corrosion, and which are marked, managed and disposed of in accordance with all applicable federal and state regulations. All containers with hazardous liquids must be stored in appropriately sized secondary containment. All spills of hazardous waste must be immediately reported to the HIARNG ENV Emergency Hotline at (808) 672-1013.

6.3.6 Painting and Paint Removal

Contractors shall consider paint to be a hazardous material and must store containers in accordance with section 5.3.4 of this plan. Contractors shall not rinse paint brushes or painting equipment on-site;. these items shall be removed off-site for cleaning or disposal.

When removing paint, contractors must capture all paint chips and debris, characterize the waste, and dispose of properly.

6.3.7 Equipment and Vehicle Storage

Frequent preventive maintenance checks shall be accomplished on equipment and vehicles to check for and prevent leaks. Equipment and vehicles not being actively used must be stored on an impervious surface when possible and drip pans must be used to capture all POL leaks. Spill supplies shall be readily available on-site to immediately clean up any leaks that may occur. Leaking equipment and vehicles shall be removed from HIARNG property as soon as possible for repair.

7 Site Inspections

All project sites must be inspected regularly by the contractor and HIARNG ENV to confirm compliance with storm water regulations.

7.1 NPDES Permitted Projects Weekly Contractor Inspections

In accordance with HAR 11-55, Appendix C, Section 9, contractors whose project sites are covered under a NPDES permit must perform site inspections at least every seven (7) days and within twenty-four (24) hours of a storm event of 0.25 inches. Inspectors must be knowledgeable in the principals and practices of erosion and sediment control and pollution prevention.

7.2 NPDES Permitted Projects Monthly Inspections

All construction, repair, and maintenance projects covered under a NPDES General permit for construction activities or individual NPDES permit, as required by HAR 11-55, Appendix C shall be inspected prior to ground disturbing activities (except for activities associated with the installation of the BMPs) by an engineer or qualified inspector employed or retained by HIARNG or the contractor who reviews and becomes familiar with the project's SWPPP and/or other equivalent document(s). In addition to inspections required by the NPDES permit program, monthly inspections are conducted by a qualified construction inspector who is independent of the construction project being inspected (i.e., not involved in the day-to-day planning, design, or implementation). The inspector shall use the HIARNG NPDES Construction Inspection Form located in Appendix D to assess the contractor's adherence to applicable regulations and their SWPPP. At the end of each inspection, the HIARNG ENV representative and the site contractor representative review the inspection results together and discuss the cause of all deficiencies (if any). The site contractor is notified of the deadline for corrective action and a follow-up inspection is scheduled for the respective timeframe. The site contractor representative

shall sign the inspection form acknowledging the inspection results and the corrective actions required. A follow-up inspection is conducted to confirm all deficiencies have been corrected and the inspection form is signed and dated by both parties to verify that the corrections have been completed. HIARNG ENV retains copies of all construction inspections for five (5) years after the permit is closed.

8 Corrective Action Policy

HIARNG's corrective action policy on storm water protection deficiencies is divided into two categories: Critical, and Non-Critical. Storm water deficiencies can occur at any NPDES permitted facility or construction site. If a contractor does not correct a storm water deficiency within the prescribed time-frame, the HIARNG Environmental Office will escalate the issue through the chain of command, contracting officer, and the Hawaii Department of Health (DOH).

8.1 Critical Deficiency

A critical deficiency is any issue that poses an immediate threat of contamination to storm water and/or surface water, or any issue that could cause an illicit discharge if a storm event were to occur. Examples of critical deficiencies are: spills that haven't been cleaned up, concrete wash out not being used, lack of proper perimeter control, and unprotected storm drain inlets. All critical deficiencies must be corrected within the same business day.

8.2 Non-Critical Deficiency

A non-critical deficiency is any issue that does not pose an immediate threat of contamination to storm water and/or surface water. Examples of non-critical deficiencies are: administrative and recordkeeping violations, lack of secondary containment, or improper installation of erosion control devices. All non-critical deficiencies must be corrected within five (5) business days.

9 Recordkeeping

9.1 During Construction

All construction, repair, and maintenance projects covered under a NPDES General permit for construction activities as required by HAR 11-55, Appendix C shall keep the NPDES permit, SWPPP, SECP, and contractor weekly inspections readily available on site at all times. The contractor must also keep a record of all changes to the SWPPP and ensure the sediment and erosion control plan is updated to reflect current site conditions. The HIARNG ENV maintains an inventory of all NPDES construction permits, SWPPP, and record of all monthly inspections.

9.2 Post-Construction

All records pertaining to NPDES permit coverage shall be retained for a minimum of five (5) years after the NOC

Appendix A – SWPPP Review Checklist

HIARNG Environmental Office
Storm Water Pollution Prevention Plan
Review Checklist

Project Name:	**Project Number:**
PM Name:	**PM Contact Info:**
Contractor Name:	**Contractor POC:**

		Yes	No	NA
1	Does the SWPPP include all storm water team members by name or title that includes their responsibilities			
2	Does the SWPPP include the total size of the property (in acres)			
3	Does the SWPPP include the size of the area to be disturbed (in acres)			
4	Does the SWPPP include the maximum area to be disturbed at any one time			
5	Does the SWPPP include a description of the construction support activities, i.e. concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, stock piles			
6	Does the SWPPP include a list of all operators who will be engaged in construction activities at the site and the areas of the site over which each operator has control			
7	Does the SWPPP include a sequence of intended construction activities			
8	Does the SWPPP include a schedule including a start date and the duration of:			
a	Installation of storm water control measures			
b	The time at which the storm water control measures will become operational			
c	Earth Disturbing activities			

			Yes	No	NA
	d	Cessation, temporarily or permanently, of construction activities on all or part of the site			
	e	Final or temporarily stabilization of areas of exposed soil			
	f	Removal of temporary storm water conveyances/channels, or other storm water control measures			
	g	Removal of construction equipment and vehicles			
		Cessation of any other pollution-generating activities			
9	Does the SWPPP include a legible site map, or a series of maps showing the following:				
	a	Boundaries of the property			
	b	Locations where construction activities will occur			
	c	Locations of earth disturbing activities			
	d	Approximate slopes before and after major grading, noting any phasing of construction activities			
	e	Locations where sediment, soil, or other construction material will be stockpiled			
	f	Locations of any crossing of surface waters			
	g	Designated points on the site where vehicles will exit onto paved roads			
	h	Locations of structures and other impervious surface upon completion of construction			
	i	Locations of construction support areas			
	j	Locations of all surface waters, including wetlands, that exist within or in the immediate vicinity of the site			
	k	Labels that indicate which water bodies are listed as impaired, or Tier 2, Tier 2.5, or Tier 3 water			
	l	Boundary lines of any natural buffers			
	m	Areas of critically listed habitat for endangered or threatened species			
	n	Topography of the site			

			Yes	No	NA
	o	Existing vegetative cover			
	p	Drainage patterns of stormwater before and after grading activities			
	q	Stormwater discharge locations			
	r	Locations of storm drain inlets on the site and in the immediate vicinity			
	s	Locations where stormwater will be discharged to surface waters or wetlands on or near the site			
	t	Locations of all potential pollution generating activities (i.e., fuel storage and transfer, fertilizers and pesticides, paints, solvents, etc.)			
	u	Location of stormwater control measures			
	v	Locations where polymers, flocculants, or other treatment chemicals will be used and stored			
10		Does the SWPPP include a list and description of all the pollutant-generating activities to occur onsite (i.e., paving, concrete, stucco, waste disposal, dewatering)			
11		Does the SWPPP include an inventory of pollutants or pollutant constituents for each pollution generating activity which could be exposed to storm water, taking into account potential spills or leaks that could occur?			
12		Does the SWPPP identify all sources of allowable non-stormwater discharges?			
13		If surface water is located within 50 ft of the project's earth disturbance; does the SWPPP describe the protective measures and compliance alternatives that will be used?			
14		Does the SWPPP provide information on the type of stormwater control measures to be installed and maintained and provide design information?			
15		Does the SWPPP specify what sediment control measures will be installed and made operational prior to earth disturbing activities?			

