

## CHAPTER 13

### TOTAL MAXIMUM DAILY LOAD PROGRAM

Prior to the effective date of the MS4 Permit, DOH completed and the USEPA approved total maximum daily loads (TMDLs) for the Ala Wai Canal, Kawa Stream, Waimanalo Stream, Kapaa Stream, and Kaneohe Stream. The purpose of the Total Maximum Daily Load Program (TMDL Program) is to comply with the Schedule of Compliance found in Part F.3.c of the MS4 Permit, submit TMDL Implementation and Monitoring Plans (I&M Plans), and implement BMPs to comply with waste load allocation (WLA) reductions for the aforementioned water bodies. TMDL compliance is assessed on a watershed scale and exhibited through quantitative analyses of the required load reductions for total nitrogen (TN), total phosphorous (TP), and total suspended solids (TSS). The TMDL Program relies collaboratively on the effective implementation of BMPs by various SWMP program elements (e.g., Debris Control Program, Erosion Control Program, etc.) to attain and demonstrate compliance with WLA reductions for TMDL water bodies.

The TMDL Program implements the following components in order to comply with MS4 Permit requirements; applicable water quality standards; and the TMDLs/WLAs for Ala Wai Canal, Kawa Stream, Waimanalo Stream, Kapaa Stream, and Kaneohe Stream:

