



STATE OF HAWAII  
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In reply, please refer to:  
EMD/CWB

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DATE: September 27, 2013  
NPDES PERMIT NO.: HI S000001

**FINAL FACT SHEET:** REAPPLICATION FOR A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE MUNICIPAL STORM WATER RUNOFF AND CERTAIN NON-STORM WATER DISCHARGES TO STATE WATERS; INCLUDING STORM WATER RUNOFF FROM MUNICIPAL INDUSTRIAL FACILITIES

**FACILITY:** MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) AND MUNICIPAL INDUSTRIAL FACILITIES  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION (DOT-HWYS)  
TMK: All of Tax District No. 1  
Island of Oahu, Hawaii

**PERMITTEE:** STATE OF HAWAII,  
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## **PERMIT STATUS**

NPDES Permit No. HI S000001 was issued on February 28, 2006, effective on March 31, 2006, and expired at midnight on September 8, 2009. The Department of Health (DOH) received the "End-of-Year Report #3 and Reapplication for HDOT Highways Next MS4 NPDES Permit No. HI S000001," dated October 2008, on November 6, 2008. The DOH administratively extended the NPDES permit by letter, dated September 4, 2009. Public notice of proposed action was published in the Honolulu Star-Advertiser on May 31, 2012. After consideration of expressed views of all interested persons and agencies received during the public notice, pertinent Federal and State statutes and rules regarding the discharge, DOH has issued the NPDES permit on Friday, September 27, 2013 to be effective on Monday, October 28, 2013. The Permit will expire on Sunday, October 28, 2018.

On September 7, 1999, the U.S. Environmental Protection Agency (EPA) issued a Findings of Violation and Order for Compliance (Order for Compliance) to DOT-HWYS (Docket No. CWA-402-9-99-029). On January 29, 2006, the Consent Decree was issued and superseded the Order for Compliance. The Consent Decree is still in effect.

The Director of Health (Director) has reviewed the permit application and applicable laws and regulations and proposes to issue an NPDES permit to the applicant valid for a permit term up till five (5) years from its effective date. This Final Permit contains those terms and conditions which the Director has determined are necessary to carry out the provisions of the Federal Clean Water Act, as amended, (33 U.S.C.1251 et seq.; the "Act"); and Hawaii Revised Statutes, Chapter 342D.

## **FACILITY DESCRIPTION**

The Permittee owns and operates an MS4 and Municipal Industrial facilities (e.g., baseyards) within the State-owned transportation system. The area of permit coverage is the Island of Oahu. The MS4 is a system of conveyances, including storm drains, catch basins, curbs, gutters, canals, and ditches, designed to collect and convey storm water runoff. The Municipal Industrial facilities, defined in accordance with Title 40 of the Code of Federal Regulations (40 CFR) 122.26(b)(14), include the following: Keehi, Kakoi, Pearl City, Waianae, and Windward Baseyards. The Baseyards are used to support DOT-HWYs maintenance operations, which may include the storage of materials/chemicals/waste/equipment, repair and maintenance of vehicles/equipment, fueling, and vehicle/equipment washing.

## **RECEIVING WATER CLASSIFICATION**

The receiving waters, include all classes of inland and marine State Waters on and around the Island of Oahu. Hawaii Administrative Rules (HAR), Section 11-54-3(a), requires existing storm water runoff into inland and marine waters to meet the basic water quality criteria specified in HAR, Section 11-54-4(a).

The majority of storm drainage outfalls discharge into receiving waters which are classified by the DOH as "Class A, Marine Waters" under the HAR, Section 11-54-6. The receiving water uses stated in HAR, Section 11-54-3(c)(2), are as follows: "It is the objective of Class A waters that their use for recreational purposes and aesthetic enjoyment be protected. Any other use shall be permitted as long as it is compatible with the protection and propagation of fish, shellfish and wildlife, and with recreation in and on these waters. These waters shall not act as receiving waters for any discharge which has not received the best degree of treatment or control compatible with the criteria established for this class."

A small number of outfalls discharge into receiving waters classified as "Class AA, Marine Waters" (e.g., Kaneohe Bay) and "Class 1 and 2, Inland Waters." While the uses of Class AA and Class 1 are essentially identical to those described for Class A and Class 2, respectively, they have the additional objective that they shall retain their natural and pristine state as nearly as possible, with an absolute minimum of pollution or alteration from any human-caused source of pollution. The objective of Class 2 waters is to protect their use for recreational purposes, support and propagation of aquatic life, agricultural and industrial water supplies, shipping, and navigation. The uses to be protected in this class of waters are all uses compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters. These waters shall not act as receiving waters for any discharge which has not received the best degree of treatment or control compatible with the criteria established for this class.

## **OCEAN DISCHARGE CRITERIA**

The Director has considered the Ocean Discharge Criteria established pursuant to Section 403(c) of the Act for the discharge of pollutants into the territorial sea, the waters of the contiguous zone, or the oceans. The Environmental Protection Agency (EPA) has promulgated regulations for Ocean Discharge Criteria in 40 CFR Part 125, Subpart M. Therefore, the Director has determined that the discharge will not cause unreasonable degradation to the marine environment. Based on current information, the Director proposes to issue a permit.