		Yes	No	NA
16	Does the SWPPP document stabilization techniques at exit points and any additional controls to be used to remove sediment prior to a vehicle exiting the site? (i.e., tire washing, vehicle tracking pad)			
17	For linear projects where the use of perimeter controls is determined to be impracticable in some portions, does the SWPPP describe how the permittee determined the impracticality?			
18	Does the SWPPP describe post-construction BMPs to minimize the discharge of pollutants via stormwater discharges after construction has finished?			
19	Does the SWPPP describe spill prevention and response techniques that will be used onsite			
20	Does the SWPPP describe procedures for notification of appropriate facility personnel and emergency response agencies			
21	Does the SWPPP describe how the permittee will handle disposal of all wastes generated at the site			
22	Does the SWPPP describe the procedures the permittee will follow for maintaining the stormwater control measures and taking corrective actions			
23	Does the SWPPP identify the personnel responsible for conducting inspections			
24	Does the SWPPP describe an inspection schedule and frequency of inspections			
25	Does the SWPPP identify the location of the rain gauge on the site or the address of the weather station the contractor will use to collect rainfall data			
26	Does the SWPPP include a copy of the inspection form that will be used			
27	Does the SWPPP include documentation of pollution prevention training for personnel who are responsible for the design, installation, maintenance, inspection and/or repair of stormwater controls and storage/application of chemicals at the site			

		Yes	No	NA
28	Does the SWPPP provide documentation of compliance with the Safe Drinking Water Act, Underground Injection Control (UIC) requirements?			
29	Does the SWPPP include documentation of any correspondence with the State of Hawaii Safe Drinking Water Branch for implementing UIC requirements with the following stormwater controls: infiltration trenches, pre-cast detention vaults, dry wells, seepage pits, etc.			
30	Does the SWPPP include the legal name, street address, POC, phone number, and email address of the contractor?			
31	Does the SWPPP include documentation supporting the determination with respect to the Endangered Species Act			
32	Does the SWPPP include documentation for the protection of historic properties			
33	Does the SWPPP include a copy of the drainage system owner's approval allowing discharge into their system?			
34	Does the SWPPP include a copy of the county-approved grading permit?			
35	Does the SWPPP include a copy of the 401 water quality certification?			
36	Does the SWPPP include a list of all other permits?			
37	Does the SWPPP include the certification listed in Appendix A HAR 11-55?			
38	Is the SWPPP signed and dated?			

Additional Comments:	
Reviewer's Name:	**Reviewer's Title:**
Reviewer's Signature:	**Date:**

Appendix B – LID Project Review Checklist

LID Design Review Checklist

Project No.	FMO Project Manager:	Review Date:

Design Complete Percentage:

Project Description:

Description of Stormwater Component:

	Yes	No
Is the project footprint 5,000 ft2 or greater?		
Does the project area discharge storm water to an MS4 or receiving water body?		
Does the project include paving previously undeveloped area?		
Does the project maintain or restore, to the maximum extent technically feasible, the pre-development hydrology of the property with regard to the temperature, rate, volume, and duration of flow?		
Does the project conform with UFC 3-210-10 *Low Impact Development*		

Describe all LID features included in the project's scope:

Describe how the LID features will need to be maintained in out years, including frequency:

ENV Reviewer Name:	ENV Reviewer Signature:

Appendix C – SWPPP Template

Storm Water Pollution Prevention Plan

Project Title
Project Number

DATE

Prepared By:
Contractor Name
Contractor Address

Table of Contents

List of Acronyms

1 Storm Water Team

Title	Name	Contact Information	Storm Water Responsibilities
Project Architect Engineer			
Site Operator/Owner			
HIARNG Project Manager			
HIARNG Building Inspector			
HIARNG Environmental Office POC	Stormwater SME	HIARNG ENV Office 91-1211 Enterprise Ave., Bldg. 1903 Kapolei, HI 96707 (808) 672-1013	SWPPP Plan Review, BMP Inspections, Training
Construction Contractor			

2 Nature of Construction Activities

Describe specifically what will occur at the site to accomplish the project, include all details that have potential to impact storm water.

Size of Project Site (Acres):	
Total Area to be Disturbed (Acres):	
Maximum Area to be Disturbed at one time (Acres)	

Is this project in response to a public emergency? YES ☐ NO☐

If yes, include civil defense proclamation.

3 Identification of Site Contractors

Contractor Name and Address	Nature of Work on Site	Contact Information

4 Sequence and Dates of Construction

Activity Description	Estimated start date	Estimated end date
Installation of storm water controls		
Excavation and Earth disturbing		
Final grading		
Soil stabilization		
Cessation of construction		
Demobilization of site equipment		
Removal of storm water controls		

5 Site Maps

Site maps must include:

1. *Boundaries of the property and locations where construction activities will occur*
2. *Locations of earth disturbing activities noting any sequencing of construction activities*
3. *Approximate slopes before and after major grading*
4. *Drainage patterns with flow arrows before and after grading*
5. *Location of stockpiles and storage of construction material*
6. *Locations of any contaminated soil stockpiles*
7. *Locations of crossing state waters*
8. *Designated construction egress*
9. *Location of structures and other impervious surfaces upon final completion*
10. *Location of construction support activities*
11. *Location of all state waters, including wetlands within or in the vicinity of the site*
12. *Boundary lines of any natural buffers provided*
13. *Topography of the site*
14. *Existing vegetation cover*
15. *Storm water discharge locations*
16. *Storm water inlets, features*
17. *Location of all pollution generating activities and chemical storage*
18. *Location of storm water control measures*

6 Construction Site Pollutants

Pollutant	Activity that Generates Pollutant
Diesel Fuel	*Fuel storage, transfers, and unanticipated spills or leaks from vehicles and heavy equipment on site*

7 Sources of Non-Storm Water

If non-storm water will be generated on site, the contractor must identify the source of the non-storm water and describe the BMP that will be used to prevent a discharge.

8 Buffer Documentation

If the site is located within 50 feet of state waters, the contractor must describe the compliance alternative selected for the site.

9 Storm Water Control Measures

Control Measure	BMP	BMP Design Description
Sediment and Erosion control	***Silt fence***	***A Silt fence will be as perimeter control around the north and west sides of the subject site to prevent soil from discharging off site***
Sediment and Erosion control	***Stabilized construction egress***	
Pollution Prevention	***Drip pan***	
Stabilization	***Hydro mulch***	

10 Post Construction Measures

Describe how discharge of pollutants will be minimized after construction is complete.