1. Complete milestones and submit deliverables to DOH in accordance with the Schedule of Compliance for each TMDL water body.
2. Implement BMPs to comply with WLA reductions, and submit to DOH, TMDL I&M Plans for Ala Wai Canal, Kawa Stream, Waimanalo Stream, Kapaa Stream, and Kaneohe Stream.
3. Develop I&M Plans for future TMDLs, as required.

The TMDL Program is administered in accordance with the MS4 Permit requirements outlined in Table 13-1.

**Table 13-1. MS4 Permit Requirements for the TMDL Program**

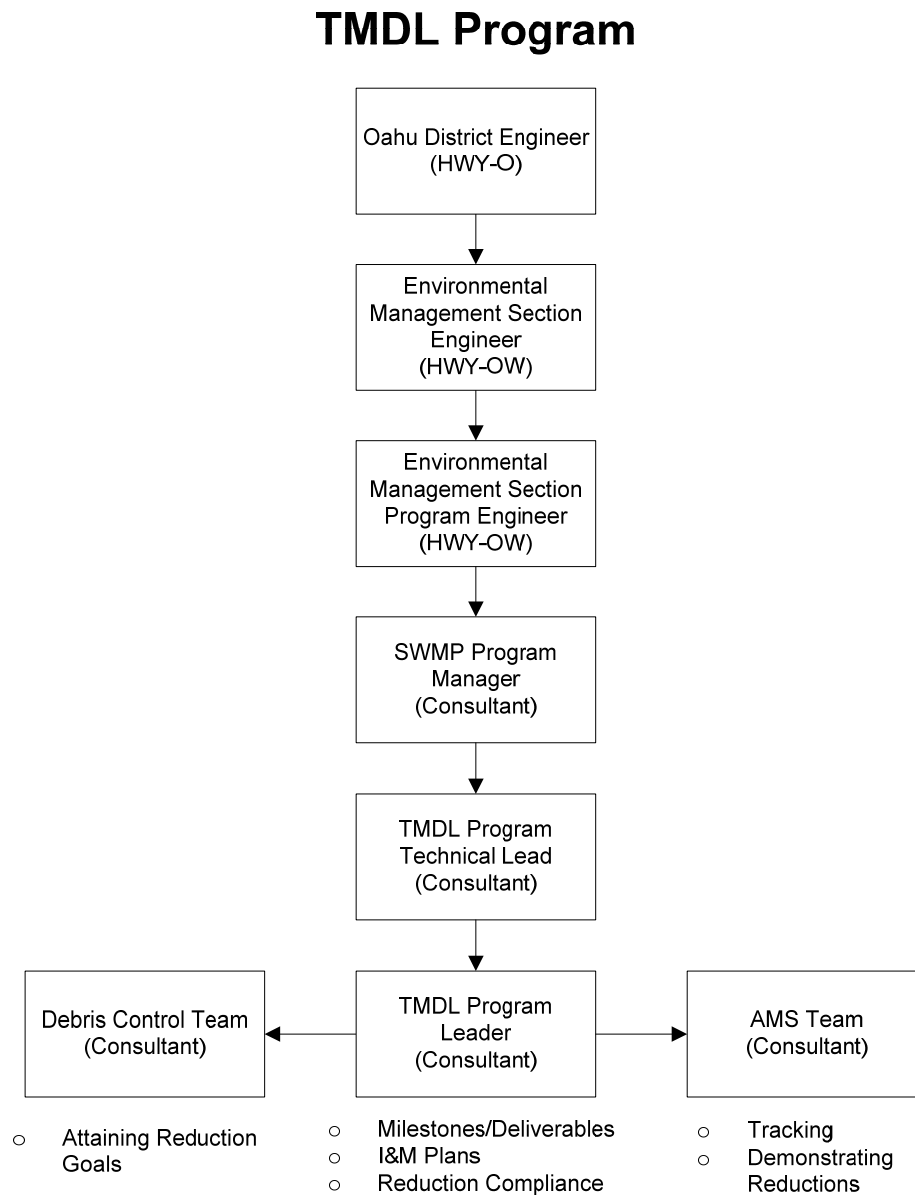
<b>MS4 Permit Reference</b>	<b>SWMPP Section</b>
<b><i>Part F.3 TMDL Implementation and Monitoring for Ala Wai Canal, Kawa Stream, Waimanalo Stream, Kapaa Stream, and Kaneohe Stream.</i></b>	Section 13.2
<b><i>Part F.3.a The Permittee shall submit to DOH a TMDL I&amp;M Plan for Kaneohe Stream, Ala Wai Canal, Kawa Stream, Waimanalo Stream, and Kapaa Stream. The draft and final I&amp;M Plans shall be made available on the Permittee's website for public review and comment. The plans shall be submitted within one (1) year of the effective date of this permit. Refer to Part F.3.c. - Schedules of Compliance. The plans shall include at a minimum the following:</i></b>	Section 13.2
<b><i>Part F.3.a.(1) Detailed information on the activities proposed to be implemented.</i></b>	Section 13.2

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<b>MS4 Permit Reference</b>	<b>SWMPP Section</b>
<b>Part F.3.a.(2)</b> Actual or literature documentation of the estimated effectiveness of the activities targeted to reduce the pollutants of concern such as total nitrogen, total phosphorus, total suspended solids, and turbidity in the watershed, as applicable, to demonstrate consistency with the annual or seasonal WLA reductions consistent with the assumption of the associated TMDL document.	Section 13.2
<b>Part F.3.a.(3)</b> A detailed and quantitative analysis which demonstrates that the proposed activities would ensure consistency with the annual or seasonal WLA reductions consistent with the assumption of the associated TMDL document.	Section 13.2
<b>Part F.3.a.(4)</b> Information from pre and post monitoring activities to quantitatively demonstrate consistency with the annual or seasonal WLA reductions consistent with the assumption of the associated TMDL document.	Section 13.2
<b>Part F.3.a.(5)</b> A monitoring plan which shall identify activities to demonstrate consistency with the annual or seasonal WLA reductions consistent with the assumption of the associated TMDL document.	Section 13.2
<b>Part F.3.b</b> The Permittee shall comply with the following annual or seasonal WLA reductions consistent with the assumptions of the associated TMDL document effective in accordance with the Schedules of Compliance in Part F.3.c.	Section 13.2
<b>Part F.3.b.(1)</b> Ala Wai Canal WLAs (See Table in Permit)	Section 13.2
<b>Part F.3.b.(2)</b> Kawa Stream WLAs (See Table in Permit)	Section 13.2
<b>Part F.3.b.(3)</b> Kapaa Stream WLAs (See Table in Permit)	Section 13.2
<b>Part F.3.b.(4)</b> Kaneohe Stream WLAs (See Table in Permit)	Section 13.2
<b>Part F.3.b.(5)</b> Waimanalo Stream WLAs (See Table in Permit)	Section 13.2
<b>Part F.3.c</b> TMDL Schedules of Compliance - The Permittee is required to provide proof of completion of each milestone and submittal of the deliverable by the date as indicated in the following tables. The Permittee shall comply with the WLA reductions consistent with the assumptions of the applicable TMDL document by the Final Compliance Date.	Section 13.1
<b>Part F.3.c.(1)</b> Ala Wai Canal WLAs (See Table in Permit)	Section 13.1
<b>Part F.3.c.(2)</b> Kawa Stream Schedule of Compliance (See Table in Permit)	Section 13.1
<b>Part F.3.c.(3)</b> Kapaa Stream Schedule of Compliance (See Table in Permit)	Section 13.1
<b>Part F.3.c.(4)</b> Kaneohe Stream Schedule of Compliance (See Table in Permit)	Section 13.1
<b>Part F.3.c.(5)</b> Waimanalo Stream Schedule of Compliance (See Table in Permit)	Section 13.1
<b>Part F.4</b> As additional TMDLs are adopted by DOH and approved by the EPA that identify the Permittee as a source, the Permittee shall develop I&M Plans for a minimum of one (1) additional TMDL per year within one (1) year of the approval date. The Permittee shall include within each I&M Plan a compliance schedule with a final deadline to demonstrate consistency with the WLAs consistent with the assumption of the associated TMDL document. The schedule shall provide for the implementation of the BMPs, monitoring to evaluate its performance, and time to make adjustments necessary to demonstrate consistency with the WLAs consistent with the assumption of the associated TMDL document at the earliest possible time. If the schedule extends beyond a year, interim dates and milestones shall be included in the schedule with the time between interim dates not to exceed one (1) year.	Section 13.3

## 13.0 Program Organization

To fulfill the requirements of the MS4 Permit and the Consent Decree, the following organizational structure has been established for the TMDL Program.



**Figure 13-1. TMDL Program Organizational Chart**

### 13.1 Schedule of Compliance

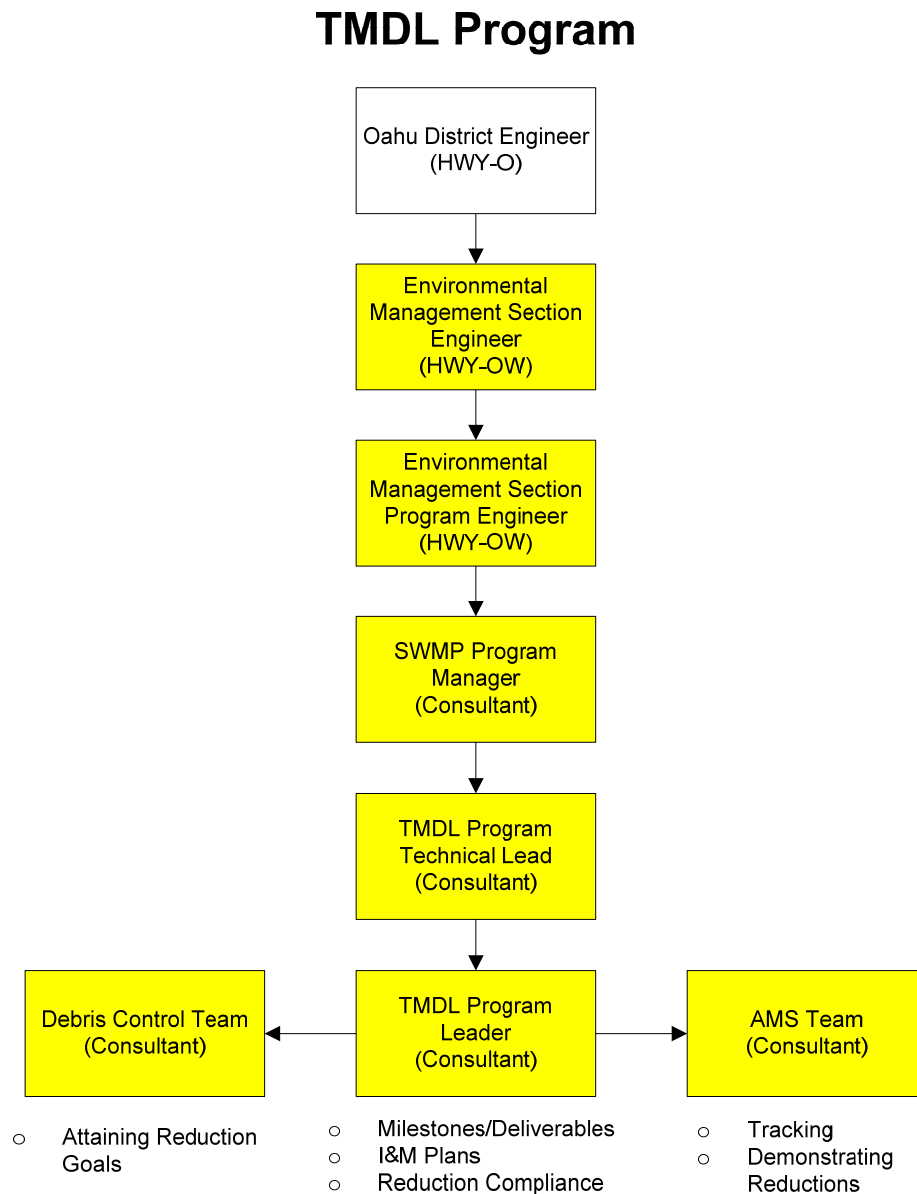
DOH included, in Part F.3.c of the MS4 Permit, a TMDL Schedule of Compliance for each established TMDL with a WLA assigned to DOT-HWYS. The TMDL Schedule of Compliance includes required milestones and submittal dates for I&M Plans, debris cleaning assessments, permanent BMP implementation (if applicable), and Final WLA Completion Reports.

DOT-HWYS' submitted a Debris Cleaning Assessment (DCA) Plan (Appendix K.1) to DOH within six months of the effective date of the MS4 Permit, in accordance with Part F.3.c. The DCA Plan documents DOT-HWYS' approach to better understanding the role of debris cleaning in the attainment of stipulated pollutant load reduction in TMDL watersheds.



*Street sweeper dumps debris at Keahi Baseyard Transfer Station (left), and Inspector obtains samples of the street sweeping debris for the Debris Cleaning Assessment (right).*

Figure 13-2 indicates the personnel responsible for ensuring compliance with Part F.3.c of the MS4 Permit.

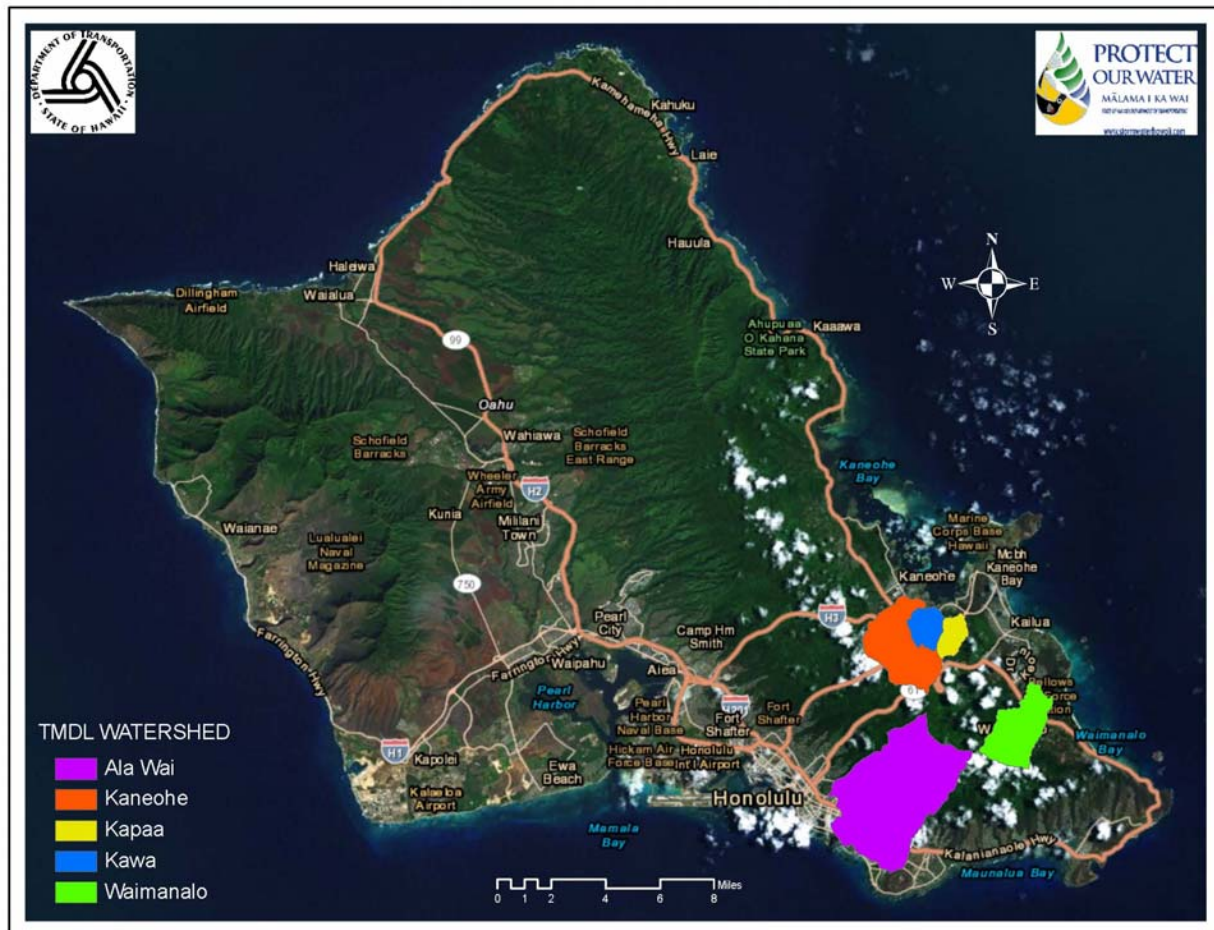


**Figure 13-2. TMDL Program Organizational Chart for Roles and Responsibilities Related to the Schedule of Compliance**

## 13.2 Implementation and Monitoring Plans

In accordance with Part F.3.a of the MS4 Permit, DOT-HWYS submitted to DOH, within one year of the effective date of the MS4 Permit, I&M Plans for the Ala Wai Canal, Kawa Stream, Waimanalo Stream, Kapaa Stream, and Kaneohe Stream (Appendices K.2 to K.6). The I&M Plans detail DOT-HWYS' strategy for attaining required pollutant load reductions and document compliance with Part F.3.a of the MS4 Permit.

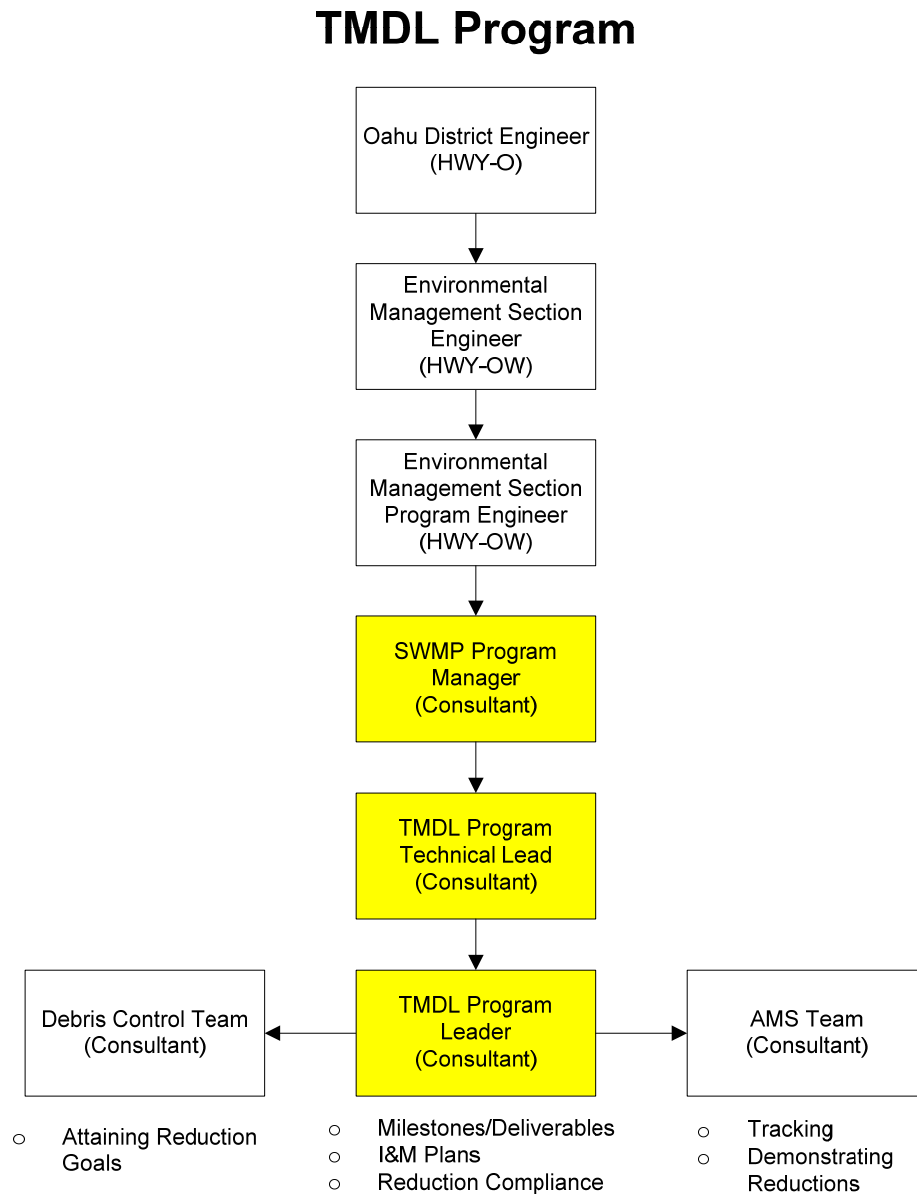
Figure 13-3 shows the locations of the five TMDL watersheds on Oahu with WLA reductions assigned to DOT-HWYS.



**Figure 13-3. TMDL Watersheds with WLA reductions assigned to DOT-HWYS**



As depicted in Figure 13-4, the TMDL Program Leader is responsible for the development of the I&M Plans, while the SWMP Program Manager and the TMDL Program Technical Lead are responsible for ensuring their implementation.

