

Construction Stormwater Updates

Department of
Transportation,
Airports Division

November 2020

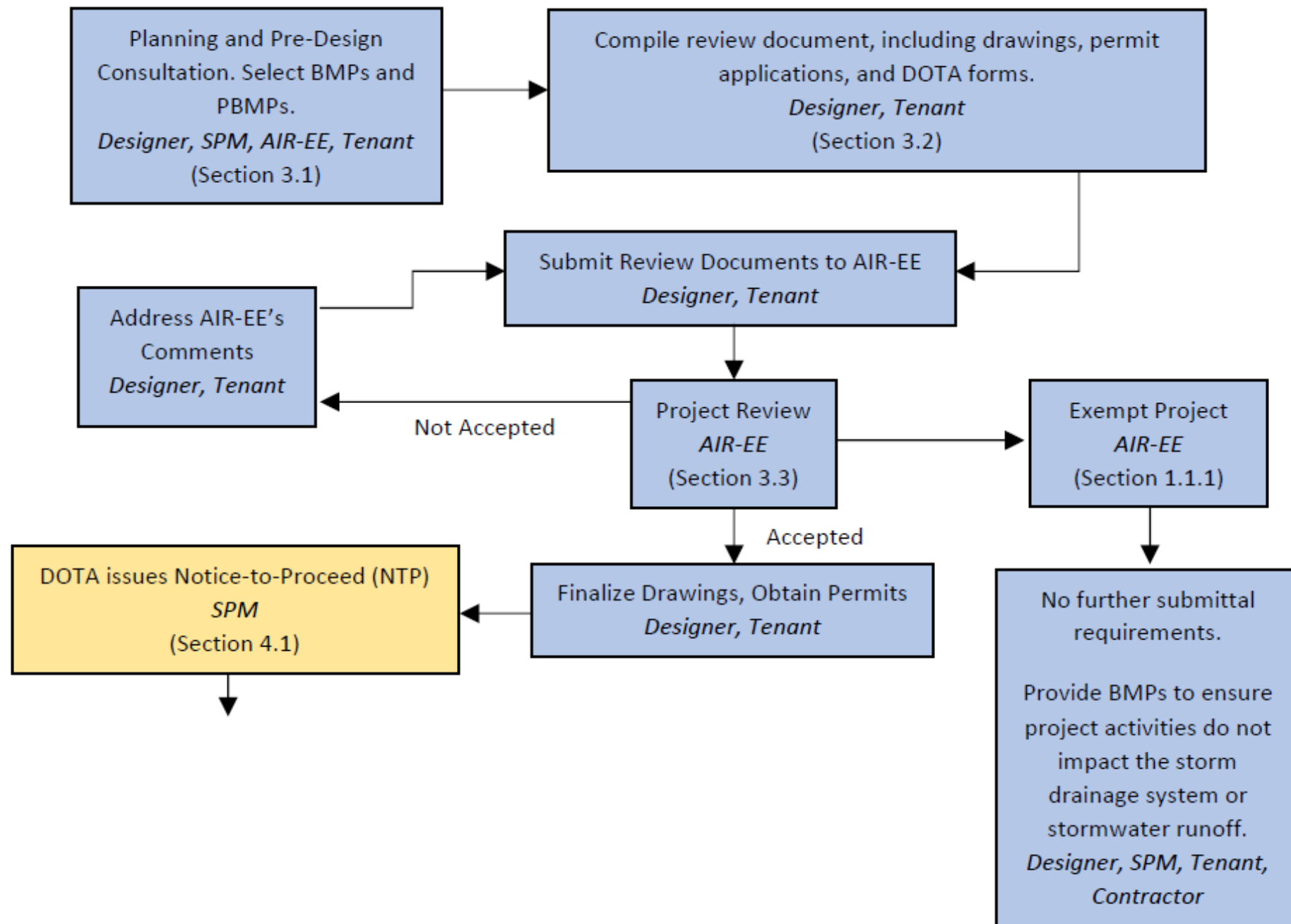


UPDATES TO CONSTRUCTION PLAN DESIGN AND REVIEW



LEGEND

**Project Design & Review
(Section 3.0)**



Design Review Documents

- Design Review Checklist (> 1 acre) Form, or the Notification Form for Sites Disturbing Less Than One Acre
- DOTA Contaminated Soil & Groundwater Review Form
- Project Drawings and Specifications
- For Projects 1 Acre or More, National Pollutant Discharge Elimination System (NPDES) Notice of Intent (NOI), Appendix C, Discharges of Stormwater Associated with Construction Activities (NOI-C).



Design Review Documents, continue



- NPDES-NOI Appendix F for Hydro-Testing Waters (NOI-F), or Appendix G for Construction Dewatering (NOI-G), if applicable.
- Stormwater Pollution Prevention Plan (SWPPP) or Site-Specific Best Management Practices Plan (SSBMP Plan)
- DOTA Discharge Permit
- Construction Asbestos Review Form (Managed by ESI, Inc.)
- Other Documents: Underground Injection Control Permit, Anticipated Design-Bid-Construction Schedule, etc., if applicable.

Other Requirements: Phase 1/ Phase 2 ESA

For all medium and large construction projects with earth-disturbing activities, Phase 1 / Phase 2 Environmental Site Assessments (ESA) are required.



- Submit the DOTA's Contaminated Soil and Groundwater Review and Construction Asbestos Review Forms
- If there are no previous Phase 1 ESA, no known mapped contaminated areas, and/or no current Site-specific (Long-Term) EHMP, a Phase 1 ESA will need to be completed.

