DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND, PACIFIC REGION
HEADQUARTERS, UNITED STATES ARMY GARRISON, HAWAII
851 WRIGHT AVENUE, WHEELER ARMY AIRFIELD
SCHOFIELD BARRACKS, HAWAII 96857-5000

REPLY TO
ATTENTION OF:

IMPC-HI-ZA

29 SEP 2010

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: United States Army Garrison, Hawaii Enforcement Policy For Post-Construction Storm Water Management in New Development and Redevelopment

1. United States Army Garrison, Hawaii (USAG-HI) holds a National Pollutant Discharge Elimination System (NPDES) permit, issued by the Hawaii State Department of Health, Clean Water Branch. Within the permit, USAG-HI must develop, implement and enforce a program for post-construction storm water management in new development and redevelopment. The enclosed enforcement policy document describes the enforcement procedures and actions of the USAG-HI program for post-construction storm water management in new development and redevelopment and satisfies the requirements of the NPDES permit.

2. The point of contact for this action is Directorate of Public Works, Environmental Division,attention: Jim Rice, PE who can be reached at 656-3105 or james.c.rice1@us.army.mil.

Encl

DOUGLAS S. MULBURY
COL, IN
Commanding

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US ARMY CORPS OF ENGINEERS ENGINEERING & CONSTRUCTION DIVISION (CEPOH-EC)
ARMY HAWAII FAMILY HOUSING (ATTN: Claire Ridding-Johnston, Project Director)
DIRECTOR, DPW
RCI HOUSING (IMPC-HI-PWH)
BUSINESS OPERATIONS DIVISION (IMPC-HI-PWB)
ENVIRONMENTAL DIVISION (IMPC-HI-PWE)
ENGINEERING DIVISION (IMPC-HI-PWF)
PLANNING DIVISION (IMPC-PWM)
ENGINEERING BRANCH (IMPC-HI-PWF)
OPERATIONS AND MAINTENANCE DIVISION (IMPC-HI-PWO)

ENFORCEMENT PROCEDURES AND ACTIONS FOR POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

as required by State Department of Health, Clean Water Branch

in accordance with

the U.S. Army Garrison, Hawaii

National Pollutant Discharge Elimination System Permit No. S000090

Prepared by

Directorate of Public Works, Environmental Division

June 2010

ENFORCEMENT PROCEDURES AND ACTIONS FOR POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

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BACKGROUND

The State Department of Health (SDOH), Clean Water Branch (CWB) issued U.S. Army Garrison, Hawaii (USAG-HI) a National Pollutant Discharge Elimination System (NPDES) permit effective February 7, 2007. This document is being prepared in compliance with Part C, Section 2.e and Section 2.e.i of the USAG-HI NPDES permit. It describes the USAG-HI program for post-construction storm water management implementation and enforcement.

Part C, Section 2.e. of the NPDES permit requires USAG HI to perform the following:

"The Permittee shall develop, implement and enforce a program to reduce pollutants in storm water runoff from new development and redevelopment projects that disturb greater than or equal to one (1) acre or more, including construction activities less than one (1) acre that are part of a larger common plan of development or sale that would disturb one (1) acre or more, that at a minimum, includes the following:

i. Establishment of installation-wide instructions, directives, or other regulatory mechanism, including enforcement procedures and actions that address post-construction runoff from new development and redevelopment projects."

In December 2007, Congress enacted the Energy Independence and Security Act (EISA). Section 438 of EISA 2007 addresses post-construction storm water management for federal projects, requiring:

"The sponsor of any development or redevelopment project involving a Federal facility with a footprint that exceeds 5,000 square feet shall use site planning, design, construction, and maintenance strategies for the property 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."

As identified in the USAG-HI NPDES permit Annual Report and in accordance with Section 438 of EISA 2007, the following technical documents shall serve as reference and guidance for the design and implementation of post-construction storm water management on the USAG-HI Installation:

- Department of the Army Office of the Assistant Secretary of the Army Installations and Environment. "Managing Stormwater with Low Impact Development." Washington DC. Draft.
- Office of the Under Secretary of Defense. "DoD Implementation of Storm Water Requirements under Section 438 of the Energy Independence and Security Act (EISA)." Washington DC. 19 January 2010.

- United States Environmental Protection Agency. "Technical Guidance on Implementing the Stormwater Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act." Washington DC. December 2009. EPA 841-B-09-001.
- United States Army Corps of Engineers. "Low Impact Development for Sustainable Installations: Stormwater Design and Planning Guidance for Development within Army Training Areas." Washington DC. 1 October 2008. Public Works Technical Bulletin 200-1-62.
- Department of Defense. "Unified Facilities Criteria Design: Low Impact Development Manual." 6 April 2010. UFC 3-210-10N.
- Department of Planning and Permitting, City and County of Honolulu. "Rules Relating to Storm Drainage Standards." January 2000.
- City and County of Honolulu. "Post-Construction Storm Water Management Manual." Not Currently Available.

PURPOSE

The purpose of this enforcement policy is to ensure that the design and construction agents and the operation and maintenance contractors/in-house staff comply with the requirements of the USAG-HI NPDES permit for post-construction storm water management of all new development and redevelopment projects. The intent of this policy is to include all new development, redevelopment and retrofit activity in order to improve water quality at all USAG-HI installations and ensure that storm water management measures are properly designed, installed and maintained.

This enforcement policy will be updated annually or as needed.

IMPLEMENTATION

The preference for USAG-HI, to improve water quality, is to include the following storm water **source control** best management practices (BMPs) or low impact development (LID) techniques in the overall design of all new development and redevelopment projects to the maximum extent practicable: disconnect impervious surfaces, grade project sites to encourage sheet flow to vegetated areas and minimize development on soils that infiltrate well. The intent is to treat storm water at the source. Acceptable **treatment control** BMPs, to be used in combination with source control BMPs, in order to comply with the USAG-HI post-construction enforcement policy and Section 438 of EISA 2007 are shown in the table on the following page.

