

# CHAPTER 1

## OVERVIEW OF STORM WATER MANAGEMENT PROGRAM PLAN

The State of Hawaii Department of Transportation, Highways Division, Oahu District (DOT-HWYS) owns and operates a municipal separate storm sewer system (MS4) on the Island of Oahu, Hawaii. The State of Hawaii Department of Health (DOH) issued DOT-HWYS the National Pollutant Discharge Elimination System (NPDES) Permit No. HI S000001 (MS4 Permit) (Appendix A.1), authorizing DOT-HWYS to discharge storm water runoff and certain non-storm water discharges from the MS4 and from DOT-HWYS' five municipal industrial facilities (i.e., baseyards), into State Waters. The MS4 Permit became effective on October 28, 2013, and will expire at midnight, September 26, 2018. The MS4 Permit legally requires the DOT-HWYS Storm Water Management Program (SWMP) to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP), and to reduce the discharge of pollutants from DOT-HWYS' baseyards to the appropriate discharge limitations subject to the Best Available Technology (BAT)/Best Conventional Pollutant Control Technology (BCT) discharge requirement, consistent with the Clean Water Act (CWA) and other respective federal and state requirements for such facilities.

At the time of the preparation of this Storm Water Management Program Plan (SWMPP), Parts A.6, D.1.g.(1), F.2, F.3.c.(3), F.3.c.(4), and H of the MS4 Permit are pending a settlement agreement between DOT-HWYS and DOH. Where referenced throughout this SWMPP, the aforementioned Parts reflect the proposed settlement language.

On January 30, 2006, the United States Environmental Protection Agency (USEPA) and DOH issued the Consent Decree Civil Action No. CV05-00636-HG- KSC (Consent Decree) (Appendix A.2) to DOT-HWYS, which stipulates storm water requirements with which DOT-HWYS must comply. Until termination of the Consent Decree, DOT-HWYS will implement the SWMP in compliance with the requirements of the Consent Decree in addition to those set forth in the MS4 Permit.

Following an introduction of the organizational structure of DOT-HWYS SWMP, this chapter provides information on the topics listed below:

1. Purpose and structure of the SWMPP;
2. Applicable storm water regulations and DOT-HWYS' legal authority; and
3. Overview of the asset management system (AMS).

### 1.0 Program Organization

The SWMP is administered by DOT-HWYS Environmental Management Section (HWY-OW), with the support of a master consultant. This SWMPP includes a unique organizational chart for each program element to account for the large number of DOT-HWYS' branches, sections, units, subunits, and personnel involved in the implementation of the SWMP, and to clearly define the roles and responsibilities of each. Additionally, DOT-HWYS utilizes private consultants,

engineering firms, and service contractors to ensure the SWMP is implemented effectively and efficiently. DOT-HWYS oversees that the activities conducted by such entities are done so in accordance with the MS4 Permit and any other applicable federal and state storm water regulations.

## **1.1 Purpose and Structure of SWMPP**

The purpose of this SWMPP is to describe the procedures, program activities, and best management practices (BMPs) DOT-HWYS will implement during the effective term of the MS4 Permit in order to reduce, to the MEP, the discharge of pollutants to and from the MS4, protect water quality, comply with the MS4 Permit and Consent Decree, and satisfy the appropriate water quality requirements of the CWA.

The SWMPP chapters are organized by program element, as follows:

Chapter 1: Overview of SWMPP

Chapter 2: Public Education and Outreach Program

Chapter 3: Illicit Discharge Detection and Elimination Program

Chapter 4: Construction Site Runoff Control Program

Chapter 5: Post-Construction Storm Water Management in New Development and Redevelopment Program

Chapter 6: Pollution Prevention/Good Housekeeping – Debris Control BMPs Program

Chapter 7: Pollution Prevention/Good Housekeeping – Chemical Applications BMPs Program

Chapter 8: Pollution Prevention/Good Housekeeping – Erosion Control BMPs Program

Chapter 9: Pollution Prevention/Good Housekeeping – Maintenance Activities BMPs Program

Chapter 10: Industrial and Commercial Activities Discharge Management Program

Chapter 11: Municipal Industrial Facilities Program

Chapter 12: Monitoring Program

Chapter 13: Total Maximum Daily Load Program

Chapter 14: Reporting Program

Each chapter begins with a brief introduction, followed by a list of the major BMPs or program activities implemented by the program element being discussed. The numbered list of BMPs corresponds to individual sections within the chapter.

Tables are provided in the beginning of each chapter that outline the MS4 Permit and Consent Decree requirements that pertain to the program element and the section(s) in which each requirement is addressed.