Other Requirements: Phase 1/ Phase 2 ESA, continue



- For Projects consisting of ground disturbing activities, based upon the Phase 1 ESA, Phase 2 ESA shall be prepared.
 - Coordinate with AIR-EE and the DOH for guidance.
 - Geotechnical Boring can be used for the Phase 2 ESA, however, it must comply with DOH's Requirements (i.e. sampling, spacing, etc.).
- Develop a Construction Environmental Hazard Management Plan (C-EHMP), as required.
 - DOTA Programmatic EHE-EHMP for Previous Unknown Contamination
 - Current Site-Specific EHMP for Known Contamination.

Project-Specific Construction EHMP Addendum for an Existing Site-Specific or Programmatic EHMP

This document is a TEMPLATE to help you to create a Construction
Environmental Hazard Management Plan (C-EHMP) Addendum for
your project at a site that currently has an HDOH-approved Site-
Specific or Programmatic EHMP.

For
{Project Name}
{Site Name}
{Site Address}
{Site TMC #}
{Date}

Contents

1.	Introduction	7
2.	Chemicals of Potential Concern	8
1.1.1	Chemicals of Potential Concern and Construction Materials	9
1.	Notification Requirements	12
2.	Key Project Personnel	12
3.0	Requirements for Onsite Environmental Oversight	13
4.0	Construction Activities	16
4.1	On-site Reuse of Known or Suspect Contaminated Soil	19
4.1.1	On-site Reuse of Known or Suspect Contaminated Soil	19
4.1.2	Stockpile Sampling for Disposal at a Disposal Facility	20
4.1.3	Record Keeping	21
4.1.4	Disposal of Groundwater	23
4.2.1	Disposal of Groundwater	23
EXAMPLE: Appendix A – BMPs		25
EXAMPLE: Appendix B – Soil Acceptance Agreement		26
EXAMPLE: Appendix C – Soil Tracking Log		27

Info Regarding Figures and Attachments

Please include Figures using the following labels and nomenclature:

{modifications to this nomenclature are acceptable, however, please be sure all elements are included, i.e., site location, known contaminants, construction plans, hazard maps, and engineering controls} If these figures are present in the Site-Specific EHMP, then they are not needed to be repeated in the C-EHMP Addendum.

Figure 1 should be the Site Location map (if multiple maps are submitted to show the site location, please use the nomenclature **Figure 1a**, **Figure 1b**, **Figure 1c**, etc., e.g., **Figure 1a** may be a GoogleEarth image or Topo Map with an arrow pointing to the site, **Figure 1b** may then be a close-up of the block with the site property outlined and adjoining businesses labeled, **Figure 1c** may focus on a portion of the site where utility trenching is planned, etc.)

Figure 2 should depict known or suspected contamination at the site (multiple maps should use the nomenclature **Figure 2a**, **Figure 2b**, etc.). Figures may include

Other Requirements: Phase 1/ Phase 2 ESA, continue

- For any Contaminated Materials that will remain within the Project Site after completion, a Long-Term Environmental Hazard Management Plan (EHMP) must be developed.





Site-Specific Best Management Practices
(SSBMP) Plan

SITE-SPECIFIC BEST MANAGEMENT PRACTICES (SSBMP) PLAN

Project Name

Tenant Company Name or DOTA Project Number

Template For Site-Specific Best Management Practices Plan (SSBMP)



STATE OF HAWAII, DEPARTMENT OF
TRANSPORTATION, AIRPORTS DIVISION
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

August 2020

Temporary

Stormwater Pollution Prevention Plan
(SWPPP)

COMING SOON

DOTA'S DISCHARGE PERMIT



Discharge Permit No.:

Issuance Date:

**PERMIT TO DISCHARGE INTO THE STATE AIRPORT DRAINAGE SYSTEM RELATING TO
CONSTRUCTION PROJECTS**

Pursuant to Hawaii Administrative Rules, Chapter 11-55, application is hereby made to discharge into the Airport drainage system at the location (s) specified below and at no other place. The permit shall expire within 5 years of issuance date.

1. Name of Airport: _____
2. Name of Tenant: _____
3. Name of Project: _____
4. PMID/TMK: _____
5. Basin ID: _____
6. Location: _____
7. Type of Discharge: _____

- ☐ Stormwater Discharge Site ☐ Construction Discharge to Stormwater Drainage Connection
☐ Construction Discharge to Stormwater Drainage

Licenses shall comply with the following:

1. The Licensee shall comply with all applicable laws, rules, and actions.

**PERMIT TO DISCHARGE INTO THE STATE AIRPORT DRAINAGE SYSTEM RELATING TO
CONSTRUCTION PROJECTS**

4. That the Licensee shall submit a copy of this permit/permission to the Department of Health (DOH) and submit a copy to the Department of Transportation (DOTA).
5. That the Licensee shall be responsible for any property damaged by the discharge.
6. That the Licensee shall be responsible for any discharge of stormwater that does not meet the requirements of the permit, and shall be liable for any damages. In addition, the Licensee shall be liable for any damages and all penalties and fines assessed against the Licensee's operations.
7. That a copy of the monitoring required by the NPD shall be furnished to DOTA.
8. That the Licensee shall inspect and clean the inlets to the State Airport drainage system prior to discharging. If DOTA determines that any materials or substances from the Licensee's discharge operations have settled into any storm sewer, the Licensee shall immediately remove and clear any material and substance to the satisfaction of DOTA.
9. That the Licensee shall notify the DOTA Engineering Branch, Environmental Section (AIR-EE) of dewatering operations at least 24 hours before commencing discharge.
10. The Licensee shall require this permit to be a part of the contract with the contractor.

Discharge Permit No.:

Issuance Date:

Construction Connection, Discharge, and Surface Runoff Permit

Pursuant to Hawaii Administrative Rules, Chapter 11-55, application is hereby made to connect or discharge into the Airport drainage system at the location(s) specified below and at no other location. The permit shall expire within 5 years of issuance date.