11 Pollution Prevention

11.1 Spill Prevention Control and Countermeasures

Describe spill response procedures, notification procedures and identify the person responsible for detection and response.

11.2 Waste Management

Type of Waste	Describe how waste will be managed on site	Describe how waste will be disposed off site
Demolition Debris		
Concrete		
Sediment		
Domestic waste		
Sanitary waste		
Petroleum Waste		
Hazardous Waste		

12 Inspections, Maintenance, and Corrective Action

Describe how the storm water BMPs will be maintained, inspected, and corrected. Include the person responsible for conducting inspections and include the inspection form in appendices.

13 Training

Document personnel training.

14 Safe Drinking Water Act Compliance

Describe and document compliance with underground injection control (UIC) well requirements for subsurface storm water controls.

15 Other State, Federal, and County Permits

Include a list of all other applicable permits such as MS4 discharge approval, grading permits, section 401, SHPO, USFWS and include as appendices.

16 Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated 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.

Name	Title	Date

17 Post-Authorization Additions to the SWPPP

Include a list of amendments and a copy of the NOI, and Permit as appendices

Log of Changes to SWPPP

Site Name:	NPDES Permit No:

Date of Change	Description of Change to SWPPP

SWPPP WEEKLY CONSTRUCTION INSPECTION FORM

Project Name:	Project No.:
Location:	Date:
FMO PM:	Contractor:
Inspector:	NPDES Permit No.:
Weather Conditions:	Reason for Inspection:

	Yes	No	NA
Is the NPDES permit readily available on site?			
Is the SWPPP readily available on site?			
Is a sign posted that includes the permit No., contact name/phone number visible from a public road nearest to the active part of the construction site?			
Are the discharge of pollutants being minimized from the construction site?			
Are the perimeter control devices installed according to the design specs?			
Are the perimeter control devices being properly maintained?			
Are vehicle tracking pads installed per the design specs using 2-4" rock?			
Are vehicle tracking pads being properly maintained?			
Are all slopes stabilized and erosion is being prevented?			
Are sediment or erosion control devices adequately protective?			
Are all portable toilets secured to the ground and installed at least 10 ft from a roadway?			
Do all POL and Haz Mat storage containers have secondary containment?			
Are spill kits stocked and located in proximity of POL and Haz Mat containers?			
Are all spills cleaned up?			
Is the concrete washout area installed according to the design specs?			
Is there a visible sign labeling the concrete washout area?			
Is concrete washout area being maintained to not exceed 50% capacity?			
Is site protected from wind erosion?			
Are tires being washed before leaving the site?			
Are drip pans being used under heavy equipment?			

	Yes	No	NA
Are all stock piles protected from erosion?			
Is the site free of debris and trash (good housekeeping)?			
Is paint brush rinse water being disposed of properly?			
Are any conditions present that could lead to a spill, leak, or discharge?			

Corrective Action Needed
1
2
3
4
5
6

By signing this form, I agree that all information recorded on this inspection form accurately represents the condition of the construction site at the date and time of inspection.

Contractor Signature:

Date:

Appendix D – NPDES Construction Inspection Form

HIARNG NPDES CONSTRUCTION INSPECTION FORM

Project Name:	**Project No.:**
Location:	**Date:**
FMO PM:	**Contractor:**
Inspector:	**NPDES Permit No.:**
Weather Conditions:	**Reason for Inspection:**

		Yes	No	NA
1	Have all deficiencies been corrected within 5 days of last inspection?			
2	Is the NPDES permit readily available on site?			
3	Is the SWPPP readily available on site?			
4	Does the SWPPP include current stormwater team members names?			
5	Does the SWPPP include current construction site operator names?			
6	Is the SECP being updated within 5 days of all changes?			
7	Is the contractor inspecting site per the frequency in their SWPPP?			
8	Is the contractor maintaining all inspection records on site?			
9	Are all inspection forms signed?			
10	Are the discharge of pollutants being minimized from the construction site?			
11	Are the perimeter control devices installed according to the design specs?			
12	Are the perimeter control devices being properly maintained?			
13	Are vehicle tracking pads installed per the design specs using 2-4" rock?			
14	Are vehicle tracking pads being properly maintained?			
15	Are all slopes stabilized and erosion is being prevented?			
16	Are all sediment or erosion control devices adequately protective?			
17	Are all portable toilets secured to the ground (when practicable) and installed at least 10 ft from a roadway?			
18	Do all POL and Haz Mat storage containers have secondary containment?			
19	Are spill kits stocked and located in proximity of POL and Haz Mat containers?			
20	Are all spills cleaned up?			
21	Is the concrete washout area installed according to the design specs?			

		Yes	No	NA
22	Is there a visible sign labeling the concrete washout area?			
23	Is concrete washout area being maintained to not exceed 50% capacity?			
24	Is site protected from wind erosion?			
25	Are tires being washed before leaving the site?			
26	Are drip pans being used under heavy equipment?			
27	Are all stock piles protected from erosion?			
28	Is the site free of debris and trash (good housekeeping)?			
29	Is paint brush rinse water being disposed of properly?			
30	Are any conditions present that could lead to a spill, leak, or discharge?			

Corrective Action Needed

All Critical deficiencies must be corrected the same business day, Non-Critical deficiencies must be corrected within 5 days

1	Date Corrected:
	Contractor Signature:
	Inspector Signature:
2	Date Corrected:
	Contractor Signature:
	Inspector Signature:
3	Date Corrected:
	Contractor Signature:
	Inspector Signature:
4	Date Corrected:
	Contractor Signature:
	Inspector Signature:
5	Date Corrected:
	Contractor Signature:
	Inspector Signature:

By signing this form, I agree that all information recorded on this inspection form accurately represents the condition of the construction site at the date and time of inspection.

Contractor Signature:	Inspector Signature:
Date:	Date:

Appendix F - Storm Water Pollution Control Plan

HAWAII ARMY NATIONAL GUARD

Stormwater Pollution Control Plan

NPDES Permit No. HI S000052

February 2016

Prepared By:
Hawaii Army National Guard
Environmental Office
3949 Diamond Head Rd.
Honolulu, HI 96816

Table of Contents

List of Acronyms

AASF1	Army Aviation Support Facility 1
AMS	Asset Management System
AO	Administrative Officer
AON	Act of Nature
ARNG	Army National Guard
AST	Aboveground Storage Tank
BMPs	Best Management Practices
CFR	Code of Federal Regulations
CISEC	Certified Inspector of Sediment and Erosion Control
COC	Chain of Custody
CWA	Clean Water Act
DMR	Discharge Monitoring Report
DOD	Department of Defense
DOH	Department of Health
DOT	Department of Transportation
EA	Environmental Assessment
ECO	Environmental Compliance Officer
EDOP	Effective Date of the Permit
EIS	Environmental Impact Statement