The program element's organizational chart is provided at the beginning of the chapter. Each section within the chapter describes the program activities DOT-HWYS implements to attain

compliance with a specific MS4 Permit and/or Consent Decree requirement(s). To further designate roles and responsibilities, an organizational chart is included at the end of each section, with the personnel responsible for implementation of the BMP(s) discussed in that section highlighted in yellow.

A table is provided in the final section (i.e., Measuring Program Effectiveness) of each chapter that outlines standards and/or milestones for the program element to attain. The purpose of this section is to establish measurable goals for the implementation of specific BMPs and to address DOT-HWYS' plan for monitoring the effectiveness of their implementation.

Cumulatively, the BMPs and storm water management procedures implemented by each program element compose DOT-HWYS' strategy for reducing the discharge of pollutants to and from the MS4 to the MEP.

## **1.2 Storm Water Regulations and Legal Authority**

DOT-HWYS is required to comply with the following state and federal storm water regulations in addition to the requirements established by the MS4 Permit and Consent Decree:

- Clean Water Act, as amended, (33 U.S.C. §1251 *et. seq.*);
- Title 40 of the Code of Federal Regulations (CFR);
- Hawaii Revised Statutes (HRS), Chapter 342D; and
- Hawaii Administrative Rules (HAR), Department of Health (DOH), State of Hawaii, Chapters 11-54 and 11-55 (HAR, Chapter 11-54 and 11-55).

On July 13, 1999, DOT-HWYS entered into a Memorandum of Understanding (MOU) with DOH (Appendix A.3), for the purpose of assisting DOT-HWYS in controlling illicit discharges into the MS4. Under HRS Chapter 342D, this MOU authorizes DOT-HWYS to prosecute administratively against illicit discharges to the MS4, therefore providing DOT-HWYS with the legal authority necessary to implement and enforce the policies and procedures described in this SWMPP.

On February 1, 2002, DOT-HWYS signed an MOU with the City and County of Honolulu (CCH) Department of Environmental Services (ENV) and Department of Facility Maintenance (DFM) (Appendix A.4). CCH owns and operates a MS4 and has been issued a MS4 NPDES permit by DOH. CCH's MS4 and DOT-HWYS' MS4 are interconnected in certain locations. The objectives of this MOU are to establish effective intergovernmental coordination between DOT-HWYS and CCH, delineate the roles and responsibilities of each agency, minimize duplication of efforts, and ensure accountability.

## **1.3 Asset Management System**

DOT-HWYS implements a comprehensive Geographic Information System (GIS)-based asset management system (AMS) as its primary mechanism to inventory and monitor SWMP

activities. DOT-HWYS' Storm Water AMS utilizes GIS, relational and spatial databases, a web-based map application, and multiple servers. It supports individual modules, each of which relates to a specific program activity. DOT-HWYS uses the AMS to maintain a map and inventory of MS4 drainage structures and permanent BMPs; track inspection dates and debris removal activities; and establish street sweeping and drain cleaning priorities based on material accumulation rates and/or the potential threat of discharge to State Waters that may have an effect on water quality.

To date, the AMS consists of the following modules:

- Street Sweeping Module;
- Construction Projects Module;
- Drain Inspection Module;
- Open Channels Module;
- Outfalls Module;
- Maintenance Facilities Module; and
- Permanent BMPs Module.

The Debris Control BMPs Program uses the Street Sweeping, Drain Inspection, Open Channels, and Outfalls Modules to track inspection dates and debris removal activities. Inspectors input information about the debris removed from street sweeping and drain cleaning activities into the AMS, such as the volume of debris removed, as well as the percentage of sediment, organic matter, trash, and "other" present. These modules allow DOT-HWYS to monitor the quantity and type of debris removed from specific highway routes and MS4 structures. DOT-HWYS annually assesses this data to identify highway segments and associated MS4 structures that may require more frequent sweeping/cleaning. The modules utilized by the Debris Control BMPs Program assist program managers in establishing priority-based schedules.

The Construction Runoff Control Program uses the Construction Projects Module to track inspection dates and results for independent (third-party) inspections of contract and encroachment permit construction projects.

The Municipal Industrial Facilities Program uses the Maintenance Facilities Module to track inspection dates, results, and follow-up activities for DOT-HWYS' baseyard inspections.

The Post-Construction Storm Water Management in New Development and Redevelopment Program uses the Permanent BMPs Module to track the frequency of inspections and maintenance of permanent BMPs.

The AMS is DOT-HWYS' principal management tool for short-term planning and long-term compliance monitoring. The AMS allows program managers to assess compliance with MS4 Permit requirements, measure efficiency, and make modifications as necessary, by facilitating visibility of resources and comprehensive data analysis.