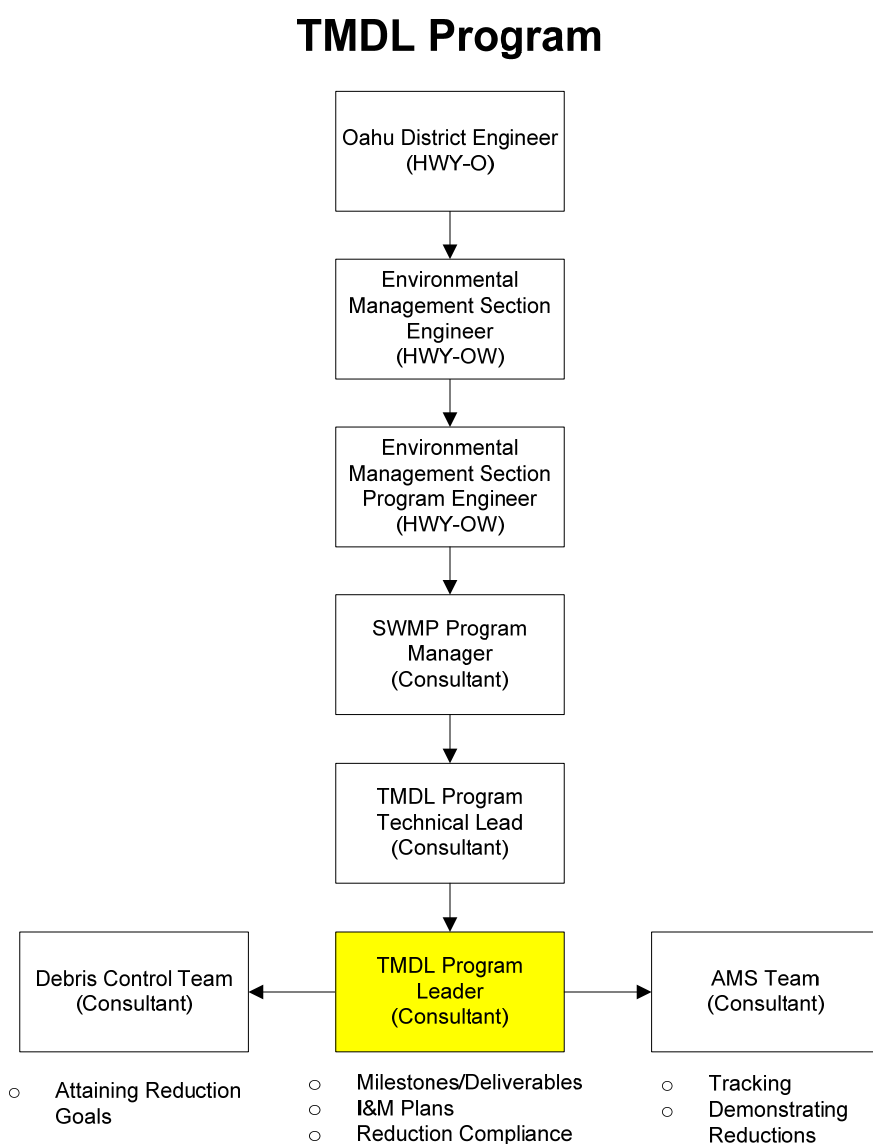


**Figure 13-4. TMDL Program Organizational Chart for Roles and Responsibilities Related to the I&M Plans**

### 13.3 I&M Plans for Future TMDLs

In accordance with Part F.4 of the MS4 Permit, as additional TMDLs are adopted by DOH and approved by the USEPA that identify DOT-HWYS as a source, DOT-HWYS will develop I&M Plans for a minimum of one additional TMDL per year, within one year of the approval date. DOT-HWYS will include within each I&M Plan a compliance schedule with a final deadline to demonstrate consistency with the WLAs consistent with the assumption of the associated TMDL document. If the schedule extends beyond a year, interim dates and milestones will be included in the schedule with the time between interim dates not exceeding one year.

As depicted in Figure 13-5, the TMDL Program Leader is responsible for the development of future I&M Plans.



**Figure 13-5. TMDL Program Organizational Chart for Roles and Responsibilities Related to I&M Plans for Future TMDLs**



### 13.4 Monitoring Program Effectiveness

Table 13-2 provides measurable standards/milestones for the BMPs discussed in this chapter and DOT-HWYS' strategy for monitoring the effectiveness of their implementation.

**Table 13-2. Standards/Milestones for the TMDL Program**

<b>Section</b>	<b>BMP</b>	<b>Standard/Milestone</b>	<b>Monitoring Effectiveness</b>
13.1	Schedule of Compliance	<ul style="list-style-type: none"><li>• Complete milestones and submit deliverables to DOH in accordance with the Schedule of Compliance for each TMDL water body.</li></ul>	<ul style="list-style-type: none"><li>• Track milestone deliverables to DOH using master schedule.</li></ul>
13.2	I&M Plans	<ul style="list-style-type: none"><li>• Submit TMDL I&amp;M Plans for Ala Wai Canal, Kawa Stream, Waimanalo Stream, Kapaa Stream, and Kaneohe Stream.</li><li>• Implement BMPs as described in I&amp;M Plans.</li></ul>	<ul style="list-style-type: none"><li>• Milestone completed on 10/27/2014.</li><li>• Document BMP implementation in the Annual Report.</li></ul>
13.3	I&M Plans for Future TMDLs	<ul style="list-style-type: none"><li>• Develop I&amp;M Plans for future TMDLs, as required.</li></ul>	<ul style="list-style-type: none"><li>• Submit future TMDL WLA I&amp;M Plans as required.</li></ul>

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