

Oahu Storm Water Management Program Plan



State of Hawaii Department of Transportation
Highways Division



PROTECT
OUR
WATER

MĀLAMA I KA WAI
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION

March 2007

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Acronyms and Abbreviations

ADPW	Army Directorate of Public Works
AMS	Asset Management System
BMP	Best Management Practice
CFR	Code of Federal Regulations
City	City and County of Honolulu
CWA	Clean Water Act
DDC	City & County of Honolulu Department of Design and Construction
DDU	State of Hawaii, Department of Transportation, Highways Division, Oahu District, Maintenance Section, Drainage Discharge Unit
DLNR	State of Hawaii Department of Land and Natural Resources
DPP	City & County of Honolulu Department of Planning and Permitting
EA	Environmental Assessment
EIS	Environmental Impact Statement
EISPN	Environmental Impact Statement Preparation Notice
ENV	City & County of Honolulu Department of Environmental Services
FONSI	Finding of No Significant Impact
FSHM	fill material, soil amendment, hydro-mulch, & erosion control matting
FSHMI	fill material, soil amendment, hydro-mulch, erosion control matting & irrigation
GIS	geographic information system
GPS	global positioning system
HAR	Hawaii Administrative Rules
HAZMAT	hazardous material
HDOH	State of Hawaii Department of Health
HDOT Airports	State of Hawaii Department of Transportation, Airports Division
HDOT Harbors	State of Hawaii Department of Transportation, Harbors Division
HDOT Highways	State of Hawaii Department of Transportation, Highways Division
HDOT	State of Hawaii Department of Transportation
HFD	City & County of Honolulu Fire Department

Oahu Storm Water Management Program Plan

HWY-DD	HDOT Highways Division, Design Branch, Design Section
HWY-DH	HDOT Highways Division, Design Branch, Hydraulic Design Section
HWY-DS	HDOT Highways Division, Design Branch, Technical Design Section
HWY-LR	HDOT Highways Division, Materials Testing and Research Branch
HWY-OC	HDOT Highways Division, Oahu District, Construction Section
HWY-OM	HDOT Highways Division, Oahu District, Maintenance Section
HWY-OT	HDOT Highways Division, Oahu District, Tunnels Section
HWY-P	HDOT Highways Division, Planning Branch
HWY-T	HDOT Highways Division, Traffic Branch
MOU	Memorandum of Understanding
MP	mile post (or mile marker)
MS4	Municipal Separate Storm Sewer System
MSERW	mechanically stabilized earth retaining wall
NGPC	Notice of General Permit Coverage
NPDES	National Pollutant Discharge Elimination System
Oahu SWMP	Oahu Storm Water Management Program
Oahu SWMP Plan	Oahu Storm Water Management Program Plan
PSA	public service announcement
SC	shotcrete
SEP	Supplemental Environmental Project
SF	silt fence and hydraulically-applied flexible erosion control blanket or gypsum binder
SH	silt fence and hydro-mulch
SHP	silt fence, hydro-mulch, and polymer emulsion
SIC	standard industrial classification
SSWMP	Statewide Storm Water Management Program
SWMP	Storm Water Management Program
SWMPP	Storm Water Management Program Plan
SWPCP	Storm Water Pollution Control Plan
TMDL	total maximum daily load

TMK	Tax Map Key
TOC	Traffic Operations Center
U.S.C.	United States Code
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	underground storage tank
WLA	waste load allocation
WQLS	water quality limited segment

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Definitions of Key Terms

303(d) List – Under Section 303(d) of the Clean Water Act, states are required to compile a list of impaired waters that fail to meet any of their applicable water quality standards or cannot support their designated or existing uses. This list, called a “303(d) list” is submitted to Congress every two years, and states are required to develop a Total Maximum Daily Load (TMDL) for each pollutant causing impairment for water bodies on the list.

Best Management Practices (BMP) – According to 40 CFR § 122.2, schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of ‘waters of the United States’. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Clean Water Act (CWA) – The Clean Water Act is an act passed by the U.S. Congress to control water pollution. It was formerly referred to as the Federal Water Pollution Control Act of 1972 or Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500), 33 U.S.C. 1251 et seq., as amended by Public Law 96-483, Public Law 97-117, and Public Laws 95-217, 97-117, 97-440, and 100-04.

Code of Federal Regulations (CFR) – The document that codifies all rules of the executive departments and agencies of the federal government. It is divided into fifty volumes, known as titles. Title 40 of the CFR (referenced as 40 CFR) lists all environmental regulations.

Connection Permit – A permit issued by HDOT Highways for physical connections into its Oahu MS4.

Contract Project – A construction project, which is designed either by HDOT Highways personnel or by engineering consultant firms, and is contracted to a private contractor.

Construction BMPs – BMPs to address a short-term storm water contamination threat during construction. They are removed at the conclusion of a construction phase or project.