The construction that occurs on USAG-HI consists primarily of three categories. They are Military Construction-Army administered by the Army Corps of Engineers (COE), Residential Communities Initiative currently awarded to Island Palm Communities LLC and Sustainment Restoration and Modernization. In addition, this policy applies for the following: Army Commands, Army Service Component Commands, Direct Reporting

Units; Army Air Force Exchange Service (AAFES); Defense Commissary Agency (DECA) and non-appropriated activities; Army privatization initiatives programs; and all tenant activities.

Treatment Control BMPs for Storm Water Management

BMP	Peak Flow Control	Volume Reduction	Water Quality Improvement
Bio-retention	●	●	●
Vegetated Swale	●	●	●
Downspout Disconnection	●	●	●
Rainwater Harvesting	●	●	
Permeable Pavement	●	●	●
Sand Filter	●		●
Infiltration Trench	●	●	●
Green Roof	●		●

Source: United States Army Corps of Engineers. "Low Impact Development for Sustainable Installations: Stormwater Design and Planning Guidance for Development Within Army Training Areas." PWTB 200-1-62. 1 October 2008.

Military Construction-Army

COE shall revise and update, as needed, the design/build request for proposal (RFP) to reflect the USAG-HI post-construction enforcement policy and require the Architect/Engineer to meet the intent of Section 438 of EISA 2007. The RFP shall also include the requirement for a long-term operation and maintenance plan that specifies maintenance activities and schedule for each treatment control BMP. Standard specifications shall be updated to include proper design, sizing, materials and installation of treatment control BMPs.

Residential Communities Initiative

As required, new development and redevelopment projects that exceed 5,000 square feet shall comply with Section 438 of EISA 2007. As required, projects shall include a plan for long-term operation and maintenance activities. As required, Island Palm Communities LLC shall provide for the long-term maintenance requirements of

treatment control BMPs in the 50-year ground lease, Design Build Agreement and Community Development Management Plan.

Sustainment Restoration and Modernization
In-house DPW staff and all contractors shall comply with the requirements of Section 438 of EISA 2007 and include source control and treatment control BMPs, as well as a plan for long-term operation and maintenance activities for all new development and redevelopment projects exceeding 5,000 square feet.

DPW Master Planning Division
DPW Master Planning Division shall include post-construction storm water management requirements in project development, scope and funding, including project charrettes, 1391 documents and Installation Design Guidelines.

DPW Real Estate Division
DPW Real Estate shall assign all permanent post-construction storm water best management facilities with a facility number.

DPW Environmental Division
DPW Environmental personnel shall conduct outreach activities to educate design, construction and operation and maintenance personnel on post-construction storm water management regulatory requirements, available technical guidance resources and best management practices.

DPW Environmental personnel shall review all new development and redevelopment project plans, specifications, engineering calculations and long-term operation and maintenance plans to ensure compliance with Section 438 of EISA 2007.

DPW Environmental personnel shall maintain a database of all permanent post-construction storm water management BMPs and retain records of all treatment control BMP monitoring results.

DPW Operations and Maintenance Division
DPW Operations and Maintenance Division in-house staff or contractor shall maintain permanent post-construction storm water management BMPs in accordance with the operation and maintenance plan. The operation and maintenance plan will include information on routine tasks, such as perimeter mowing, pruning, debris and sediment removal and outlet and overflow device inspections.

Annual Reporting
Annual reports in a spreadsheet shall be made through the chain of command in November of each year to the Office of the Assistant Chief of Staff for Installation Management for all LID project work implemented or waived and shall include:

installation/activity name, name of master planner, LID design engineer(s), project type, location, watershed name and cost to complete.

Exemptions and Waivers
Exemptions to implementing LID techniques shall be made when end user activities include the following: POL offloading and fueling, hazmat/waste loading/unloading, tactical vehicle/equipment parking, etc. Waivers to the post-construction storm water management requirement shall be obtained from the Regional Director.

INSPECTIONS

DPW Environmental personnel shall conduct inspections at the following stages of all new development and redevelopment projects: during the installation of permanent treatment control BMPs, immediately upon completion of construction of permanent treatment control BMPs, annually or as needed. Contractors shall provide DPW Environmental personnel with at a minimum 72 hours advance notice prior to the installation of all permanent treatment control BMPs. Contractors shall provide DPW Environmental personnel with at a maximum 72 hours notice upon completion of construction of all permanent treatment control BMPs.

ENFORCEMENT

For COE and Sustainment Restoration and Modernization or capital improvement type projects, short and long-term operation and maintenance activities shall be performed by DPW Operations and Maintenance Division. If a deficiency is identified, then the deficiency shall be corrected within two (2) weeks to reduce the possibility of impairment of water quality. If the deficiency is not corrected, then the maintenance issue will be elevated to the DPW Director. The Garrison Commander will be the final authority for all issues of noncompliance.

For Residential Communities Initiative projects, short and long-term operation and maintenance activities shall be performed by Island Palm Communities LLC. If a deficiency is identified, then the deficiency shall be corrected within two (2) weeks to reduce the possibility of impairment of water quality. If the deficiency is not corrected, then the maintenance issue will be elevated to the DPW Director. The Garrison Commander will be the final authority for all issues of noncompliance.

RECORD KEEPING

A summary of all project reviews, inspections and monitoring shall be kept on file with the DPW, Environmental Division. Records shall be kept for five (5) years in accordance with the NPDES permit.

CERTIFICATION

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

29 Sep 10

DOUGLAS S. MULBURY
COL, IN
Commanding

Date