Airport:	PMD/TMK:	Basin ID:
Tenant Company Name or DOTA Project Name and No.:		
Tenant Contact Name or DOTA State Engineer:		
Contact Email:	Contact Number:	

Type of Connection and/or Discharge (check all that apply):

- ☐ Stormwater runoff from construction site ☐ Construction Dewatering ☐ Hydrotesting
☐ Alteration or removal of Drainage ☐ New Drainage Connection ☐ Other _____

I, the Designer, have included the following as attachments to this application:

- ☐ Plans showing the changes/connection to the drainage system, if applicable
☐ Quantity of stormwater and site process water entering drain system

Please check the boxes below to indicate which items have been submitted to AIR-EE for review and acceptance:

- ☐ DCHNCL-C Application for Stormwater Discharge from Construction Activities for Projects that disturb one (1) acre or more, if applicable.
☐ Designer's Stormwater Pollution Prevention Plan (SWPPP) or Site-Specific BMP Plan for projects that disturb less than one (1) acre, including a project location map, discharge locations, and runoff flow patterns.

Name of Designer: _____ Design Company: _____

Designer Signature: _____ Date: _____

To be completed by the Contractor:

Please check the boxes below to indicate which items have been submitted to AIR-EE for review and acceptance:

- ☐ Contractor's Site-Specific Construction Best Management Practices (BMP) Plan, including a detailed summary of Erosion Control BMPs, project location map, and construction schedule
☐ Copy of the DOH NPDES Permit for Dewatering or Hydrotesting, if applicable.

Licensee Information and Agreement

The Licensee shall be the owner or authorized representative of the tenant's company for Tenant Improvement Projects, or construction company authorized representative for DOTA Projects.

Discharge Permit No.:

Issuance Date:

Licensee, the undersigned, hereby agree to the following:

- That the Licensee shall indemnify and hold the State free and harmless from all suits and actions resulting from the licensee's discharge operations.
- That the Licensee will comply with all requirements of the DOTA construction specifications for DOTA projects and the DOTA Construction Activities BMP Field Manual and other DOTA construction requirements as included on the AIR-EE Construction Site Runoff webpage <https://hawaii.gov/air-ee/construction-site-runoff-control-program/>.
- This permit/approval shall obligate the activity to implement BMPs as required in Hawaii Administrative Rules, Chapter 11-55, Appendices C, F, and/or G.
- The Licensee will promptly correct any deficiencies identified by DOH or DOTA.
- That the Licensee shall provide appropriate best management practices and treatment devices for the removal of soil particles and other pollutant(s) in the discharge. Such discharge shall meet the basic water quality criteria applicable to all waters, as identified in Hawaii Administrative Rules, Chapter 11-54, Section 4 and any other applicable sections, at the point of discharge into State waters.
- That the Licensee shall make all restoration to any State Airport or Airport tenant property damaged during the Licensee's discharge operations in accordance with DOTA.
- That the Licensee shall discontinue the discharge should DOH determine that the receiving waters are being polluted, or the discharge does not meet the effluent requirements of the NPDES permit, or the Licensee's operations are not in the best interest of the general public. In addition, the Licensee shall be liable for any and all penalties as a result of discharges from the Licensee's operation.
- That a copy of any effluent monitoring required by the NPDES permit shall be furnished to DOTA.
- That the Licensee shall inspect and clean the inlets to the State Airport drainage system prior to discharging. If DOTA determines that any materials or substances from the Licensee's discharge operations have settled into any storm sewer, the Licensee shall immediately remove and clear any material and substance to the satisfaction of DOTA.
- That the Licensee shall notify the DOTA Engineering Branch, Environmental Section (AIR-EE) of dewatering operations or hydrotesting operations at least 72 hours before commencing discharge.

Signature of Licensee _____ Print Name and Title _____ Date _____

Company Name _____ Company Address _____ Zipcode _____

Phone Number _____ Fax Number _____

Approved by:

Environmental Section Supervisor _____ Date _____

Pursuant to Hawaii Administrative Rules, Chapter 11-55, application is hereby made to connect or discharge into the Airport drainage system at the location(s) specified below and at no other location. The permit shall expire within 5 years of issuance date.

Airport:	PMID/TMK:	Basin ID:
Tenant Company Name or DOTA Project Name and No.:		
Tenant Contact Name or DOTA State Engineer:		
Contact Email:	Contact Number:	

Type of Connection and/or Discharge (check all that apply):

- ☐ Stormwater runoff from construction site
- ☐ Construction Dewatering
- ☐ Hydrotesting
- ☐ Alteration or removal of Drainage
- ☐ New Drainage Connection
- ☐ Other_____

I, the Designer, have included the following as attachments to this application:

- ☐ Plans showing the changes/connection to the drainage system, if applicable
- ☐ Quantity of stormwater and site process water entering drain system

Please check the boxes below to indicate which items have been submitted to AIR-EE for review and acceptance:

- ☐ DOH NOI-C Application for Stormwater Discharge from Construction Activities for Projects that disturb one (1) acre or more, if applicable.
- ☐ Designer’s Stormwater Pollution Prevention Plan (SWPPP) or Site-Specific BMP Plan for projects that disturb less than one (1) acre, including a project location map, discharge locations, and runoff flow patterns.

Name of Designer:_____

Design Company:_____

Designer Signature:_____

Date:_____

To be completed by the Contractor:

Please check the boxes below to indicate which items have been submitted to AIR-EE for review and acceptance:

- ☐ Contractor's Site-Specific Construction Best Management Practices (BMP) Plan, including a detailed summary of Erosion Control BMPs, project location map, and construction schedule

- ☐ Copy of the DOH NPDES Permit for Dewatering or Hydrotesting, if applicable.

Signature of Licensee

Print Name and Title

Date

Company Name

Company Address

Zipcode

Phone Number

Fax Number



[Home](#) » [Doing Business](#) » [Engineering](#) » [Environmental](#) » Construction Site Runoff Control Program

CONSTRUCTION SITE RUNOFF CONTROL PROGRAM

The Construction Site Runoff Control Program has been developed to address the potential pollutants that are generated as a result of construction activities in accordance with the National Pollutant Discharge Elimination System (NPDES) Permit Program. All Designers, Construction Managers, Contractors, and other parties involved with construction at airports, statewide, must comply with this program. All construction projects must undergo a construction plan review and receive a Notice-To-Proceed from DOTA prior to commencing construction activities.

HNL SWMP (STORMWATER MANAGEMENT PROGRAM PLAN)

- **REVISED** [Section C – Construction Site Runoff Control Program](#) (4.29 MB)
- [Section D – Permanent Best Management Practice Program](#) (9.91 MB)
- [Retrofit Action Plan](#) (2.22 MB)

OGG SWMP (STORMWATER MANAGEMENT PROGRAM PLAN)

- [Construction and Post-Construction SW Management Plan](#) (11MB)

CONSTRUCTION BMP (BEST MANAGEMENT PRACTICES) TRAINING VIDEO AND PRESENTATION



All parties involved with construction project responsibilities, including DOTA engineers, inspectors, contractors, consultants, and designers, are required to complete annual training. Submit completed training rosters and Construction Training Survey to the DOTA Environmental Section at dot.air.environmental@hawaii.gov or fax to 808-838-8017.

- [Training Roster Sign-in Sheet](#)
- [2020 Construction BMP Quiz](#)
- [2019 Construction Stormwater and Asbestos Training Material](#)
- [2018 Construction Stormwater Training Material](#)

USEFUL CONSTRUCTION DOCUMENTS (ALL AIRPORTS)

- **Spill Response Fact Sheets**
 - **REVISED** [HNL Spill Reporting Fact Sheet](#)
 - **REVISED** [OGG Spill Reporting Fact Sheet](#)
 - **REVISED** [JRF & HDH Spill Reporting Fact Sheet](#)
 - **REVISED** [MKK Spill Reporting Fact Sheet](#)
 - **REVISED** [LIH Spill Reporting Fact Sheet](#)
 - **REVISED** [ITO & KOA Spill Reporting Fact Sheet](#)
 - **REVISED** [PAK, LUP, LNY, JHM, HNM, UPP & MUE Spill Reporting Fact Sheet](#)
- **DOTA Statewide Programmatic Environmental Hazard Evaluation and Environmental Hazard Management Plan (EHE-EHMP)**
 - [DOTA Statewide EHE-EHMP October 2019](#)
- **Designers and Tenant Improvement Projects:** submit the proper forms with your plans for review and approval.
 - [Construction Plan Design and Review SOP for Designers and Tenants](#)
 - **REVISED** Tenant Improvement Projects: Complete this application for stormwater discharges from your construction site (this is applicable to all HNL, OGG projects and all projects for dewatering and/or hydrotesting). [Construction Connection, Discharge, and Surface Runoff Permit](#) (28.7KB) (For drainage basin maps for other airports please reach out to DOT AIR-EE.)
 - [Contaminated Soil and Groundwater Review Form](#)
 - **REVISED** One acre or more: [Design Review Checklist](#)
 - [Construction Project Review Package for Projects Equal to or Greater than One Acre](#)
 - Less than one acre: [Notification Less Than One Acre](#)
 - **NEW** [Site-Specific Best Management Practices \(SSBMP\) Plan Template](#)
 - [Construction Project Review Package for Less Than One Acre](#)

SPECIFICATION SECTIONS UPDATES



Environmental Specification Sections



All three (3) Sections are required to be included in all DOTA Construction Contracts.

Section 01560 Environmental Controls

Section 01561 Construction Site Runoff Control
Program

Section 01562 Management of Contaminated Media

(Reference the DOTA PPT Library for the Latest Versions of Each Section.)

SPECIFICATION SECTION 01560

Environmental Controls



~~OLD: Two (2) Version of Section 01560~~

- ~~• Federally Funded Projects~~
- ~~• Non-Federally Funded Projects~~

NEW: One (1) Version of Section 01560 For All DOTA Projects

- Dated 8/28/2020

SPECIFICATION SECTION 01561

Construction Site Runoff Control Program



~~OLD: Appendix A Requires the Hardcopy Inclusion
of the DOTA Construction Activities BMP Field
Manual~~

NEW: DOTA Construction Activities BMP Field Manual
Is Referenced by DOTA Website Address

- Dated 3/1/2020

HIGHLIGHTS OF SECTION 01561



- Construction BMP Inspections

- Initial BMP Inspections

- Prior to commencing earth-disturbing construction activities. Construction is not allowed to start until the Initial BMP Inspection is conducted and all deficiencies corrected.

- Routine / Monthly BMP Inspections

- Final BMP Inspections

- Conducted after all disturbed areas are permanently stabilized. Temporary BMP Measures are not allowed to be removed until the Final BMP Inspection is conducted and all deficiencies corrected.

- Liquidated Damages For Non-Compliance of Environmental Requirements.
See Appendix.

- Annual Construction BMP Training Requirement for All DOTA Contractors and Their Subcontractors, Including the Accompanying Quiz/Survey. (DOTA's Webpage for [Construction](#), Not Tenants)

SPECIFICATION SECTION 01562

Management of Contaminated Media



- Reflects Hawaii Department of Health's Updated Procedures and Protocols.
- Feedback from Construction Managers on DOTA Construction Projects. (Example: OSHA Requirements.)
- Version Dated 10/21/2020, Released on 11/1/2020.