Critical Deficiency – Deficiencies that pose an immediate threat for the discharge of pollutants to the storm drain system, surface waters, or State waters. Critical deficiencies include, but are not limited to, the following examples:

1. Any observed discharge, or evidence of discharge, of untreated storm water or non-storm water to the storm drain system, surface waters, or State waters generated by the construction activity;
2. Absence of linear barriers and/or perimeter controls required by the BMP Plan;
3. There are identified storm drain inlets, surface waters, or State waters within or adjacent to the project site in close proximity to disturbed soil areas without control measures in place that pose an immediate threat of untreated storm water discharges;
4. Work in an active stream channel or other surface water body without proper implementation of required BMPs; and

5. Presence of any spilled oil or hazardous materials near to unprotected storm drain inlets, surface waters, or State waters.

Detention Device – Facilities designed to collect and temporarily detain a portion of the storm water runoff for a specified period of time and to permit settlement of particulate pollutants.

Discharge – Any liquid, semi-solid or solid substance that is released into and from the Oahu MS4.

Discharge Permit – A permit issued by HDOT Highways for discharges during construction into its Oahu MS4.

Drainage Area – That portion of the surface area from which storm water runoff flows to a given location. With respect to a highway, this location may be either a culvert, the farthest point of a channel, or an inlet to a roadway drainage system.

Encroachment – Occupancy of HDOT Highways right-of-way by non-project structures or object of any kind or character; also, the activities of other parties within the HDOT Highways right-of-way.

Encroachment Project – A construction project undertaken by a non-HDOT entity (i.e., third party) within the HDOT Highways right-of-way and requires the issuance by HDOT Highways of a Permit to Perform Work upon State Highways.

Erosion – The wearing away of land surface, primarily by wind or water. Erosion occurs naturally as a result of weather or runoff but can be intensified by clearing, grading, or excavation of the land surface.

Erosion Control – Stabilizing a disturbed or exposed surface area in order to prevent soil particles from being detached and causing sediment accumulation in nearby surface waters.

Good Housekeeping – A common practice related to the storage, use, or cleanup of materials performed in a manner that minimizes the discharge of pollutants.

Herbicides – Chemical compounds that are used to control weeds.

Illegal Connection – Any connection to the Oahu MS4 that is not permitted by a drain connection permit from HDOT Highways.

Illicit Discharge – Any discharge that is not composed entirely of storm water, except the following types of discharges provided that they do not contain pollutants in amounts that will cause or contribute to a violation of an applicable water quality standard:

- 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 fire fighting activities.

In-House Project – A construction project that is performed by HDOT Highways personnel. These projects are typically small and maintenance related.

Initial Inspection – Inspections conducted on projects that require NPDES coverage, to verify that the construction BMPs identified in the site-specific BMP plan are properly installed and in the correct locations prior to the commencement of ground-disturbing activity.

Maintenance Activities – Routine activities that may require cutting, clearing, grading, or excavation to maintain original line and grade, hydraulic capacity, or original purpose of the facility.

Maintenance Projects – Projects that are performed by outside contractors and are overseen by Oahu District’s Maintenance Section (HWY-OM). These projects are typically highway maintenance-related.

Major Deficiency – Deficiencies that are significant problems which could result in the discharge of pollutants to the storm drain system, surface waters, or State waters. Major deficiencies include, but are not limited to, the following examples:

1. No BMP plan or NPDES permit (if required);
2. Linear barriers and/or perimeter controls in areas tributary to a water body or drain inlet that are installed as required by the BMP plan, but are not functional, such as silt fences that are not anchored properly, have collapsed, or been driven over or overwhelmed by accumulated sediment;
3. Hazardous materials or waste is stored within a project without containment or implementation of BMPs;
4. Oil, fuel, or brake or transmission fluid spills covering more than one square yard and/or are adjacent to protected storm drain inlets, surface waters, or State waters;
5. Any discharge of sediment or other deleterious material resulting from dewatering operations conducted without implementation of required BMPs for dewatering;

6. Sediment tracking more than 50 feet from project ingress/egress location(s);
7. Expansion of the active disturbed soil area limit without written approval;
8. Soil stabilization and sediment controls are not installed in accordance with applicable site-specific BMP Plan;
9. Sediment controls are installed in accordance with the BMP Plan, but there is a large unstabilized disturbed soil area with insufficient controls down gradient to prevent the discharge of untreated storm water to the storm drain system, surface waters, or State waters if a rain event generates runoff; and
10. Dust from project site visibly blowing off the site and into storm drain conveyances or adjacent surface water bodies.

Master Consultant – The consultant procured by HDOT Highways in order to provide various functions in support of the requirements of the Consent Decree and the Oahu MS4 NPDES Permit.