ENV	Environmental Office
EO	Environmental Officer
EPA	Environmental Protection Agency
EPAS	Environmental Performance Assessment System
EPCRA	Emergency Planning & Community Right-to-Know Act
EQCC	Environmental Quality Control Committee
ERF	Extended Range Fuel
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FMO	Facilities Management Office
HAR	Hawaii Administrative Rules
HAZMAT	Hazardous Materials
HEPCRA	Hawaii Emergency Planning and Community Right-to-Know Act
HIARNG	Hawaii Army National Guard
HIENG	Engineering Office
HMWMP	Hazardous Material and Waste Management Plan
HRS	Hawaii Revised Statutes
IAW	In Accordance With
IOSC	Installation On-Site Coordinator
IWDP	Industrial Wastewater Discharge Permit
IPMP	Integrated Pest Management Plan
ISCP	Installation Spill Contingency Plan
LID	Low Impact Development

MCM	Minimum Control Measure
MFT	Mobile Fuel Tanker
MILCON	Military Construction
MS4	Municipal Separate Storm Sewer System
MSDS	Material Safety Data Sheet
NGB	National Guard Bureau
NG Pam	National Guard Pamphlet
NPDES	National Pollutant Discharge Elimination System
OWS	Oil Water Separator
O&M	Operation and Maintenance
OSHA	Occupational Safety Hazardous Administration
QA/QC	Quality Assurance / Quality Control
POL	Petroleum Oil Lubricant
RCRA	Resource Conservation and Recovery Act
REC	Record of Environmental Consideration
RTSM	Regional Training Site Maintenance
SOW	Scope of Work
SPCC	Spill Prevention, Control and Countermeasure
SRM	Sustainment, Restoration, and Modernization
STMP	State Transportation Motor Pool
SWMP	Storm Water Management Plan
SWPCP	Storm Water Pollution Control Plan

SWPPP	Storm Water Pollution Prevention Plan
TAG	The Adjutant General
UIC	Underground Injection Control
USACE	United States Army Corps of Engineers
USPFO	U.S. Property and Fiscal Office
UST	Underground Storage Tank
UTES	Unit Training Equipment Site
WAAF	Wheeler Army Airfield

Certification Statement

In accordance with Part A.4. of National Pollutant Discharge Elimination System (NPDES) Permit HI S000052, the Hawaii Army National Guard (HIARNG) has included the certification statement below:

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 information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering 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.

Signature: **Date:**

Name: **LTC Tracey Omori**

Title: **Facilities Management Officer**

---

1 Cross Reference Table

Hawaii Administrative Regulation Chapter 11-55, Appendix B		
Regulation	**Description**	**Location in Document**
HAR 11-55, Appendix B 6.(a)(1)	Brief Facility Description	Section 3
HAR 11-55, Appendix B 6.(a)(2)	Site Map	Section 4.1
HAR 11-55, Appendix B 6.(a)(3)	Pollutant Control Strategy	Section 5
HAR 11-55, Appendix B 6.(a)(4)	Spill Prevention and Response Plan	Section 6
HAR 11-55, Appendix B 6.(a)(5)	Past Spills	Section 7
HAR 11-55, Appendix B 6.(a)(6)	Past Illicit Discharges	Section 8
HAR 11-55, Appendix B 6.(a)(7)	Stormwater Monitoring Plan	Section 9
HAR 11-55, Appendix B 6.(a)(7)(A)	Rationale for Selecting Sampling Location	Section 9.1
HAR 11-55, Appendix B 6.(a)(7)(B)	Sample Collection Methods	Section 9.2
HAR 11-55, Appendix B 6.(a)(7)(C)	List of Parameters	Section 9.3
HAR 11-55, Appendix B 6.(a)(7)(D)	Type of Sample for Each Parameter	Section 9.3
HAR 11-55, Appendix B 6.(a)(7)(E)	Test Procedures	Sections 9.2 and 9.3
HAR 11-55, Appendix B 6.(a)(7)(F)	Detection Limit for Each Test Procedure	Section 9.3
HAR 11-55, Appendix B 6.(a)(7)(G)	Stormwater Flow Calculation Method	Section 9.4
HAR 11-55, Appendix B 6.(a)(7)(H)	Procedure to Collect Storm Event Data	Section 9.5
HAR 11-55, Appendix B 6.(a)(7)(I)	Procedure to Inspect Receiving Water	Section 9.6
HAR 11-55, Appendix B 6.(a)(8)(A)	Annual Employee Education Program	Section 10.1
HAR 11-55, Appendix B 6.(a)(8)(B)	Protocol for Inspections	Section 10.2
HAR 11-55, Appendix B 6.(a)(8)(C)	Documentation Procedures for all Inspections and	Section 10.3

2 Introduction

The HIARNG has prepared this Storm Water Pollution Control Plan (SWPCP) in accordance with the Federal Water Pollution Control Act as amended (33 U.S.C.1251) (also known as the Clean Water Act); Hawaii Revised Statutes, Chapter 342D; Hawaii Administrative Rules (HAR), Chapters 11-55, Appendix A and B, and Part E and F of HIARNG's Municipal Separate Storm Sewer System (MS4) NPDES Permit No. HI S000052, effective August 17, 2014 (herein referred to as the Permit). The objective of this SWPCP is to minimize the discharge of pollutants in stormwater runoff and to maintain compliance with conditions of the permit. A copy of this plan must be maintained at the Army Aviation Support Facility 1 (AASF1).

3 Facility Description

This SWPCP is applicable to HIARNG's AASF1 located at 1935 Santos Dumont Rd., Schofield Barracks, Wheeler Army Air Field (WAAF) in Wahiawa, HI. The facility consists of three buildings: 825, 829, and 832, helicopter and tactical vehicle parking areas, and a wash rack. The nearest water body to the facility is the Wahiawa Reservoir, located approximately 0.3 miles north of the facility. The majority of the AASF1 facility is paved, stormwater at the site flows to the USAG-HI Municipal Separate Storm Sewer System (MS4) and eventually discharges to the receiving waters of Waieli Stream to the west of WAAF. Waieli Stream converges with the Waikele Stream to the south and discharges into West Loch of Pearl Harbor which is a navigable waterway. The total POL storage capacity at the site is 45,346 Gallons (G) in the form of fifty-five (55) G drums, Mobile Fuel Tankers (MFT), Emergency and Helicopter Startup Generators, and Extended Range Fuel (ERF) storage.

3.1 Bldg. 825

Building 825 is contains administrative offices and a small aircraft hangar used primarily for storage of one C-26 jet. Aircraft maintenance is not performed in the hangar on a regular basis, therefore the building does not store any hazardous waste or petroleum oil or lubricant (POL) in quantities greater than 55 gallons. Stormwater around building 825 is captured by trench drains, and catch basins around the building and is conveyed through underground piping to a StormCeptor® and drain field on the south side of the building. The StormCeptor® was installed in 2010 to relieve localized flooding around the building.

A large asphalt area separates buildings 825 and 829 and is used for aircraft parking, aircraft refueling, and occasionally aircraft maintenance. Stormwater from the aircraft parking area sheet flows to the North into a grassy swale and a catch basin where it's discharged into the Schofield Barracks MS4.

3.2 Bldg. 829

Building 829 contains administrative offices, a large aircraft hangar, a wash rack, oil water separator (OWS), oil and hazardous material storage area, and a hazardous wastes satellite accumulation point. The wash rack effluent flows to an OWS before discharging into the sanitary sewer. Stormwater around building 829 flows to catch basins on the north and south side of the building before discharging to the Schofield Barracks MS4.