HIGHLIGHTS OF SECTION 01562



- If contaminated media or potential asbestos conduit is identified during construction, the Contractor must immediately inform the CM, DOTA Engineer, DOTA AIR-EE, and DOH HEER Office.
- DOTA's Programmatic EHE-EHMP
- Spill Notifications:
 - All Spills: Airport Duty-Manager/Dispatch, DOTA Engineer, & AIR-EE
 - Depending on the Quantity of Spill (25 gallons or more), DOH HEER Office
 - Spill Enters MS4 and/or Receiving Waters, DOH CWB
 - Complete the DOTA Spill Reporting Sheet Found on DOTA's Webpage.

FUTURE IMPROVEMENTS



VEOCI NEW ASSET MANAGEMENT SOFTWARE



Design Review Process

- Electronic submission of Design Documents – Project Drawings, Specifications, etc.
- Electronic Fill-In Forms – Discharge Permit, Notification Form for Site Disturbing Less Than One Acre, Design Review Checklist, etc.

Construction BMP Inspections

- Generate BMP Inspection Checklist Reports for AIR-EE and Streamline the Entire Process.

SWMPP SECTION D PBMPs

By
Vijaya Tummula





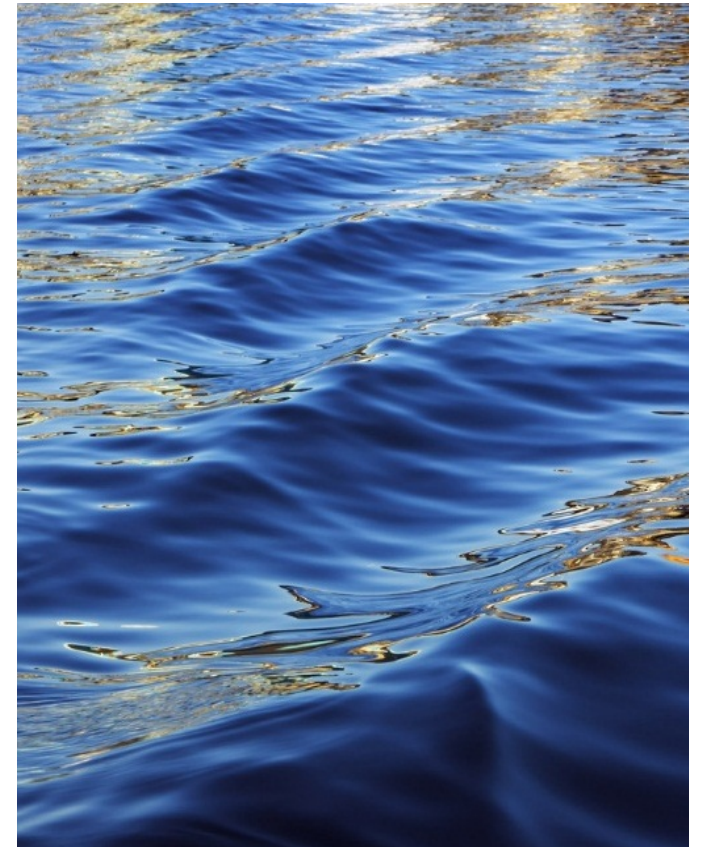
Thank you



Permanent Best Management Practices Program and Upcoming Revisions

Department of Transportation,
Airports Division

November 18, 2020



Agenda



- Current Permanent Best Management Practice (PBMP) Program
- Upcoming Revisions to PBMP Program
- Upcoming Revisions to Asset Management System (AMS)



Current PBMP Program

Key Terms

- Post-Construction BMP
- Permanent BMP (PBMP)
- Low Impact Development (LID)





Definitions

- PBMP: BMP designed to improve water quality after construction is completed, subcategories include:
 - LID
 - Source Control
 - Treatment
- LID: Site design that seeks to mimic predevelopment hydrology by minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiration, and/or biotreating storm water close to its source