## **DISCHARGE DESCRIPTION**

The discharge consists of storm water runoff and certain non-storm water discharges which are collected by the MS4 and discharged into State Waters or into adjacent separately-owned storm drainage systems. The major pollutants of concern continue to be silt, nutrients, litter and debris, heavy metals, and petroleum hydrocarbons. The volume of discharge is dependent upon rainfall-induced runoff and is highly variable.

The discharge of pollutants from the Permittee's MS4 shall be reduced to the Maximum Extent Practicable (MEP). The discharge of pollutants from the Permittee's Municipal Industrial facilities shall be reduced to the appropriate discharge limitations subject to

the Best Available Technology currently available (BAT)/ Best Conventional Pollutant Control Technology (BCT) discharge requirement, consistent with the CWA and other respective federal and state requirements for such facilities.

## **DESCRIPTION OF THE EXISTING DISCHARGE QUALITY**

The most recent Storm Water Monitoring Report, dated October 29, 2012, submitted to DOH reports that the DOT-HWYS obtained and analyzed storm water samples from the Kaneohe Watershed and five (5) Pearl Harbor sub-watersheds: Aiea, Kapakahi, Waiawa, Waikele, and Waimalu. As a basis for comparison, the State's Water Quality Standard 2% Not To Exceed (NTE) criteria was used for analyzing samples for Total Nitrogen (TN), Total Phosphorus (TP), and Total Suspended Solids. The results showed every site except for Kaneohe and Kapakahi exceeded the 2% NTE criteria for TN (800 µg/L). Waiawa, Waimalu and Waikele exceeded the 2% NTE criteria for TP (150 µg/L); and Aiea and Waimalu exceeded the 2% NTE criteria for TSS (80 µg/L).

Note: In future DOT-HWYS MS4 Permit Fact Sheets, this section's title will be revised to "Summary of the Water Quality Issues in the DOT-HWYS Watersheds" in which the results of assessing the water quality issues in watersheds resulting from storm water discharges to receiving waters will be provided. Refer to Parts F.1.a.(7) and G.2.b.(1) of the permit.

## **PERMIT DETERMINATIONS AND CONDITIONS**

1. General Requirements listed in Part A. of the permit set the framework for the Permittee to comply.

As specified in this part, the Permittee shall comply with its existing Storm Water Management Program (SWMP) Plan until submittal of the revised plan. The purpose of this requirement is to clarify DOH's expectations during which the SWMP Plan is being revised per the requirement of this permit and to prevent any gap in time where an SWMP Plan is not being implemented.

Additional requirements clarify the relationship between DOT-HWYS' Consent Decree and this permit, other basic requirements (i.e., requiring a copy of the SWMP Plan be retained at a location designated in its SWMP), certification statement required to be included with all submittal and provide the addresses where information shall be submitted.

Parts A.6. and A.7. in the Final Permit was renumbered to Parts A.7. and A.8. New language in Part A.6 was added based on a comment received during the public comment period. The language ensures that the public is afforded an opportunity to review and comment on plans to ensure consistency with the 2003 decision by the Ninth Circuit Court in *Environmental Defense Center, Inc. v. EPA*, 344 F.3d 832 and the 2005 decision by the Second Circuit Court in *Waterkeeper Alliance et al. v. EPA*,

399 F.3d 486. Also, the language clarifies expectations for implementation of Plans and the opportunity for DOH to require correction of any deficiencies determined after submittal.

2. Discharge Limitations listed in Part B. of the permit specify that the Permittee shall effectively prohibit non-storm water discharges through its MS4 into State Waters (per Section 402(p) of the Act). "Effectively prohibit" means that a non-storm water discharge shall be specifically regulated by an NPDES permit, or that the discharge is not considered a waste, or that the discharge does not contain constituents of concern which would necessitate an NPDES permit. NPDES permitted discharges and certain non-storm water discharges identified in Part B.2. of this permit may be allowed into the MS4 provided that such discharges will not contain pollutants in amounts that will result in a violation of an applicable water quality standard.

As required by Section 402(p) of the Act and 40 CFR §122.26(d)(2)(iv), the discharge of pollutants must be reduced to the "maximum extent practicable (MEP)." The activities described in the SWMP shall meet this MEP control standard.

The discharge of pollutants from the DOT-HWYS Municipal Industrial facilities shall be consistent with the BAT/BCT requirement of the Act.

3. Receiving Water Limitations listed in Part C. of the permit are restated from HAR, Section 11-54-4(a). In accordance with HAR, Section 11-54-3(a), existing storm water discharges into State Waters are allowed provided such discharges meet the basic water quality criteria listed in HAR, Section 11-54-4 (refer to Part C.1. of the permit). The discharge shall not cause or contribute to a violation of any of the applicable beneficial uses or water quality objectives contained in HAR, Chapter 11-54, titled "Water Quality Standards."

The Permittee shall demonstrate consistency with the WLA reductions consistent with the assumptions of the applicable TMDL document by the Final Compliance Date (refer to the TMDL Schedules of Compliance in Part F.3.c. of the permit). Any future WLAs adopted by DOH and approved by the EPA shall demonstrate consistency with the WLAs within the timeframes as specified in its Implementation and Monitoring Plan, modified permit (refer to Part F.4.b. of the permit), or renewed permit, whichever occurs first. The timeframes shall be developed in accordance with 40 CFR 122.47.

Part C.3. in the Final Permit was revised to specify a minimum frequency for visual inspections of State waters to provide guidance to the Permittee for development of their inspection program, and also to create an enforceable requirement. To integrate the other inspection/screening program elements in the permit, the language was revised to "During inspections/screenings as required by this permit, the Permittee shall also visually inspect the receiving state waters..."

4. Storm Water Management Plan (SWMP) listed in Part D. of the permit contains six (6) minimum control measures as listed below.

- a. Public Education and Outreach
- b. Public Involvement/Participation
- c. Illicit Discharge Detection and Elimination

Part D.1.c.(5)(i) in the Final Permit was revised to replace requiring the establishment of rules for penalties to requiring the establishment of policies for penalties. Refer to DOT-HWYS Public Notice Permit Comments (No. 2), dated June 26, 2013. The rationale provided by the Permittee was that the DOT-HWYS does not have the authority to establish rules.

- d. Construction Site Runoff Control

Requirements within this section apply to all public construction projects and private projects which discharge storm water to the Permittee's MS4.

An error was corrected for reference to the Natural Resources Conservation Service in Part D.1.a.(1) of the Final Permit.

Part D.1.c.(2) in the Final Permit was revised based on public comment to specify a minimum frequency for field screening to provide guidance to the Permittee for development of their Outfall Field Screening Plan, and also to create an enforceable requirement.

Part D.1.d.(3)(i) in the Final Permit was revised to clearly define the requirement. Refer to DOT-HWYS Public Notice Permit Comments (No. 3), dated June 26, 2013.

Part D.1.d.(1) requires the Permittee to establish policies to require proposed construction projects to implement its BMPs and standards. The purpose is to provide the Permittee an enforcement mechanism for those in non-compliance. This requirement in the Final Permit remained the same as the Public Notice Permit which was a revision to the Permittee's previously issued Permit.

Part D.1.d.(3)(ii) requires that a permit or approval to discharge is required for both direct connections and surface runoff. This requirement in the Final Permit remained the same as the Public Notice Permit which was a revision to the Permittee's previously issued Permit.

Part D.1.d.(3)(ii) in the Final Permit was revised to replace DOT-HWYS “approved” with DOT-HWYS “accepted.” The rationale provided by the Permittee was that DOT-HWYS does not approve all of these documents but reviews the documents for consistency with its program requirements. Refer to DOT-HWYS Public Notice Permit Comments (No. 4), dated June 26, 2013.

Part D.1.d.(3)(iv) requires the checklist to include comments for deficiencies and a date of when corrective actions were addressed. This requirement in the Final Permit remained the same as the Public Notice Permit which was a revision to the Permittee’s previously issued Permit.

The last sentence in Part D.1.d.(3)(iv) of the Final Permit was deleted. The rationale provided by the Permittee was that DOT-HWYS currently has an efficient system in place to ensure that all comments are addressed and that the DOT-HWYS is committed to ensure all comments identified during the review process are properly addressed. Refer to DOT-HWYS Public Notice Permit Comments (No. 5), dated June 26, 2013.

Part D.1.d.(4)(i) requires that in addition to checking the project documents are consistent with the onsite field conditions, inspector shall also identify and remedy site conditions having the potential for erosion and sediment runoff, including other pollutant discharges which may not have been addressed within the project documents. This requirement in the Final Permit remained the same as the Public Notice Permit which was a revision to the Permittee’s previously issued Permit.

Part D.1.d.(4)(i) in the Final Permit was also revised to replace DOT-HWYS “approved” with DOT-HWYS “accepted” and, the last sentence was revised to language as suggested by the Permittee. The rationale provided by the Permittee was that DOT-HWYS does not “approve” documents but reviews the documents for consistency with its program requirements and to provide a clearer description of the requirement. Refer to DOT-HWYS Public Notice Permit Comments (No. 4 and 6), dated June 26, 2013.

Part D.1.d.(4)(ii) allows quarterly instead of monthly inspections based on three successive monthly inspections that indicate, in total, no critical or major deficiencies. This requirement in the Final Permit remained the same as the Public Notice Permit which was a revision to the Permittee’s previously issued Permit.

Part D.1.d.(4)(iv) in the Final Permit was revised to require photos to document deficiencies instead of a site map denoting locations of the deficiencies. Refer to DOT-HWYS Public Notice Permit Comments (No. 7), dated June 26, 2013 and the City and County of Honolulu Comments, dated June 28, 2013.



In the Public Notice Permit, Part D.1.d.(5)(i) included new language to require the Permittee establish its own policies for enforcement and rules for penalty. The use of the word “rules” refers to the HAR where “policies” may or may not require HAR adoption/amendment. However, the Final Permit was revised to replace requiring the establishment of rules for penalties to requiring the establishment of policies for penalties. Refer to DOT-HWYS Public Notice Permit Comments (No. 8), dated June 26, 2013. The rationale provided by the Permittee was that the DOT-HWYS does not have the authority to establish rules.

In Part D.1.d.(7) in the Final Permit “maintenance staff” was revised to specify “construction and maintenance inspectors” shall receive annual training. The revision does not change the requirement as “all DOT-HWYS staff with construction storm water responsibilities” is still required to receive annual training.

e. Post-Construction Storm Water Management in New Development and Redevelopment

This part was revised to include Low Impact Development (LID) requirements for addressing post-construction BMPs in the DOT-HWYS’ Standards. Part D.1.e.(1) was revised to prioritize the implementation of LID practices to favor those more effective in reducing pollutant discharges.

For design-build project, Part D.1.e.(2) allows the Plan review and approval process to be performed prior to implementation. The language in the Final Permit remained the same as in the Public Notice Permit which was a revision to the Permittee’s previously issued Permit.

Part D.1.e.(3) in the Final Permit was revised to specify a minimum frequency for BMP inspections to provide guidance to the Permittee for development of their inspection program, and also to create an enforceable requirement.

f. Pollution Prevention/Good Housekeeping

The following was added to this Final Fact Sheet to clarify the intent of the requirement in Part D.1.f.(1)(iv).

Part D.1.f.(1)(iv) requires the Permittee to submit an Action Plan for Retrofitting Structural BMPs. The purpose of the Action Plan is to implement the results of the Retrofit Feasibility Study (received by DOH on March 31, 2009) to be completed within 5 years following completion of the Plan.

Part D.1.f.(1)(iv) was also revised to correct an error by deleting, “for the 5<sup>th</sup> year of the schedule” at the end of a sentence.

Part D.1.f.(1)(v) in the Final Permit was revised to require submittal of its Trash Reduction Plan within three (3) years after the effective date of the permit. The timeframe considered the amount of time needed to develop a quantitative estimate of the baseline load.

Part D.1.f.(1)(v) requires the Permittee to develop and submit to DOH a trash control plan with an implementation schedule to reduce trash discharges from the MS4 to zero. Numerous waterbodies on Oahu are currently listed on the State’s CWA section 303(d) as impaired due to trash, and the proposed requirement is intended to address this problem. Similar requirements have recently been adopted for trash control in the City and County of Honolulu’s MS4 Permit and State of California, and DOH recommends that the Permittee review these requirements in developing a practicable plan and implementation schedule. This requirement in the Final Permit remained the same as the Public Notice Permit which was a revision to the Permittee’s previously issued Permit.

\*Additional information is available at:

[http://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/stormwater/mrp.shtml](http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/mrp.shtml), and  
[http://www.waterboards.ca.gov/losangeles/water\\_issues/programs/stormwater/municipal/index.shtml](http://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/index.shtml)

Part D.1.f.(3)(iii) requires the development of a maintenance plan for vegetated portions of the drainage system used for erosion and sediment control and LID features. This requirement in the Final Permit remained the same as the Public Notice Permit which was a revision to the Permittee’s previously issued Permit.

Part D.1.f.(3)(iv) requires submittal of an Action Plan to address erosion at outlets to be submitted within one (1) year of the effective date of this permit and implemented within five (5) years. This requirement in the Final Permit

remained the same as the Public Notice Permit which was a revision to the Permittee's previously issued Permit.

The following sentence in Part D.1.f.(3)(iv) of the Public Notice Permit was revised to clarify the intent of the requirement:

“An annual status report on the implementation schedule shall be included in the Annual Report”

to:

“A status report on implementation of the plan shall be included in the Annual Report.”

**g. Industrial and Commercial Activities Discharge Management Program**

Part D.1.g.(1) requires implementation of BMPs for industrial and commercial facilities through the issuance of a permit or written equivalent approval process for drainage connections and discharge of surface storm water runoff into the MS4. This requirement in the Final Permit remained the same as the Public Notice Permit which was a revision to the Permittee's previously issued Permit.

Part D.1.g.(5) specifies inspection frequencies for industrial and commercial facilities. This requirement in the Final Permit remained the same as the Public Notice Permit which was a revision to the Permittee's previously issued Permit.

In Part D.1.g.(5), fourth paragraph of the Final Permit, the word “prevent” was replaced with “minimize” consistent with this standard.

Part D.1.g.(6) requires the Permittee to review and approval Storm Water Pollution Control Plans (SWPCP) for Industrial Activities, similar to the Plan review and approval process for construction activities in Part D.1.d.(3)(ii) of the permit. This requirement in the Final Permit remained the same as the Public Notice Permit which was a revision to the Permittee's previously issued Permit.

In Part D.1.g.(6) of the Final Permit the word “approval” was replaced with “acceptance.”

In the Public Notice Permit, Part D.1.g.(7) included new language to require the Permittee to establish and implement an enforcement policies for facilities which have failed to comply with its requirement and rules for penalties. However, the Final Permit was revised to replace requiring the establishment

of rules for penalties to requiring the establishment of policies for penalties. Refer to DOT-HWYS Public Notice Permit Comments (No. 15), dated June 26, 2013. The rationale provided by the Permittee was that the DOT-HWYS does not have the authority to establish rules.

**h. Modifications**

Control measures for urban storm water management may need to be modified as new information is obtained, existing practices are evaluated, and new BMPs developed. Part D.2. requires the Permittee to revise the SWMP, as necessary, if any discharge limitation or water quality standard is exceeded. Part D.3. of this permit allows either the Permittee, the Director, or the EPA to propose other changes to the SWMP. All modifications to this permit shall be made pursuant to any applicable requirements in the DOH's Standard NPDES Permit Conditions.

5. The DOT-HWYS Municipal Industrial Facilities in Part E of the Final Permit is a new section to allow coverage of DOT-HWYS' facilities under this permit and to consolidate separate DOT-HWYS NPDES permits into this permit. Requirements for these facilities shall comply with HAR, Chapter 11-55, Appendix B.

6. Monitoring Requirements listed in Part F. of the permit.

a. The permit language was revised to specify the following monitoring program's objectives:

Part F.1.a.(1) Assess compliance with this permit (including TMDL I&M Plans and demonstrating consistency with WLAs;

Part F.1.a.(2) Measure the effectiveness of the Permittee's storm water management program;

Part F.1.a.(3) Assess the overall health based on the chemical, physical, and biological impacts to receiving waters resulting from storm water discharges and an evaluation of the long term trends;

Part F.1.a.(4) Characterize storm water discharges;

Part F.1.a.(5) Identify sources of specific pollutants

Part F.1.a.(6) Detect and eliminate illicit discharges and illegal connections to the MS4; and

Part F.1.a.(7) Assess the water quality issues in watershed resulting from storm water discharges to receiving waters.

Annual Monitoring Plan is due on June 1st, one (1) month before the end of the fiscal year.

Part F.1.b. lists the Plan's minimum requirements.

- b. Part F.2. specifies the monitoring parameters for Industrial Facilities.

Refer to Part G.2.b.(6) for submittal of the Discharge Monitoring Reports (DMR) for DOT-HWYS Municipal Industrial Facilities (i.e., Baseyards). DMRs shall be included in the Annual Monitoring Report and submitted via NetDMR once established by the DOH.

- c. Part F.3. TMDL Implementation and Monitoring for Ala Wai Canal, Kawa Stream, Waimanalo Stream, Kapaa Stream, and Kaneohe Stream.

Part F.3.a. specifies the Implementation and Monitoring Plan requirements used to demonstrate consistency with the WLA reductions consistent with the assumptions of the associated TMDL document.

Part F.3.b. identifies the WLA reductions required per watershed effective in accordance with the Schedules of Compliance in Part F.3.c.

DOH is directly implementing the TMDL wasteload allocations (WLAs) applicable to the MS4 as water quality-based effluent limits (WQBELs).

To demonstrate consistency with the assumptions and requirements of applicable WLAs, it is expected that DOT-HWYS will quantify pollutants removed from DOT-HWYS MS4. The quantity of a given pollutant removed on an annual or seasonal basis in a given watershed can then be compared to the WLA reductions required in that watershed. DOH considers compliance with WLAs shall be achieved through meeting the WLA reductions on an annual or seasonal basis as specified in the permit.

DOH determined compliance based on WLA reductions instead of with end-of-pipe Water Quality sampling and comparison to the WLA numeric limits is consistent with the assumptions and requirements of the TMDL documents. Note: End-of-pipe water quality sampling was not used in the development of the TMDLs to determine DOT-HWYS WLAs.

For Ala Wai Canal and Kawa Stream, the tables were copied from the TMDL reports and revised to only show the WLAs assigned to the DOT-HWYS. For Waimanalo Stream, the DOT-HWYS required WLA reductions were

developed because the DOT-HWYS was not explicitly identified (i.e., the DOT-HWYS WLAs were associated with the urban source). For the Kaneohe and Kapaa Stream, the DOT-HWYS required WLA reductions were calculated by converting the WLAs from an event to seasonal basis as explained below.

For Kapaa and Kaneohe Stream

In the Public Notice Permit, the WLA reductions were interpreted from the TMDL documents to be seasonal loads. However, in the Final Permit the required WLA reductions were adjusted based on the WLA reductions in the TMDL documents being event based and to include the seasonal 2% runoff events. The revisions were required as a result a comment received during the public comment period and also after further DOH review of the TMDL documents.

The following conditions and criteria as discussed in the TMDL documents were the basis of DOH's implementing strategy:

1. "Water quality criteria for the 10% and 2% rainfall events are the water quality standards not to be exceeded during more than 10% and 2% of the time, respectively."
2. "Loading capacities and allocations developed for the 10% storm events are intended as values to be exceeded no more than 10% of the time."

The total number of events per season was calculated as:

Wet Season events = 18.1 days (181 days x 10%)

Dry Season events = 18.4 days (184 days x 10%)

181 days = Wet season days

184 days = Dry season days

3. "Associations of the wet weather TMDLs with explicit (critical) rainfall conditions, along with the spreadsheet format of this analysis, are intended to provide some design insight for TMDL implementing authorities."

DOH assumes "explicit (critical) rainfall conditions" to allude to the number of events. Therefore, consistent with the TMDL the number of events were multiplied by the WLAs in Tables 5.10 and 5.11 (for Kaneohe) and Tables 6.10 and 6.11 (for Kapaa) to determine the WLA reductions per season.

The above was referenced from Part 5.1 of the Kaneohe TMDL document and is similar if not exactly the same as those discussed in Section 6.1 of the Kapaa Stream TMDL.

Both TMDLs provided six (6) TMDL conditions including: wet season baseflow, wet season 10% rainfall event, wet season 2% rainfall events, dry season baseflow, dry season 10% rainfall events and dry season 2% rainfall events. Baseflow conditions were excluded because they represented non-runoff conditions when there is no discharge from the MS4.

In the Final Permit, the required seasonal WLA reductions were determined using the following equations:

Wet Season WLA Reduction =

$$= (14.5 \times \text{WLA Reduction}_{\text{wet } 10\%}) + (3.6 \times \text{WLA Reduction}_{\text{wet } 2\%})$$

Dry Season WLA Reduction =

$$= (14.7 \times \text{WLA Reduction}_{\text{dry } 10\%}) + (3.7 \times \text{WLA Reduction}_{\text{dry } 2\%})$$

Assuming the 10% runoff events include the 2% runoff events. Refer to the Kaneohe TMDL, Section 2.4, Pages 2-14 (likewise for the Kapaa Stream TMDL):

“For the 30-year Pali Golf Course record, rainfall was equal to **or greater** than 0.35-inch during 10% of the dry season days and equal to or greater than 0.70-inch during 10% of the wet season days. Rainfall was equal to or greater than 1.27-inch during 2% of the dry season days and equal to or greater than 2.30-inch during 2% of the wet season days.”

$$3.6 = 181 \times 0.02;$$

$$14.5 = (181 \times 0.10) - 3.6;$$

and

$$3.7 = 184 \times 0.02;$$

$$14.7 = (184 \times 0.10) - 3.7;$$

For Kapaa

$$\text{TSS Wet Season WLA Reduction} = (14.5 \times 6) + (3.6 \times 56) = 288.6 \text{ kg}$$

$$\text{TSS Dry Season WLA Reduction} = (14.7 \times 0) + (3.7 \times 19) = 70.3 \text{ kg}$$

TN Wet Season WLA Reduction =  $(14.5 \times 0.1) + (3.6 \times 0.5) = 3.25$  kg

TN Dry Season WLA Reduction =  $(14.7 \times 0) + (3.7 \times 0.2) = 0.74$  kg

TP Wet Season WLA Reduction =  $(14.5 \times 0.1) + (3.6 \times 1.6) = 7.21$  kg

TP Dry Season WLA Reduction =  $(14.7 \times 0) + (3.7 \times 0.5) = 1.85$  kg

For Kaneohe

TSS Wet Season WLA Reduction =  $(14.5 \times 0) + (3.6 \times 0) = 0$  kg

TSS Dry Season WLA Reduction =  $(14.7 \times 0) + (3.7 \times 0) = 0$  kg

TN Wet Season WLA Reduction =  $(14.5 \times 0.73) + (3.6 \times 20) = 82.59$  kg

TN Dry Season WLA Reduction =  $(14.7 \times 0.04) + (3.7 \times 6.56) = 24.86$  kg

TP Wet Season WLA Reduction =  $(14.5 \times 0.32) + (3.6 \times 6.5) = 28.04$  kg

TP Dry Season WLA Reduction =  $(14.7 \times 0.04) + (3.7 \times 2.92) = 11.39$  kg

Kapaa Stream

<b>Season</b>	<b>TSS (kg per season)</b>	<b>TN (kg per season)</b>	<b>TP (kg per season)</b>
Wet Season Reduction	288.60	3.25	7.21
Dry Season Reduction	70.30	0.74	1.85

Wet Season Days = 181 days (November 1 – April 30)

Dry Season Days = 184 days (May 1 – October 31)

Kaneohe Stream

<b>Season</b>	<b>TSS (kg per season)</b>	<b>TN (kg per season)</b>	<b>TP (kg per season)</b>
Wet Season Reduction	0	82.59	28.04
Dry Season Reduction	0	24.86	11.39

Wet Season Days = 181 days (November 1 – April 30)

Dry Season Days = 184 days (May 1 – October 31)

For Kawa Stream

The WLA reductions were provided in the Kawa Stream TMDL, Table 11.1, Page 12.

For Ala Wai Canal

The Ala Wai Canal TMDL did not explicitly assign numerical WLAs to DOT-HWYS. Instead the TMDL estimated a combined load



reduction to be implemented by the City and County of Honolulu and DOT-HWYS.

Table 8 in the Ala Wai TMDL (reproduced in part below) requires a 65% reduction of existing load for TN and a 50% reduction of existing load for TP in the Urban source wasteload allocation for the City and County of Honolulu and DOT-HWYS. Based on the waste load allocations of 6 kg/day of TN and 4 kg/day of TP, the annual urban land use reductions for TN and TP are 4066 kg/yr and 1460 kg/yr, respectively.

TN - Existing load would have to be 17.14 kg/day for a 65% reduction of existing load to equal an allocation of 6 kg/day. Reduction is  $17.14 \text{ kg/day} - 6 \text{ kg/day} = 11.14 \text{ kg/day} = 4066 \text{ kg}$

TP - Existing load would have to be 8 kg/day for a 50% reduction of existing load to equal an allocation of 4 kg/day. Reduction is  $8 \text{ kg/day} - 4 \text{ kg/day} = 4 \text{ kg/day} = 1460 \text{ kg}$

From TMDL Table 8: TMDLs, Wasteload Allocations for Urban Land Use for Ala Wai Canal Watershed.

Pollutant	Est. Load (kg/day)	% total load	Allocations (kg/day)	% reduction needed
TN	6 – 26	10 - 33%	6	65
TP	6 – 10	35 - 48%	4	50

Of the 5,573 acres of Urban Lands identified in the TMDL, DOT-HWYS owns 101 acres of right-of-way (ROW) and has 18 acres of permitted connections contributing to their MS4. Therefore DOT-HWYS' annual load reduction requirements are 2.13% (119 acres DOT HWYS / 5,573 acres Urban Lands) of the annual load reduction requirement for Urban Lands within Ala Wai Canal Watershed:

**TN: 87 kg/yr**  
**TP: 31 kg/yr**

For Waimanalo Stream

The Waimanalo Stream TMDL did not establish WLAs; instead the TMDL suggested specific BMPs that could be implemented. DOH has calculated numeric load reduction requirements for DOT-HWYS in this watershed based on the original sample data utilized to prepare the TMDL. Please refer to Appendix A for a description of the method and calculations. DOH determined that no reduction is

required for total suspended solids in stormwater discharges from DOT-HWYS municipal separate storm sewer system (MS4), and the following seasonal reductions are required for TN and TP:

<b>Season</b>	<b>TSS (kg per season)</b>	<b>TN (kg per season)</b>	<b>TP (kg per season)</b>
Wet Season Reduction	0	1.71	0.06
Dry Season Reduction	0	1.71	0.06

Wet Season = 181 days (November 1 – April 30)

Dry Season = 184 days (May 1 – October 31)

The calculation uses only the Wet season data because there was insufficient data for the Dry Season and then applies the reductions to both seasons. The intent of seasonal requirement is such that the Permittee shall demonstrate consistency with the WLA reductions throughout both seasons.

- d. Part F.3.c. Schedules of Compliance shall manage and effectively schedule and track DOT-HWYS activities to comply with the WLA reductions consistent with the assumptions of the TMDL document effective in accordance with the Schedules of Compliance in Part F.3.c. (i.e., Final Compliance Date).

On March 18, 2013, the DOH has received approval from EPA, in accordance with CWA Section 303(c) and implementing federal regulations at 40 CFR 131, to implement schedules of compliance for State-adopted water quality standards in NPDES permits, including limitations necessary to implement Total Maximum Daily Loads under Section 303(d) of the Act, 33 U.S.C. §1313(e). The following sections of Chapter 11-55 contains Hawaii's provisions to implement schedules of compliance: 11-55-01, 11-55-08(a)(2)(B), 11-55-15(d), 11-55-19(a)(4)(A), 11-55-21, and 11-55-22. These compliance schedule implementation provisions adopted by the State in Chapter 11-55 on October 21, 2012, were found by EPA to be consistent with the requirements of the CWA and EPA's regulations at 40 CFR 131.5 and 131.6.

The Final Permit incorporates schedules of compliance for WLA reductions from the TMDL established for the Ala Wai Canal, Kawa Stream, Kaneohe Stream, Kapaa Stream, and Waimanalo Stream. This is the first time that the WLA reductions are being required on the Permittee. The existing discharge is not expected to comply with the new WLA reductions based on the Permittee's current activities as outlined in their existing Storm Water Management Program Plan and therefore, a schedule of compliance pursuant to HAR, Section 11-55-15(d) has been established in Part F.3.c. of the Final Permit.

The schedule of compliance as described in the Final Permit is in accordance with 40 CFR 122.47. The schedule of compliance is for WLAs that were not required in the previous permit and the existing discharge is not expected to comply with the requirements.

Interim and final compliance dates included in the permit reflect having to consider the specific steps and represent a reasonable time period to complete the necessary tasks, and ensure compliance is achieved without unnecessary delay. Compliance tasks and dates are based on the proposed compliance schedules submitted by the Permittee. For Ala Wai Canal and Kawa Stream final compliance is anticipated to require the implementation of unidentified BMP treatment technologies, with unknown implementation and operational costs, thus, a systematic approach involving project funding; development of plans, specifications, and estimates; advertisement/bid opening/award; construction, and providing sufficient time to investigate study results and evaluate the technologies is necessary. For all TMDLs included in the Final Permit, final compliance will also involve debris control and assessing removal rates to determine required cleaning frequencies. Interim requirements and final compliance is required "as soon as possible." The Permittee is required to comply with the interim compliance tasks before the established interim compliance dates, if possible. As such, the compliance schedule requires compliance as soon as possible, consistent with the requirements of 40 CFR 122.47(1). DOH believes that the schedules and milestones as described in the Final Permit are action based and will achieve compliance with the WLA reductions as soon as possible.

