

# 7 | Pollution Prevention/Good Housekeeping Chemical Applications BMPs Program



State of Hawaii, Department of Transportation  
Highways Division, Oahu District  
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*Staff from the Special Services Subunit demonstrates proper herbicide mixing technique.*

The Pollution Prevention/Good Housekeeping (PP/GH) Program is designed to develop and maintain a system maintenance program to reduce, to the MEP, the discharge of pollutants from facilities, roads, parking lots, baseyards, and maintenance facilities, and the MS4.

The PP/GH Chemical Applications BMPs Program (Chemical Applications Program) is designed to reduce, to the MEP, the contribution of pollutants associated with the application, storage, and disposal of pesticides (including herbicides) and fertilizers from municipal areas and activities to the MS4.

The Chemical Applications Program includes the following control measures:

1. Implement BMPs for the application, storage, and disposal of pesticides (including herbicides) and fertilizers.
2. Update the Authorized Use List of the pesticides (including herbicides) and fertilizers DOT-HWYS uses and implement a specific training program for all potential applicators on the proper application of these chemicals.

The Chemical Applications Program is administered in accordance with the MS4 NPDES Permit requirements referenced in Table 7-1.

**Table 7-1. MS4 NPDES Permit Requirements for the Chemical Applications Program.**

MS4 NPDES Permit Reference	SWMPP Section
<p><b>Part D.1.f</b>—The Permittee shall further develop and maintain a system maintenance program to reduce to the MEP the discharge of pollutants from all Permittee-owned facilities, roads, parking lots, baseyards, maintenance facilities, and the MS4. The program shall include:</p>	
<p><b>Part D.1.f.(2)(i)</b> Implement appropriate requirements for pesticide (including herbicide) and fertilizer applications – The Permittee shall implement BMPs to reduce the contribution of pollutants associated with the application, storage, and disposal of pesticides (including herbicides) and fertilizers from municipal areas and activities to the MS4. Municipal areas and activities include, at a minimum, municipal facilities, public right-of-ways, and landscaped areas.</p> <p>Such BMPs shall include, at a minimum: (1) educational activities, permits, certifications and other measures for municipal applicators; (2) integrated pest management measures that rely on non-chemical solutions; (3) the use of native vegetation; (4) chemical application, as needed; and (5) the collection and proper disposal of unused pesticides (including herbicides) and fertilizers.</p> <p>The Permittee shall ensure that their employees or contractors or employees of contractors applying registered pesticides (including herbicides) and fertilizers shall follow the pesticide label, and comply with any other State, City, or government regulations for pesticides and fertilizers.</p>	Section 7.1
<p><b>Part D.1.h.(4)</b> Chemical Applications BMPs Program Plan – The Permittee shall update its Authorized Use List of the chemicals DOT-HWYS uses and implement a specific training program for all potential appliers (bulk and hand-held) of the chemicals (e.g., fertilizers and pesticides including herbicides) in its proper application as it pertains to storm water pollution prevention. All Permittee employees or contractors applying fertilizers or pesticides shall receive training on the BMPs annually. The Permittee shall not permit the application of fertilizers or pesticides (including herbicides) unless the applier has first received this training.</p>	Section 7.2

## 7.0 Program Organization

To fulfill the MS4 NPDES Permit requirements of the Chemical Applications Program, the following organizational structure has been established, as shown in Figure 7-1.