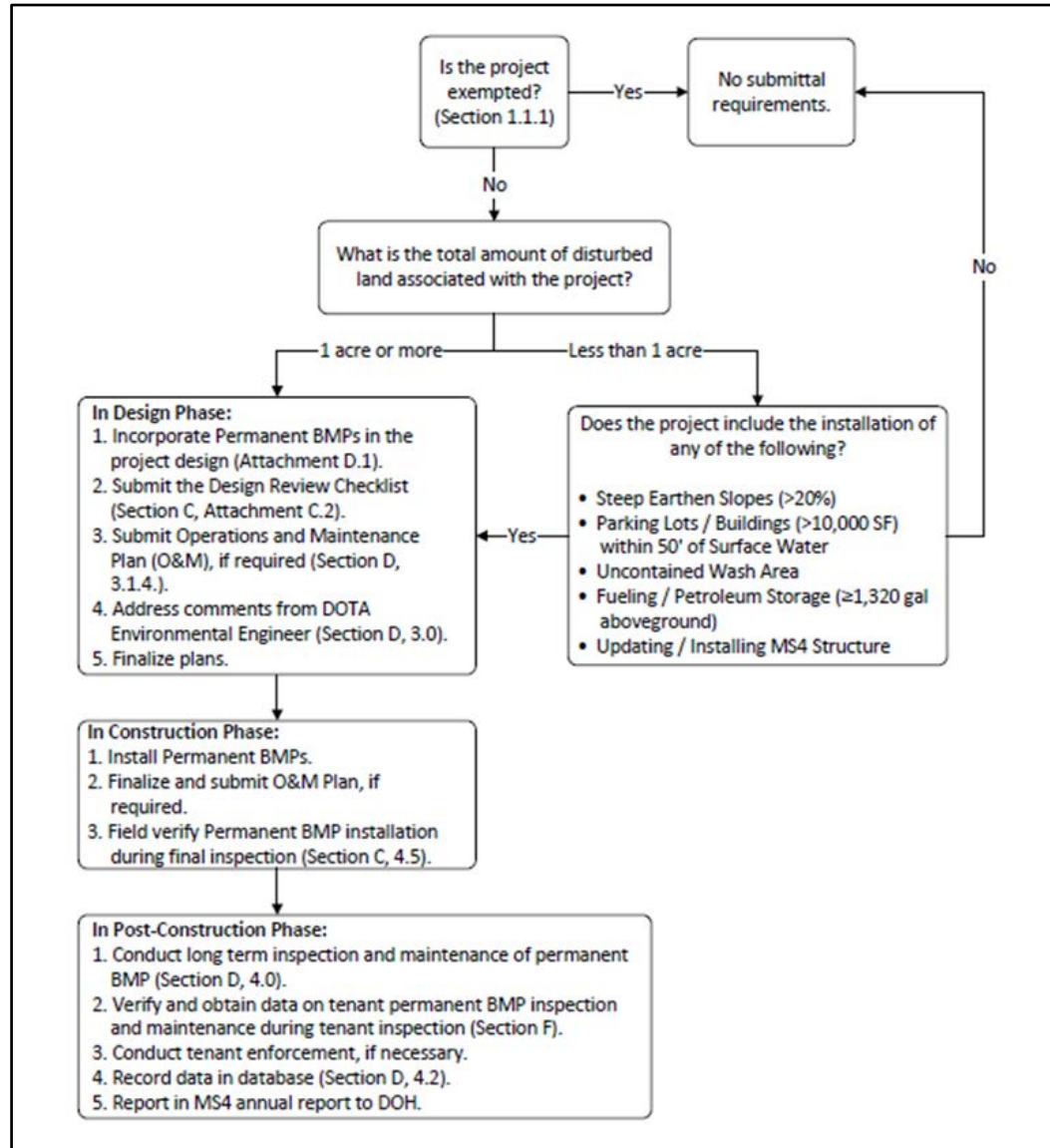


PBMP Requirements

PBMPs will be considered projects that meet the following criteria:

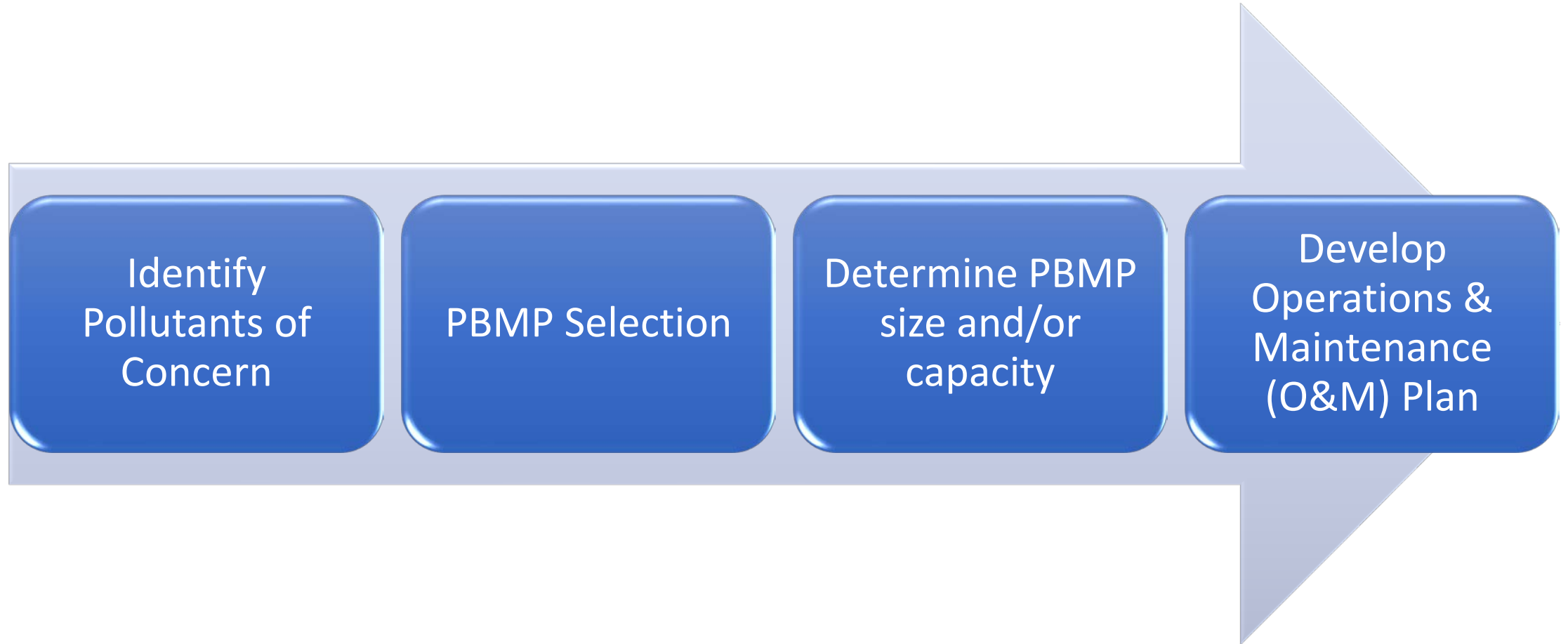
- Construction activities that disturb an area of one acre or more
- Construction projects less than one acre that result in the installation of one or more of the following:
 - Steep earthen slopes (i.e. grade of 20 percent or more)
 - Parking lots and buildings adding 10,000 square feet or more of impervious area within 50' of a surface water body
 - Uncontained aircraft, vehicle, or equipment washing area
 - Fueling area or petroleum storage that exceeds the regulatory threshold for Spill Prevention, Control, and Countermeasure (SPCC) plans in 40 CFR 112 (i.e. 1,320 gallons)
 - Modifying, replacing, or installing new MS4 drainage structures, as appropriate

PBMP Requirements, Cont.



