HAWAII ARMY NATIONAL GUARD

Construction, Repair, and Maintenance Storm Water Best Management Practices Manual

NPDES Permit No. HI S000052

August 2016

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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
G	Gallons
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.

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, August 17, 2014 HIARNG SWMP, February 2016, HIARNG 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 and 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 RECP 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 RECP.

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.

All POL containers 55 Gallons (G) and above are subject to the requirements of title 40 of the code of federal regulations (CFR) Part 112 *Oil Pollution Prevention*; if a contractor is storing 1,320 G or more of POL on site for 6 months or more they must prepare a site specific Spill Prevention Control and Countermeasures Plan (SPCCP) to comply with 40 CFR 112.

Anytime hazardous materials and POL are used, stored, or transferred on HIARNG property contractors must have spill supplies readily available.

All spills of hazardous materials and POL must be cleaned up immediately and used absorbent material shall be disposed in accordance with applicable Resource Conservation and Recovery Act (RCRA) regulations.

Contractors must call the HIARNG ENV Emergency Hotline at (808) 672-1013 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 any hazardous waste generation, accumulation, and disposal of hazardous waste prior to and throughout construction, repair or maintenance activities. Contractors shall store all hazardous 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 outside. If a facility discharges sanitary waste water to a cesspool or septic tank, the contractor cannot rinse paint brushes and equipment on site. If a facility discharges sanitary waste water to the municipal sewer system, contractors are allowed to rinse paint brushes and equipment into an approved sink.

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

6.3.7 Equipment Storage

Heavy equipment that is not being actively used must be stored on an impervious surface when possible and must use a drip pan to capture all POL leaks.

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 HIARNG ENV Inspections

All construction, repair, and maintenance projects covered under a NPDES General permit for construction activities as required by HAR 11-55, Appendix C shall be inspected prior to ground disturbing activities and monthly by a HIARNG ENV representative whom is a Certified Inspector of Sediment and Erosion Control (CISEC) or has at least two years of storm water construction compliance experience. 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 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: