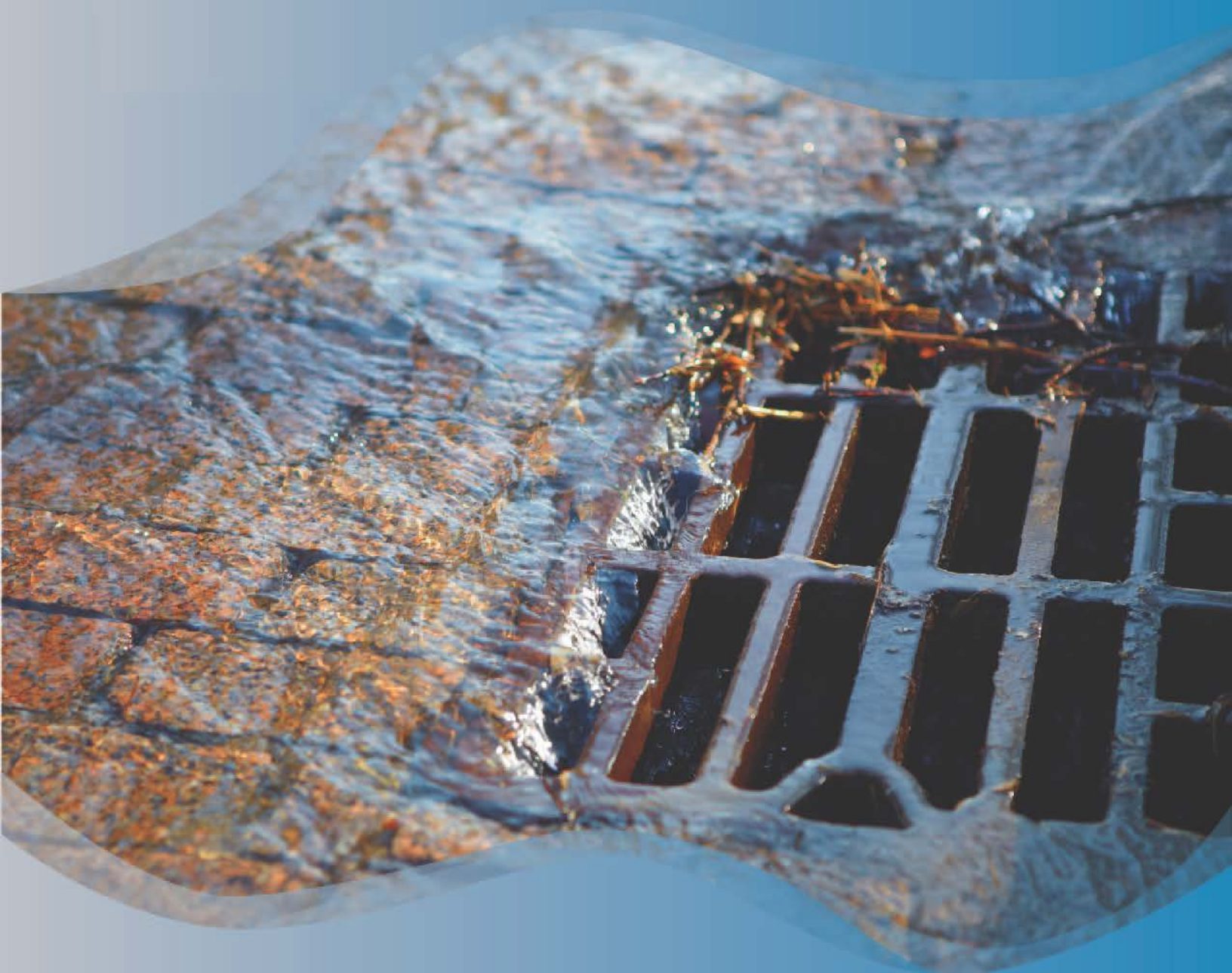


1 | Overview of Storm Water Management Program Plan



State of Hawaii, Department of Transportation
Highways Division, Oahu District
SWMPP, February 2022



A drainage channel conveys storm water runoff on Pookela Street, Kaneohe, Hawaii.