- Figure 1 from HNL SWMPP Section D 2.0 detailing the PBMP requirements process

PBMP Design Criteria & Process





How to Identify Pollutants of Concern?

- Designers should identify/anticipate pollutants of concern based on:
 - Land use type of the development project and associated pollutants
 - Historical pollutants expected to be present on-site
 - Planned Activities
 - Planned Site Design
 - MS4 NPDES Requirements
 - SWMPP Section E, Trash Reduction Plan for HNL
 - Receiving water quality and CWA Section 303(d) List of Impairments
 - Typical pollutants of concern are sediment, trash, nutrients, oil & grease, metals, pesticides, etc.

PBMP Program



LID

- Retain stormwater on-site

Source Control

- Keep potential pollutants from coming into contact with stormwater runoff or before they are discharged to DOTA MS4 or receiving water

Treatment

- Remove pollutants from the stormwater runoff before they are discharged to DOTA MS4 or receiving water

PBMP Selection

- Based on pollutants of concern and site conditions

BMP	Nutrients	Sediment	Trash	Bacteria	Pesticides	Oil & Grease	Metals	Organic Compounds
Infiltration Basin	H	H	H	H	H	H	H	H
Infiltration Trench	H	H	H	H	H	H	H	H
Subsurface Infiltration	H	H	H	H	H	H	H	H
Dry Well	H	H	H	H	H	H	H	H
Bioretention Basin	H	H	H	H	H	H	H	H
Permeable Pavement	H	H	L	H	H	H	H	H
Green Roof	M	H	H	M	M	H	M	M
Vegetated Bio-Filter	M	H	H	M	U	H	H	H
Enhanced Swale	M	H	H	U	U	M	M	U
Downspout Disconnection	L	M	M	M	U	M	M	U
Vegetated Swale	L	M	L	L	U	M	M	U
Vegetated Buffer Strip	L	M	M	L	U	M	M	M
Harvesting / Reuse	H	H	L	H	H	H	H	H
Detention Basin	L	M	H	L	U	M	L/M	U
Manufactured Treatment Device	L	M/H	H	L	L	M/H	L	L
Sand Filter	L/M	H	H	M	U	H	M/H	M/H

Note: H= High, M = Medium, L = Low, U = Unknown

*Reference from City and County of Honolulu, *Storm Water BMP Guide*



PBMP Sizing Criteria

- DOTA requires specific criteria for PBMPs for both volume-based and flow-based BMP designs
 - Volume-Based Design (capture 1-inch rainfall)
 - Flow-Based Design (0.4 inch/hour)

Examples of LID at Airports



Permeable Pavement and Bioswale
at the Elliott Street Parking lot



Examples of LID at Airports, Cont.



Bioswale at Mokulele Airlines facility



Examples of Treatment Control PBMPs at Airports



Detention Pond at OGG



Evaporation Pond at OGG

Examples of Treatment Control PBMPs at Airports, Cont.

- Retrofits - manufactured treatment devices



CDS Unit



Drain Inlet Insert

PBMP Inspection and Maintenance

- AIR-EE is required to inspect all PBMPs annually and conduct maintenance as needed; inspection and maintenance records need to be kept for 5 years
- DOTA developed O&M for the common PBMPs at the Airports



CDS Unit Inspection and Maintenance



Upcoming Revisions to PBMP Program



Goals for Upcoming Revisions

- Provide guidance to designers for PBMP and LID implementation
- Revisit the PBMP implementation criteria
- Standardize LID BMPs
- Waivers/variance from LID due to safety concerns at airports
- Update the Stormwater Permanent BMP Manual
- Update the PBMP Operations & Maintenance Manual



LID Implementation - Challenges

- Need to establish a clear and consistent approach to ensure LID implementation is assessed
 - Consideration of LID for small projects
 - Streamline feasibility
 - Waivers or variance for LID
- FAA Rules for vegetation and water features
 - Types of vegetation
 - Vegetation height
 - Water features
 - Obstructions
- Wildlife Hazard Management (WHM)



LID Implementation - Waivers

- Develop a documented process to grant a waiver/variance from LID implementation
- Streamline when a waiver or variance can be granted for LID at airports due to wildlife attraction, prohibited obstruction in the safety zones including ability to maintain PBMPs, infiltration feasibility, etc.



Stormwater PBMP Manual - Updates

- Include applicability for other factors such as potential pollutants, treatment area, physical restrictions, infiltration feasibility, depth to ground water etc.
- Reevaluate the design considerations for the various PBMPs to ensure they are consistent with the FAA restrictions
- Reevaluate the maintenance considerations for the various PBMPs to ensure they are consistent with the FAA restrictions, manufacturer recommendations, and lessons learned from implementation



PBMP O&M Manual - Updates

- Include O&M Fact Sheets for additional PBMPs such as dry wells, and detention basins
- Update the Storm Water Inspection and Maintenance Forms so they are more user friendly for the inspectors, DOTA staff, and maintenance contractors



Summary of Upcoming SWMPP Revisions

- Revise definitions of key terms
- Emphasize LID PBMPs per HNL Permit requirements and a consistent approach to implementation
- Review PBMP requirements and where to implement per airport
- Reevaluate/revise PBMP selection and consider including cost analysis for alternatives and long term O&M

Summary of Upcoming SWMPP Revisions, Cont.