The schedules of compliance exceeds one (1) year from the date of permit issuance. Consistent with the requirements of 40 CFR 122.47(3), interim compliance dates and deliverable requirements have been established no greater than one (1) year apart, and to ensure consistent progress towards compliance with the WLA reductions by the Final Compliance Date.

The compliance schedules require the Permittee to submit for acceptance the following:

1. Debris Cleaning Assessment (DCA) Plan
2. Implementation and Monitoring (I&M) Plan, and
3. WLA Completion Report

For Ala Wai Canal, Kapaa Stream, Kaneohe Stream, and Waimanalo Stream, to complete the items in the schedules of compliance and to comply with the WLA reductions 5 years (after the effective date of the permit) is necessary. For Kawa Stream, to complete the items in the schedules of compliance and to comply with the WLA reductions 7 years (after the effective date of the permit) is necessary. The end of the five (5) or seven (7) years, as

applicable, is the Final Compliance Date where full compliance with the WLA reductions is required.

The following are descriptions of the DCA Plan and WLA Completion Report as provided in the DOT-HWYS letter, dated May 16, 2013:

#### *DCA Plan*

*Capturing and removing pollutants in the DOT-HWYS ROW and MS4 is the most effective method of reducing pollutants loads in discharges from the MS4. The Debris Control Assessment Study has two primary goals:*

- 1. To improve the quality of pollutant removal data collected through debris control activities from the DOT-HWYS' ROW and MS4.*
- 2. To assess pollutant removal rates at different cleaning frequencies to allow DOT-HWYS to predict changes in total pollutant removal that can be expected with increased or decreased cleaning frequencies, and to perform cost-benefit analysis of changes in cleaning frequency.*

*Ideally the Debris Control Assessment Study would include data collection from four years or more as other researchers have done to reduce the uncertainty in the results caused by variations in seasonal and annual rainfalls totals, intensity and seasonality. Because of the limited time available, the Debris Control Assessment Study will be limited to two years of data collection initially, and the results evaluated and determination made if additional data collection would be beneficial. The following description of the WLA Completion Report was provided in the DOT-HWYS letter, dated May 16, 2013:*

#### *WLA Completion Report*

*The purpose of the WLA completion report (in Year 7 for Kawa Stream Watershed and in Year 5 for all other TMDLs) is to re-assess the compliance strategy and calculations included in the WLA Implementation and Monitoring Plan based on the results of the Debris Control Assessment Study Report and/or implementation of permanent BMPs. The WLA Completion Report will conclude with confidence that the existing and planned operational and structural BMPs as described in the WLA Implementation and Monitoring Plan are sufficient to demonstrate consistency with assigned WLAs.*

Also, Part F.3.c. in the Final Permit was revised to clarify that the Permittee shall comply with the WLA reductions consistent with the assumptions of the applicable TMDL document by the Final Compliance Date.

- e. Other TMDLs - As additional TMDLs are adopted by DOH and approved by the EPA that identify the Permittee as a source, the Permittee shall develop implementation and monitoring plans for a minimum of one (1) additional WLA per year within one (1) year of its approval date.
- f. Part F.4.b. was renumbered to Part F.5. and the re-opener provision was revised to include revised TMDLs as adopted by DOH and approved by the EPA.

7. Reporting Requirements listed in Part G. of the permit.

a. Annual Report

Most of the information specified in the end-of-year report is required by 40 CFR §122.42(c). The Annual Report is due on October 31st, three (3) months after the end of the fiscal year.

b. Annual Monitoring Report

The Annual Monitoring Report is due on October 31st, three (3) months after the end of the fiscal year, and may be included in the Annual Report.

Discharge Monitoring Reports (DMRs) for Municipal Industrial Facilities shall be included in the Annual Monitoring Report. A DMR must be submitted for the facility which is scheduled to be monitored even if sampling was not conducted. An explanation as to why sampling was not conducted shall be explained with the submittal.

c. Memorandum of Understanding (MOU)

i. Roles and Responsibilities of the DOT-HWYS

The "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" was signed by DOT-HWYS on February 1, 2002, by the Department of Environmental Services on December 19, 2001; and by the Department of Facility Maintenance on December 27, 2001. DOT-HWYS shall continue to maintain and comply with this MOU as required by the NPDES permit. Continued intergovernmental coordination between adjacent MS4 operators is

integral to the success of both the DOT-HWYS and the City's Storm Water Management Program.

ii. Legal Authority of DOT-HWYS

The "Memorandum of Understanding (MOU) Between Department of Transportation, State of Hawaii, and Department of Health, State of Hawaii" was executed on July 8, 1999, because 40 CFR 122.26(d)(2)(i) requires that DOT-HWYS obtain the legal authority to control the discharge of pollutants to the MS4. DOT-HWYS shall continue to maintain and comply with this MOU as required by the NPDES permit.

8. The Final Permit was revised to include a Summary of Deadlines in Part H of the permit. For consistency, deadlines were listed as appeared in the Final Permit.