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 the MS4 National Pollutant Discharge Elimination System (NPDES) Permit No. HI S000001 (MS4 NPDES Permit) (Appendix A.1), that authorizes DOT-HWYS to discharge storm water runoff and certain non-storm water discharges from the MS4 and from five DOT-HWYS baseyard facilities into state waters in and around the island of Oahu. The MS4 NPDES Permit became effective on September 1, 2020, and will expire at midnight on August 31, 2025.

The *Storm Water Management Program Plan (SWMPP)* was further developed and improved to address the requirements of the MS4 NPDES Permit and reduce, to the maximum extent practicable (MEP), the discharge of pollutants to and from the MS4 to protect water quality and to satisfy the appropriate water quality requirements of the Clean Water Act (CWA).

The overview of the *SWMPP* introduces the organizational structure of DOT-HWYS and provides information on the following topics:

1. Purpose and structure of the *SWMPP*.
2. Applicable storm water regulations and the legal authority of DOT-HWYS.
3. Overview of the Asset Management System (AMS).

1.0 Program Organization

The Storm Water Management Program (SWMP) is primarily administered by the DOT-HWYS Environmental Management Section (HWY-OW). However, numerous Highways Division branches and Oahu District sections support HWY-OW, which allows for timely adjustments to program needs, sufficient redundancy in tasks, succession planning, and facilitates intragovernmental communication and cooperation for SWMP implementation.

DOT-HWYS additionally administers the SWMP with the support of a master consultant to manage the activities of private consultants, engineering firms, and service contractors to ensure effective and efficient implementation. DOT-HWYS requires that the activities conducted by such entities are performed in accordance with the MS4 NPDES Permit and any other applicable federal and state storm water regulations.

The HWY-OW Engineer coordinates the SWMP Team implementation of activities among three Oahu District functional sections: Maintenance Section (HWY-OM), Construction Section (HWY-OC), and Tunnel Operations Section (HWY-OT). The organizational structure of DOT-HWYS (Appendix A.2) identifies the primary and ancillary support provided to the HWY-OW Engineer for the implementation and oversight of each program element. The Oahu District's Asset Management Section and Office Services provide support as needed.

HWY-OM is responsible to implement requirements of the Baseyard Facilities Program, Construction Site Runoff Control Program, Post-Construction Storm Water Management in New Development and Redevelopment Program, and the Pollution Prevention/Good Housekeeping subprograms: Debris Control BMPs Program, Chemical Applications BMPs Program, and Maintenance Activities BMPs Program.

HWY-OC is responsible for the requirements of the Construction Site Runoff Control Program, including implementing best management practices (BMPs) and standards to prevent erosion, controlling the transport of sediment from earth disturbances during construction activities, and executing the Enforcement Response Plan for public construction projects.

HWY-OT is responsible to contact the spill response Emergency Coordinator in the event of an illicit discharge or spill after work hours, and for Storm Water Pollution Control for Flood Control Projects which includes operation and maintenance of the Punahou Pump Station.

HWY-OW additionally coordinates SWMP implementation among the Highways Division Design Branch and Construction & Maintenance Branch to ensure that post-construction BMPs and low impact development (LID) practices are considered, in accordance with the criteria, from private and public construction projects implemented within or otherwise encroaching the DOT-HWYS rights-of-way (ROW).

HWY-OW facilitates SWMP implementation with the Highways Division Planning Branch, Right-of-Way Branch, Materials and Testing Branch, Traffic Branch, Project Coordination and Technical Services Office, Staff Services Office, Engineering Information Technology Office, and the Motor Vehicle Safety Office, as applicable.