- Include FAA and safety restrictions/feasibility for installation of LIDs and PBMPs in general and more detailed options or exemptions for these areas
- Incorporate FAA rules/regulations including Wildlife Hazard Management
- Incorporate a waiver/variance for LID implementation
- Update the Stormwater Permanent BMP Manual
- Update the PBMP Operations & Maintenance Manual



Schedule for SWMPP Revisions

- SWMPP Revisions are currently under development
- Anticipated completion to the updates to SWMPP Section for PBMP Program in 2021



Upcoming Revisions to AMS

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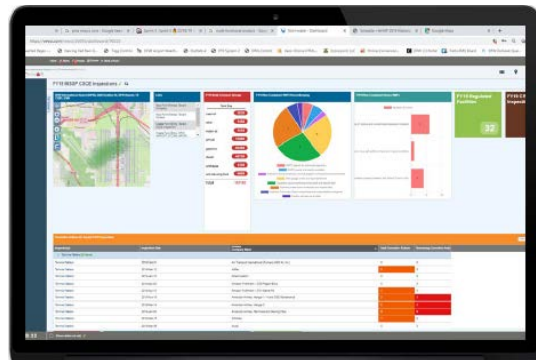
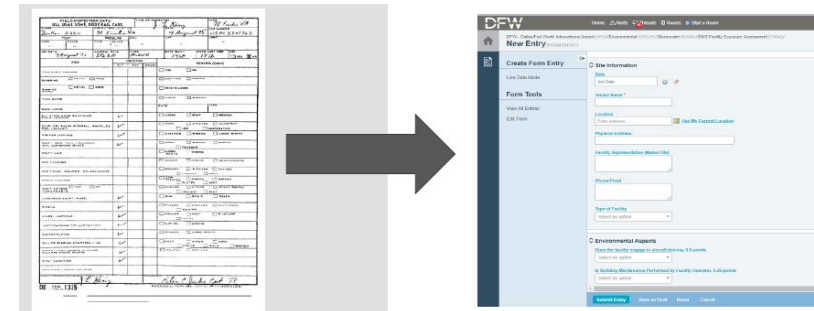
WINGS GIS

Appendix 6.3 PMPM Inspections and Maintenance									
Name	Inspection Date	Status	Inspector(s)	Comments	Maintenance Needed	Amount of Total Debris Removed (lb)	Trash Category A Removed (lb)	Trash Category B Removed (lb)	Trash Category C Removed (lb)
EVAPORATION POND AND INFILTRATION BEDS									
04770 Evaporation Pond (4)	10/11/2019	Closed	HES	Wood attached to berm.	Yes	199	1		
04770 Evaporation Pond (4)	02/07/2020	Closed	HES	Wood attached to the berm.	Yes	247	1		
04770 Evaporation Pond (4)	05/14/2020	Closed	HES	Wood attached to the berm.	Yes	260	1		
05175 Evaporation Pond (4)	10/06/2019	Closed	HES	Mowed the grass.	Yes	689	3		
05175 Evaporation Pond (4)	02/20/2020	Closed	HES	Mowed the grass.	Yes	3	3		
05182 Evaporation Pond (4)	10/06/2019	Closed	HES	Mowed the grass.	Yes	391	2		
05182 Evaporation Pond (4)	02/25/2020	Closed	HES	Mowed the grass.	Yes	307	1		
12011 Infiltration Bed (Cherry House)	02/28/2020	Closed	HES		No				
PERMEABLE PAVEMENT									
11334 Pavement Permeant (Elliot St)	01/17/2020	Closed	Medison Hoppe & Rylee Emley	1) Cleanup of oil staining on the permeable pavement was recommended from the inspection last year on 9/26/2018. However due to logistics of moving cars, cleaning did not commence until 1/20-24/2020. ABM cleaned the permeable pavement with a vacuum sweeper. While this is effective at removing debris within the pores of the permeable pavement, it is not effective at removing oil staining. Recommended according to oil leaks with absorbent materials. 2) Recommended manual vacuum or washing. Vacuuming manually or using other may be necessary to remove debris from the surface of the permeant. For best results over a large area, a regenerative vacuum sweeper should be used. Other cleaning options may include	No				

New AMS - Veoci



- Transition from Manual to electronic
- GIS Integration
- Merge GIS, Analytical, & Metrics
- Compliance dashboard




Date and Time	Outfall Number	Outfall	Point Type	Outfall	Waterbody	Outfall	TPH Qualifier
2015-Jun-16 10:30	10	Industrial	Swale Creek	+			
2015-Jun-16 10:30	1008	Municipal	Trigg Lane	+			
2015-Jun-15 19:40	10	Industrial	Trigg Lane	+			
2015-Jun-22 11:10	23	Industrial	Trigg Lane	+			
2015-Jun-22 11:07	34	Municipal	Trigg Lane	+			
2015-Jun-22 10:00	62	Municipal	Trigg Lane	+			
2015-Jun-22 09:34	51	Municipal	Black Deer Creek	+			
2015-Jun-22 10:13	82	Municipal	Black Deer Creek	+			



SWMPP Resources


<https://hidot.hawaii.gov/airports/doing-business/engineering/environmental/construction-site-runoff-control-program/>




Stormwater Management Program Plan

Daniel K. Inouye International Airport

Section D: Permanent Best Management Practice Program







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NPDES Permit No. HI5000005


August 2019






Post- Construction Best Management Practices


Stormwater Permanent BMP Manual







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August 2019






Permanent BMP Operations & Maintenance Manual





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Version 2





Thank You