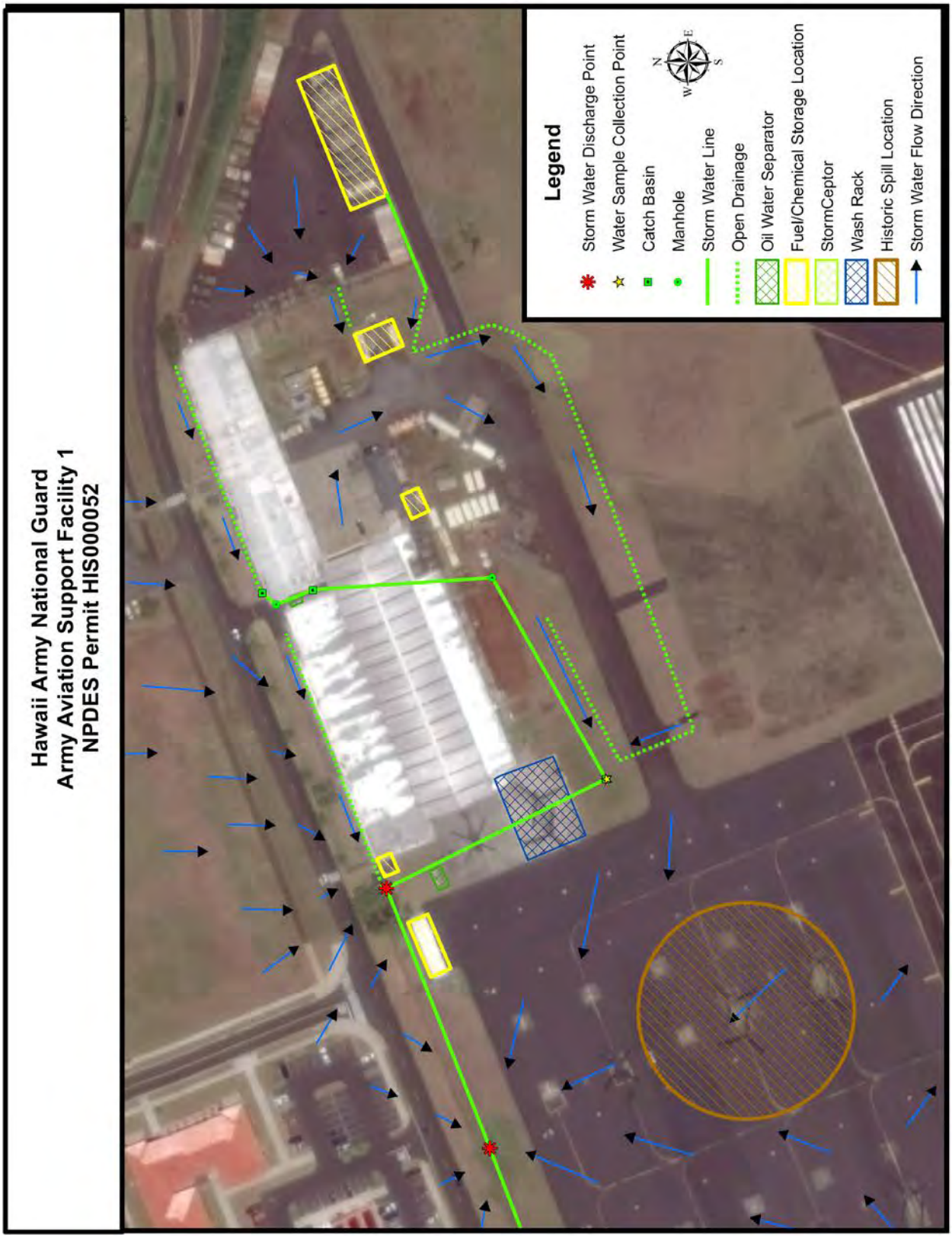
3.3 Bldg. 832

Building 832 contains administrative offices, vehicle storage area, and two concrete berm secondary containments for parking Mobile Fuel Tanker (MFT). Stormwater on the north side of building 829 sheet flows West to a down gradient catch basin in between buildings 829 and 832, stormwater on the South and East sides of building 829 sheet flows to a grassy swale on the south side of the buildings and to a catch basin before discharging to the Schofield Barracks MS4.

4 Site Map

The site map of the AASF1 facility depicts the location of the AASF1 MS4, drainage basins, discharge points, stormwater flow directions, stormwater sampling points, areas of significant spills, POL and hazardous substance storage locations, and wash racks.

4.1 Site Map


Hawaii Army National Guard
Army Aviation Support Facility 1
NPDES Permit HIS000052
Legend
Storm Water Discharge Point
Water Sample Collection Point
Catch Basin
Manhole
Storm Water Line
Open Drainage
Oil Water Separator
Fuel/Chemical Storage Location
StormCeptor
Wash Rack
Historic Spill Location
Storm Water Flow Direction
N
W
E
S

5 Pollutant Control Strategy

All personnel at the AASF1 facility are required to implement best management practices (BMPs) to prevent pollutants from coming in contact with stormwater. Table 4.1 below provides a list of potential pollutants, sources, and the BMPs that are used as the pollution control strategy.

Potential Pollutant	Source of Pollutant	Pollution Control Strategy (BMP)
Oil/Grease	Fuel Storage	• Store fuel inside impervious secondary containment • Inspect fuel storage container quarterly per SPCC Plan • Absorb any sheen before releasing water from secondary containment
Oil/Grease	Fuel Transfers	• Stage a spill kit nearby during transfers • Clean up spills immediately
Oil/Grease	Aircraft Washing	• Wash only in designated wash rack area
Oil/Grease	Oil Interceptors	• Maintain Oil Interceptor by pumping at least once a year
Turbidity	Sediment	• Report and repair erosion • Maintain vegetation to prevent bare soil
Total Suspended Solids	Vegetative debris, sediment	• Prevent grass clippings and vegetated debris from entering storm drains
Chemical Oxygen Demand	Food waste, antifreeze, emulsified oils	• Practice good housekeeping • Perform aircraft maintenance under cover • Wash only in designated wash rack area
Cadmium	Aircraft Parts	• Practice good housekeeping • Perform aircraft maintenance under cover Wash only in designated wash rack area • Dispose of work rags in designated waste containers
Chromium	Aircraft Parts	• Practice good housekeeping • Perform aircraft maintenance under cover in designated areas • Wash only in designated wash rack area • Dispose of work rags in designated waste containers
Copper	Aircraft brake pads, downspouts	• Monitor discharges • Maintain vegetated buffer around storm drain inlets
Zinc	Galvanized Metals, Fencing, Tires	• Monitor discharges • Maintain vegetated buffer around storm drain inlets
Lead	Batteries, Paints, Soder, weapons cleaning	• Practice good housekeeping • Perform aircraft maintenance under cover • Wash only in designated wash rack area

6 Spill Prevention and Response Plan

AASF1 is covered under a site specific Spill Prevention Control, and Countermeasures (SPCC) Plan that provides facility users with guidance for storage and handling of POL, spill response, and spill reporting. Bulk storage containers are inspected quarterly for leaks, corrosion, damage, and any other condition that could result in a spill. All oil handling personnel receive annual training on spill prevention and response from the HIARNG Environmental Office. Under the SPCC Plan requirements, all POL storage containers 55 gallons and over must have at least one form of secondary containment and spill kit nearby.

7 Site History of Spills

The site has had two spills in the past; the first occurred on July 7, 2009 when less than two (2) gallons of JP-8 fuel and motor oil were released to a grassy area when draining water from the MFT secondary containment. The second spill occurred on May 5, 2012 when ten (10) gallons of JP-8 was released onto the aircraft parking area when an aircraft vent valve was left open by accident. Both spills were cleaned up immediately and did not impact stormwater at the site.

8 Site History of Illicit Discharge

The AASF1 facility does not have a history of any illicit discharges of stormwater of a reportable quantity for which notification was required.

9 Stormwater Monitoring Plan

The objectives of the stormwater monitoring plan are to collect representative samples of stormwater which will identify and quantify non-stormwater discharges originating from HIARNG's industrial facility AASF1. Sample results will help HIARNG improve BMP's to mitigate the impacts of industrial activities on stormwater discharges.

The monitoring plan includes collection of a time weighted composite sample every 15 minutes from a storm event which accumulates 0.1 inch of rain and occurs at least 72 hours after the previous 0.1 inch rainfall event; and a grab sample from the first 15 minutes of a discharge.

Lab data reports from stormwater sampling allow HIARNG to determine the level of compliance with The Permit, and identify potential sources of pollutants. Effluent pollutant concentrations are compared to HAR 11-54 *Water Quality Standards* to determine if HIARNG is in compliance with The Permit and State regulations. HDOH will be notified immediately if any water quality standards are exceeded. Any industrial process at AASF1 found to be a contributing source of stormwater pollutants will immediately be evaluated and revised to incorporate a BMP to mitigate future impacts to stormwater. Sample data will also be compared annually with previous sampling events to track effectiveness of BMPs at the site.

9.1 Sampling Location Rational

The catch basin located in the grassy swale southwest of bldg. 829 Hangar was selected as the sampling location because it receives stormwater from the areas surrounding bldgs. 829 and 832 where the most industrial activity occurs and has the least amount of runoff from Santos Dumont Road.

9.2 Sample Collection Methods

Samples are collected using an ISCO refrigerated auto sampler and a long handled dipper sampler or bucket. The auto-sampler is triggered by a digital rain gauge measurement of 0.1 inches which occurs at least 72 hours after the previous rain event measuring 0.1 inches. A grab sample for in-situ measurements is collected by lowering either a long handled dipper or a polypropylene bucket into the catch basin to collect flowing stormwater; the grab for oil and grease is collected directly into the laboratory provided sample bottle by holding the bottle directly in the stormwater flow. All grab samples are collected within 15 minutes of the qualifying rain event. A field log book is used to record time, duration, intensity, total rainfall of the event, results of in-situ measurements, time of sample collections, physical attributes of the stormwater, and weather conditions. The composite sample will be preserved on wet ice to a temperature of 4°C and relinquished to a certified laboratory for analysis of the parameters listed in part F.2 of The Permit as well as toxic pollutants with known sources at the facility.

9.3 Sample Parameters

Effluent Parameter	Analytical Method	Type of Sample	Method Detection Limit
Flow	Q=CIA	Composite	(1)
BOD	EPA 405.1	Composite	1 mg/l
COD	EPA 410.4	Composite	3 mg/l
TSS	EPA 160.2	Composite	1 mg/l
Total Phosphorus	SM 4500 P E	Composite	0.04 mg/l
Total Nitrogen	Calculation	Composite	0.242 mg/l
Nitrate - Nitrite	EPA 300.1	Composite	0.042 mg/l
Ammonia Nitrogen	EPA350.1	Composite	0.2 mg/l
Oil and Grease	EPA 1664A	Grab	5 mg/l
Cadmium	EPA 3015/6020A	Composite	.002 mg/l
Chromium	EPA 3015/6020A	Composite	.002 mg/l
Zinc	EPA 3015/6020A	Composite	.002 mg/l
Copper	EPA 3015/6020A	Composite	.002 mg/l
Lead	EPA 3015/6020A	Composite	.002 mg/l
Turbidity	Oakton T-100 Turbidity Meter	Grab	(1)
pH	Hanna 929828 Multi-Parameter Sonde	Grab	(1)
Dissolved Oxygen	Hanna 929828 Multi-Parameter Sonde	Grab	(1)
Oxygen Saturation	Hanna 929828 Multi-Parameter Sonde	Grab	(1)
Temperature	Hanna 929828 Multi-Parameter Sonde	Grab	(1)
Salinity	Hanna 929828 Multi-Parameter Sonde	Grab	(1)

(1) Detection limit is not applicable for in-situ parameters

9.4 Method to Calculate Stormwater Flow

Stormwater flow is the product of the runoff coefficient (C), rainfall intensity in inches per hour (I), and drainage area (A). The equation Q=CIA is used to discover stormwater flow in cubic feet per second (CFS).

9.5 Procedures to Collect Storm Event Data

Storm event data is collected using a digital rain gauge at the discharge location. Data from the rain gauge is transferred to a computer and verified using data supplied by the National Oceanic and Atmospheric Administration (NOAA) collected at Wheeler Army Airfield. Visual observations about the qualifying storm event are recorded in the field in a waterproof field data log book.

9.6 Inspection Procedures

During the annual water quality monitoring event, the sampler inspects the receiving MS4 to detect signs of illicit discharges and any condition that is a violation of basic water quality standards. This inspection may require removing drain grates and manhole covers beyond the discharge point.

10 Implementing the Stormwater Pollution Control Plan

10.1 Training

Personnel at AASF1 receive stormwater training at least annually; the training includes an overview of water quality regulation, description of HIARNG's NPDES permit compliance requirements, effects of water quality degradation on receiving ecosystems, specific examples of HIARNG activities which have potential to impact stormwater, BMPs to prevent stormwater contamination, visual examples of illicit discharges, and oil and hazardous substance spill prevention and response.

10.2 Inspection Protocol

The AASF1 facility is inspected quarterly to verify BMPs are being implemented to prevent stormwater pollution. The facility is inspected for housekeeping, erosion, and for the presence of sediment, trash,

and debris in the MS4 conveyances. If any conditions are observed that could contribute to an illicit discharge, immediate action will be taken to correct the situation and mitigate impacts to stormwater.

10.3 Documentation

All quarterly stormwater inspection records are retained by the permittee at the central located environmental office.