1.1 Purpose and Structure of SWMPP

The purpose of the *SWMPP* is to describe the procedures, program activities, and BMPs that DOT-HWYS will implement during the effective term of the MS4 NPDES Permit in order to reduce, to the MEP, the discharge of pollutants to and from the MS4; protect water quality; comply with the MS4 NPDES Permit; and satisfy the appropriate water quality requirements of the CWA.

The *SWMPP* chapters are organized by program element, as follows.

- 1 | Overview of *Storm Water Management Program Plan*
- 2 | Public Education and Outreach Program
- 3 | Illicit Discharge Detection and Elimination Program
- 4 | Construction Site Runoff Control Program
- 5 | Post-Construction Storm Water Management in New Development and Redevelopment Program
- 6 | Pollution Prevention/Good Housekeeping – Debris Control BMPs Program
- 7 | Pollution Prevention/Good Housekeeping – Chemical Applications BMPs Program
- 8 | Pollution Prevention/Good Housekeeping – Erosion Control BMPs Program
- 9 | Pollution Prevention/Good Housekeeping – Maintenance Activities BMPs Program
- 10 | Industrial and Commercial Activities Discharge Management Program
- 11 | Baseyard Facilities Program
- 12 | Monitoring Program
- 13 | Total Maximum Daily Load Program
- 14 | Reporting Program

Each chapter opens with a brief introduction, followed by a list of the major BMPs or program activities implemented by the program element. Training requirements per MS4 NPDES Permit Part D.1.h are incorporated into the SWMPP chapters as applicable. The numbered list of BMPs corresponds to individual sections within the chapter. A table is provided outlining the MS4 NPDES Permit requirements that pertain to the program element and the associated section(s) in which each requirement is addressed.

The next section in each chapter shows the program element's overall organizational structure. At the end of each subsequent section, the organizational chart highlights the personnel responsible for the implementation of BMPs discussed to further identify roles and responsibilities.

The final section of each chapter, *Measuring Program Effectiveness*, identifies the relevant table in the *Program Effectiveness Strategy* (Appendix A.3) that documents the outcome level, data collection method, and assessment parameters for each program BMP. The purpose of this section is to establish metrics for specific BMPs and to address how DOT-HWYS monitors the effectiveness of BMP implementation.

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

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 NPDES Permit:

- 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
- Hawaii Administrative Rules (HAR) Chapters 11-54 and 11-55

On July 13, 1999, DOT-HWYS entered into a *Memorandum of Understanding Between Department of Transportation, State of Hawaii, and Department of Health, State of Hawaii* (Appendix A.4), for the purpose of assisting DOT-HWYS in controlling illicit discharges into the MS4 to the extent provided by law. Under HRS Chapter 342D, this Memorandum of Understanding (MOU) provides DOT-HWYS with the legal authority necessary to implement and enforce the policies and procedures described in the *SWMPP*.

On February 1, 2002, DOT-HWYS signed a *Memorandum of Understanding Between The Department of Transportation Highways Division, State of Hawaii and The Department of Environmental Services and The Department of Facility Maintenance City and County of Honolulu* (Appendix A.5). The City and County of Honolulu (CCH) owns and operates an MS4 and has been issued an MS4 NPDES permit by DOH. The CCH MS4 and the 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 inventories and monitors SWMP assets and activities through an integrated, multiplatform AMS. The foundation of the AMS is a georeferenced inventory of all known MS4 drainage structures and post-construction BMPs hosted on Esri's ArcGIS platform. All assets can be explored alongside reference information including hydrology, infrastructure, and cadastral datasets in an interactive, web-based map application (AMS Viewer).

The spatial inventory is directly linked to a relational database hosted on IBM's Maximo Asset Management platform (AMS Maximo). AMS Maximo connects each individual asset to an attribute dataset and inspection work orders. Inspectors enter data into AMS Maximo either directly through its web interface or through a mobile data collection app, such as ArcGIS Field Maps or Survey123.

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

To date, AMS Maximo supports the following individual modules, each of which is dedicated to a specific program activity (Figure 1-1).