Minor Deficiency – Deficiencies that do not pose a threat of discharge of untreated storm water or pollutants to the storm drain system, surface waters, or State waters, but are not in strict conformance with the SWMPP or BMP Plan. Minor deficiencies include, but are not limited to, the following examples:

1. BMP Plan does not reflect current operations and an amendment is recommended;
2. BMPs are not deficient, but are not consistent with the BMP plan;
3. Linear barriers and/or perimeter controls are installed as required by the BMP plan, but require minor maintenance, such as a silt fence which is not anchored properly throughout the entire length or an inlet protection device with some accumulated silt;
4. Expansion of the active disturbed soil area limit without written authorization or sediment controls are installed as required by the BMP plan, but not properly maintained;
5. Site inspections by project staff are not being conducted at the required frequencies;
6. Non-storm water or waste management BMPs that are improperly maintained;
7. Oil, fuel, or brake or transmission fluid spills covering less than one square yard and not adjacent to storm drain inlets, surface waters, or State waters;
8. Evidence of active wind erosion on unstabilized slopes/stock piles;
9. Minor tracking less than 50 feet from project ingress/egress locations; and
10. Major deficiencies which are corrected prior to the inspector leaving the site.

Municipal Separate Storm Sewer System (MS4) – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) owned by a state, city, town, or other public body, that is designed or used for collecting or conveying storm water, that is not a combined sewer, and that is not part of a publicly owned treatment works [40 CFR 122.26(b)(8)].

National Pollutant Discharge Elimination System (NPDES) – The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the CWA.

Non-point Source Pollutants – Pollutants that come from many different sources. Unlike pollution from industrial and sewage treatment plants, non-point source pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters, and even underground sources of drinking water. These pollutants include:

- Excess fertilizers, herbicides, and insecticides from agricultural lands and residential areas;
- Oil, grease, and toxic chemicals from urban runoff and energy production;
- Sediment from improperly managed construction sites, crop and forest lands, and eroding stream banks;
- Salt from irrigation practices and acid drainage from abandoned mines;
- Bacteria and nutrients from livestock, pet wastes, and faulty septic systems; and
- Atmospheric deposition and hydromodification.

Notice of Intent (NOI) – Form completed and signed by a construction site operator or an industrial facility operator notifying the State of Hawaii Department of Health (HDOH) that the operator will comply with an applicable NPDES general permit.

Nutrients – Any substance assimilated by living things that promotes growth. The term is generally applied to nitrogen and phosphorus in wastewater, but is also applied to other essential and trace elements.

Oahu MS4 NPDES Permit – An Individual NPDES permit issued by HDOH to HDOT Highways for discharges from the HDOT Highways large municipal separate storm sewer system on Oahu and designated as Permit No. HI0021245 and reissued as No. HIS000001.

Outfall – Refers to the discharge point of a municipal storm sewer system to a conveyance ditch or natural stream channel.

Performance Measures – Quantitative indicators of how well (or poorly) a program meets a specific objective.

Permanent BMPs – Storm water BMPs designed to be installed and remain in place as part of the project features to provide long-term storm water quality or quantity control.

Periodic Inspections – Inspections of a contract, in-house, maintenance, or encroachment project's construction BMPs by an independent inspector who is not involved in overseeing other aspects of the projects construction.

Point Source Pollution – Point source pollution is when sources of pollution can be traced to a single point into the receiving water. Point Sources account for over 60 percent of the water pollution in the U.S. today. Industry and domestic sewage treatment plants play a major role in point source pollution. Industrial and domestic waste water and discharges include oils, greases, metals, chemicals, nutrients and sediments.

Sanitary Sewer – Pipes that carry only domestic waste water, not storm water.

Sediment – Organic or inorganic material that is carried by or is suspended in water and that settles out to form deposits in the storm drain system or receiving waters.

Sediment Load – Sediment particles maintained in the water column by turbulence and carried with the flow of water.

Service Contractor – The contractor or contractors procured by HDOT Highways in order to provide various services in support of the requirements of the Oahu MS4 NPDES Permit.

Site Specific BMP Plan – A plan for controlling pollutants in storm water discharges from sites that meets the requirements of the General Construction Activities Storm Water Permit and Section V of the Consent Decree.

Soil Stabilization – Erosion control measures used to minimize erosion.

Spill – An accidental dumping or spilling of a potential pollutant onto the ground or into a waterway.

State Waters – All waters, fresh, brackish, or salt, around and within the State, including, but not limited to, coastal waters, streams, rivers, drainage ditches, ponds, reservoirs, canals, ground waters, and lakes.

Storm Water – Storm water runoff, and surface runoff and drainage.

Construction BMPs – BMPs that address a short-term storm water contamination threat during construction. They are removed at the conclusion of a construction phase or project.

Total Maximum Daily Load (TMDL) – A TMDL establishes the maximum amount of an impairing substance or stressor that a water body can assimilate and still meet Water Quality Standards (WQSs) and allocates that load among pollution contributors. TMDLs are also a tool for implementing State water quality standards. They are based on the relationship between pollution sources and in-stream water quality conditions. A TMDL addresses a single pollutant or stressor for each water body.

Waste Load Allocation – The maximum quantity of pollutants each discharger of waste is allowed to release into a particular waterway as set by an authority. Discharge limits are usually required individually for each specific water quality criterion.

Water Quality Standards (WQSs) – State adopted and USEPA-approved ambient standards for water bodies. The standards prescribe the use of water body and establish the water quality criteria that must be met to protect water bodies.

Watershed – The area of land that catches rain and snow and drains or seeps into a receiving water such as marsh, stream, river, lake or ocean.