HAWAII ARMY NATIONAL GUARD

Stormwater Pollution Control Plan
Army Aviation Support Facility (AASF) Kalaeloa
NPDES Permit No. HI S000052

August 2017

Prepared By:

Hawaii Army National Guard
Environmental Office
3949 Diamond Head Road
Honolulu, HI 96816

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Table of Contents

APPENDICES

List of Acronyms

AASF	Army Aviation Support Facility
AMS	Asset Management System
AO	Administrative Officer
AON	Act of Nature
ARNG	Army National Guard
AST	Aboveground Storage Tank
BMPs	Best Management Practices
CFR	Code of Federal Regulations
CISEC	Certified Inspector of Sediment and Erosion Control
COC	Chain of Custody
CWA	Clean Water Act
DMR	Discharge Monitoring Report
DOD	Department of Defense
DOH	Department of Health
DOT	Department of Transportation
EA	Environmental Assessment
ECO	Environmental Compliance Officer
EDOP	Effective Date of the Permit
EIS	Environmental Impact Statement
ENV	Hawaii Army National Guard Environmental Office
EO	Environmental Officer
EPA	Environmental Protection Agency
EPAS	Environmental Performance Assessment System
EPCRA	Emergency Planning & Community Right-to-Know Act
EQCC	Environmental Quality Control Committee
ERF	Extended Range Fuel
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FMO	Facilities Management Office
HAR	Hawaii Administrative Rules
HAZMAT	Hazardous Materials
HDOT	Hawaii Department of Transportation Airports Division
HEPCRA	Hawaii Emergency Planning and Community Right-to-Know Act
HIARNG	Hawaii Army National Guard
HIENG	Engineering Office
HMWMP	Hazardous Waste Management Plan
HRS	Hawaii Revised Statutes
IAW	In Accordance With
IOSC	Installation On-Site Coordinator
IWDP	Industrial Wastewater Discharge Permit
IPMP	Integrated Pest Management Plan
ISCP	Installation Spill Contingency Plan
LID	Low Impact Development
MCM	Minimum Control Measure
MFT	Mobile Fuel Tanker

MILCON	Military Construction
MS4	Municipal Separate Storm Sewer System
NAS	Naval Air Station
NGB	National Guard Bureau
NG Pam	National Guard Pamphlet
NPDES	National Pollutant Discharge Elimination System
OWS	Oil Water Separator
O&M	Operation and Maintenance
OSHA	Occupational Safety and Health Administration
QA/QC	Quality Assurance / Quality Control
POL	Petroleum, Oil and Lubricant
RCRA	Resource Conservation and Recovery Act
REC	Record of Environmental Consideration
RTSM	Regional Training Site Maintenance
SDS	Safety Data Sheet
SOW	Scope of Work
SPCC	Spill Prevention, Control and Countermeasure
SRM	Sustainment, Restoration, and Modernization
STMP	State Transportation Motor Pool
SWMP	Storm Water Management Plan
SWPCP	Storm Water Pollution Control Plan
SWPPP	Storm Water Pollution Prevention Plan
TAG	The Adjutant General
UICs	Underground Injection Control Wells
USACE	United States Army Corps of Engineers
USPFO	U.S. Property and Fiscal Office
UST	Underground Storage Tank
UTES	Unit Training Equipment Site

Certification Statement

In accordance with Part A.4. of the National Pollutant Discharge Elimination System (NPDES) Permit HI S000052, the Hawaii Army National Guard (HIARNG) has included the certification statement below:

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 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.

Signature: TOMASA.STUART.JON.1104939445 Digitally signed by TOMASA.STUART.JON.1104939445 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=TOMASA.STUART.JON.1104939445 Date: 2017.09.01 14:53:53 -10'00' **Date:** 01 SEP 2017

Name: **COL Stuart Tomasa**

Title: **Construction and Facilities Management Officer**

Table 1.1 Regulatory Cross References

Hawaii Administrative Regulation Chapter 11-55, Appendix B		
Regulation	**Description**	**Location in Document**
HAR 11-55, Appendix B 6.(a)(1)	Brief Facility Description	Section 2
HAR 11-55, Appendix B 6.(a)(2)	Site Map	Appendix A
HAR 11-55, Appendix B 6.(a)(3)	Pollutant Control Strategy	Section 4
HAR 11-55, Appendix B 6.(a)(4)	Spill Prevention and Response Plan	Section 5
HAR 11-55, Appendix B 6.(a)(5)	Past Spills	Section 6
HAR 11-55, Appendix B 6.(a)(6)	Past Illicit Discharges	Section 7
HAR 11-55, Appendix B 6.(a)(7)	Stormwater Monitoring Plan	Section 8
HAR 11-55, Appendix B 6.(a)(8)(A)	Annual Employee Education Program	Section 9.1
HAR 11-55, Appendix B 6.(a)(8)(B)	Protocol for Inspections	Section 9.2
HAR 11-55, Appendix B 6.(a)(8)(C)	Documentation Procedures for all Inspections and Reviews of SWPCP	Section 9.3

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1 Introduction

The Hawaii Army National Guard (HIARNG) has prepared this Storm Water Pollution Control Plan (SWPCP) for the Army Aviation Support Facility (AASF) Kalaeloa in accordance with the Federal Water Pollution Control Act as amended ((33 U.S.C.1251) (also known as the Clean Water Act)); Hawaii Revised Statutes, Chapter 342D; Hawaii Administrative Rules (HAR), Chapters 11-55, Appendix A and B, and Part E and F of HIARNG's Municipal Separate Storm Sewer System (MS4) NPDES Permit No. HI S000052, effective August 17, 2014 (herein referred to as the Permit). The objective of this SWPCP is to minimize the discharge of pollutants in stormwater runoff and to maintain compliance with conditions of the Permit. A copy of this Plan shall be maintained at the AASF Kalaeloa.

2 Facility Description

This SWPCP is applicable to HIARNG's AASF Kalaeloa, located at the former Naval Air Station (NAS) Barbers Point, Kalaeloa, Oahu, Hawaii (Appendix A, Figure 1). The AASF Kalaeloa is a newly constructed aviation support facility, not yet operational at the time of this SWPCP development, consisting of a single hangar with offices, tactical aviation maintenance area, mobile fuel tanker parking area, and tarmac for the aircraft. Although aircraft maintenance activities will be conducted at this Facility, these activities will be largely conducted under cover in the hangar, and therefore not a contributing factor for potential stormwater pollutants. The nearest receiving water body to the AASF Kalaeloa is the Pacific Ocean approximately 1 mile south of the AASF Kalaeloa.

The majority of the AASF Kalaeloa facility is either comprised of impervious surfaces (concrete, asphalt, or structures), or pervious surface associated with seepage pits, Underground Injection Control (UIC) wells, open grassy drainages, stormwater detention basins. These features were constructed to manage the stormwater on-site at the Facility. The stormwater that does not enter the network drains as overland flow towards the Kalaeloa Airport.

Although the Facility is currently not operational, plans are in place for having two 2,500 gallon mobile fuel tankers to be staged onsite. The tankers will provide fuel storage for aviation aircraft. There is also a single stationary generator used for emergency power.

3 Site Map

The site map of the Facility (Appendix A, Figure 2) shows the location of important structures, the stormwater drainage features, and the direction of overland flow. The AASF Kalaeloa sits on a

topographically level portion of a coral reef platform within the former NAS Barbers Point, at approximately 46 feet above mean sea-level. Stormwater drains over the impermeable surfaces of the central and west portion of the Facility in the direction of the Kalaeloa Airport where it enters the HDOT UIC Network. Stormwater at the facility comingles with stormwater that drains from parking areas and roadways adjacent to and north of the Facility. Stormwater from the Facility discharges to a point of compliance at the most southerly portion of the Facility where it enters HDOT property. Stormwater collecting in the eastern portion of the Facility is drained into open grassy drainages, seepage pits, UIC wells, and sinkholes.