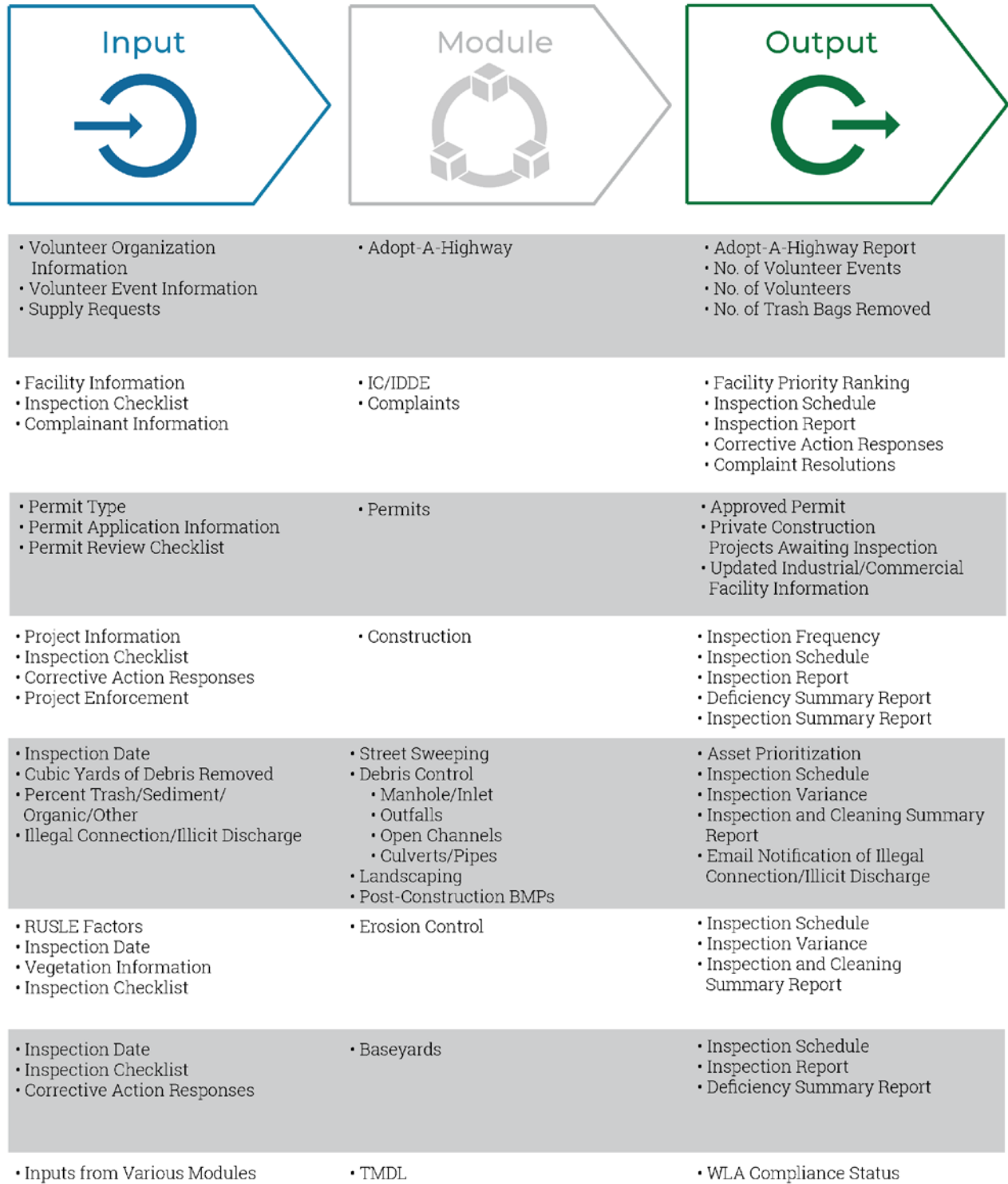


Figure 1-1. AMS Maximo Inputs and Outputs per Module.