4 Pollutant Control Strategy

All personnel at the Facility are required to be trained in spill response and have adequate knowledge on the proper use and implementation of best management practices (BMPs) common to spill response and cleanup. Table 4.1 below provides a list of potential pollutants and sources, and the BMPs that are used as the pollution control strategy.

Table 4.1 Potential Pollutants, Pollution Sources, and BMPs at AASF Kalaeloa

Potential Pollutant	Source of Pollutant	Pollution Control Strategy (BMP)
Oil/Grease	Fuel Storage	• Store fuel inside impervious secondary containment • Inspect fuel storage container quarterly per SPCC Plan • Absorb any sheen before releasing water from secondary containment
Oil/Grease	Fuel Transfers	• Stage a spill kit nearby during transfers • Clean up spills immediately • Prevent spills from entering pervious surfaces and stormwater drainage structures
Oil/Grease	Aircraft Washing	• Wash only in designated wash rack area
Oil/Grease	Oil Interceptors	• Maintain Oil Interceptor by pumping at least once a year
Turbidity	Sediment	• Report and repair erosion • Maintain vegetation to prevent bare soil
Total Suspended Solids	Vegetative Debris, Sediment	• Prevent grass clippings and vegetated debris from entering storm drains and MS4
Chemical Oxygen Demand	Food Waste, Antifreeze, Emulsified Oils	• Practice good housekeeping • Perform aircraft maintenance under cover • Wash only in designated wash rack area

Cadmium	Aircraft Parts	• Practice good housekeeping • Perform aircraft maintenance under cover • Wash only in designated wash rack area • Dispose of work rags in designated waste containers
Chromium	Aircraft Parts	• Practice good housekeeping • Perform aircraft maintenance under cover in designated areas • Wash only in designated wash rack area • Dispose of work rags in designated waste containers
Copper	Aircraft Brake Pads	• Monitor discharges • Maintain vegetated buffer around storm drain inlets
Zinc	Galvanized Sheet Metal, Fencing, Tires	• Monitor discharges • Maintain vegetated buffer around stormwater drainage structures
Lead	Batteries, Paints, Solder, Weapons Cleaning	• Practice good housekeeping • Perform aircraft maintenance under cover • Wash only in designated wash rack area

5 Spill Prevention and Response Plan

Facility personnel follow the guidance in the site specific spill prevention and response plan for storage and handling of POL. Bulk storage containers and fuel tankers, when in use, will be inspected regularly for contents, leaks, corrosion, damage, and any other condition that could result in a spill. All oil handling personnel receive annual training on spill prevention and response from the HIARNG Environmental Office. All POL storage containers 55 gallons and over must have at least one form of secondary containment and a spill kit nearby.

6 Site History of Spills

There has been no activity associated with the AASF Kalaeloa site as of the time of this SWPCP development.

7 Site History of Illicit Discharge

There has been no activity associated with the AASF Kalaeloa site as of the time of this SWPCP development.

8 Stormwater Monitoring Plan

Not Applicable. Stormwater from this facility does not drain to an MS4.

9 Implementing the Stormwater Pollution Control Plan

9.1 Training

Personnel at AASF Kalaeloa receive stormwater training annually. Topics covered include an overview of water quality regulations, a description of HIARNG's NPDES permit compliance requirements, and a discussion about how pollution effects water quality. In addition, personnel are trained on how to select and employ the appropriate BMPs to prevent stormwater contamination, as well as training on oil and hazardous substance handling, spill prevention and spill response procedures.

9.2 Inspection Protocol

The AASF Kalaeloa is inspected quarterly by HIARNG to verify that BMPs, if in use, are being implemented effectively to prevent stormwater pollution. The sites and facilities are inspected for housekeeping, signs of erosion, and for the presence of sediment, trash, debris and other pollutants in the Facility stormwater conveyances. If any conditions are observed that could contribute to an illicit discharge or non-stormwater related discharges, immediate action will be initiated to correct the situation and mitigate impacts to stormwater.

9.3 Documentation

Water quality Facility inspections and spill reports are retained by the permittee at the centrally located HIARNG Environmental Office.

APPENDIX A

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Figure 1. Vicinity Map

ARMY AVIATION SUPPORT FACILITY (AASF) KALAELOA

15001 - Kalaeloa

County: Honolulu
Address: Diamond Head Rd.

State: HI
Zip Code: 96816

Scale 1:96,000

1 inch = 2 miles

0 0.5 1
Miles

HIARNG Sites

AASF Kalaeloa

Date Published: Thursday, July 20, 2017
Image Date: 2013
Coordinate System:
WGS 1984 Web Mercator Auxiliary Sphere

Reference map

This illustrative conceptual plan is not intended as a design document.

In accordance to Army Regulation 115-13, Installation Geospatial Information and Services, (3-11) Data Quality ... will be maintained to a shared, minimum standard defined by the respective proponent and documented in a QAP ... (3-15) Data Sharing ... making authoritative geospatial data available to authorized users with a need-to-know, with the exception of 16 U.S.C. 470hh - Confidentiality of information concerning nature and location of archaeological resources. (3-16) Data Security ... is intended to be unclassified and houses data which is unclassified and/or FOUO. Unclassified information may be exempt from public disclosure in accordance with the FOIA.

MXD: D:\TEMPLATES\1_VicinityMap_ECOP.mxd

Figure 2: Site Map

Stormwater Pollution Control Map - Readiness Center (RC) & Army Aviation Support Facitlity (AASF)

15001 - Kalaeloa

County: Honolulu State: Hawaii
Address: Diamond Head Zip Code: 96816

Scale 1:2,400 1 inch = 200 feet

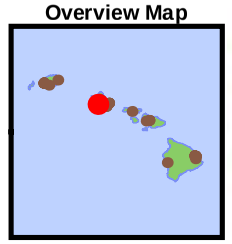
0 50 100 200
Feet

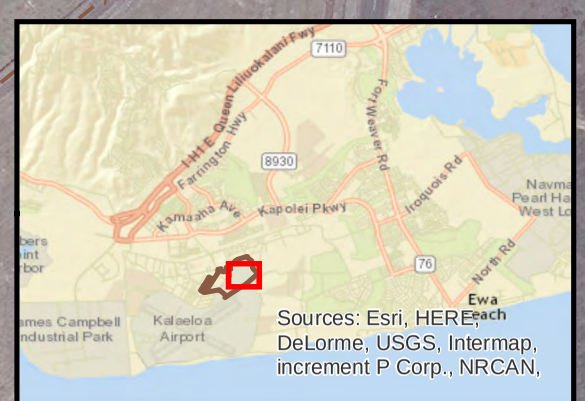
N W E S

- Catch Basin
- Curb Inlet
- Catch Basin
- SW Drainage Pit (DP)
- UIC Wells
- Discharge Point
- HAZMAT Storage (AST)
- HAZMAT Storage
- Generators
- Substations
- Transformer
- Storm Drainage
- Storm Flow
- Fences
- Detention Basin
- Mobile Tanker Parking
- Impervious Surface - 721,725 SQFT
- Facility Area - 1,215,469 SQFT
- HIARNG Sites

Published: HIARNG Environmental Office
Monday, September 11, 2017
Imagery Date: 18 May 2017
Coordinate System: GCS WGS 1984

Overview Map





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