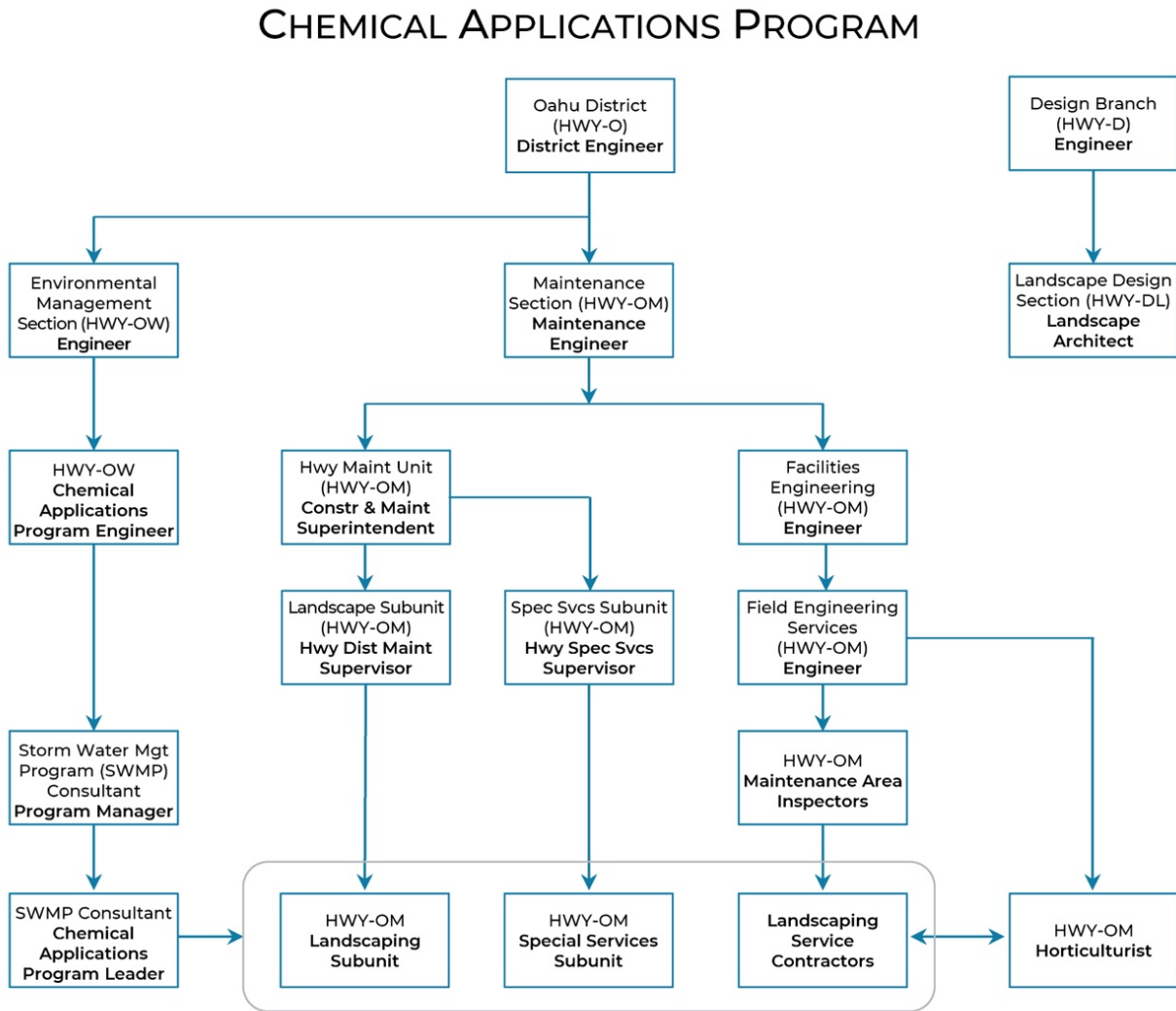


Figure 7-1. Chemical Applications Program Organizational Chart.

## 7.1 Chemical Applications BMPs | MS4 NPDES Permit Part D.1.f.(2)(i)

DOT-HWYS utilizes the *Highway Manual for Sustainable Landscape Maintenance* to establish chemical application BMPs and educate potential appliers on BMP implementation. The *Highway Manual for Sustainable Landscape Maintenance* was published to encourage a culture of sustainable landscape maintenance practices, such as planting native vegetation, utilizing integrated pest management practices, and reducing the impacts of herbicide application through other sustainable practices. The DOT-HWYS Design Branch, Landscape Design Section provides periodic training on the *Highway Manual for Sustainable Landscape Maintenance* to DOT-HWYS staff and service contractors.

The *Highway Manual for Sustainable Landscape Maintenance* is available on the DOT-HWYS website, [www.hidot.hawaii.gov/highways/landscape-architecture-program/](http://www.hidot.hawaii.gov/highways/landscape-architecture-program/).

*Native Carex grass is planted for erosion control along Kalaniana'ole Highway near Kailua.*



Content from the *Highway Manual for Sustainable Landscape Maintenance* is incorporated into the Chemical Applications Training, and attendees are encouraged to access additional resources on the DOT-HWYS website, [www.stormwaterhawaii.com](http://www.stormwaterhawaii.com).

HWY-OM staff is instructed to only mix chemicals in sufficient quantities for the task, store unmixed chemicals per the manufacturer's label, and reuse rinse water.

To protect the quality of state waters, DOT-HWYS has established the following policies for the application of chemicals by HWY-OM personnel and service contractors. These policies are included in the Chemical Applications Training:

- DOT-HWYS shall not apply chemicals to any areas below and/or downstream of the top of bank (TOB). TOB is defined as the break in slope between the bank and surrounding terrain. TOB is the point closest to the boundary of the active floodplain of a stream where a break in the slope of the land occurs.
- DOT-HWYS shall not apply chemicals to any areas over state waters or over the area enclosed by the top of the bank. This includes flat areas, overhanging trees, or foliage. State waters include streams, rivers, oceans, coastal waters, wetlands, ponds, reservoirs, canals, ground water, and lakes.
- DOT-HWYS shall not apply pesticides to wetlands. Wetland is an area that is saturated with water either permanently or seasonally, consisting of wet soils, and supports wetland vegetation.
- DOT-HWYS shall ensure that chemical application to bridges with scuppers and/or deck drains shall not affect the state waters and/or the TOB.
- DOT-HWYS shall not apply pesticides to any areas with standing or flowing waters. Examples of such areas include ditches with flowing waters, medians with open state waters, etc.
- DOT-HWYS shall not spray roadside ditches that are naturally occurring and/or conveying state waters.

In addition to the above-mentioned constraints, DOT-HWYS shall comply with the pesticide label, and comply with city, state, and federal regulations.

The individuals and teams highlighted in Figure 7-2 are responsible for implementing the control measures described in this section.

## CHEMICAL APPLICATIONS PROGRAM

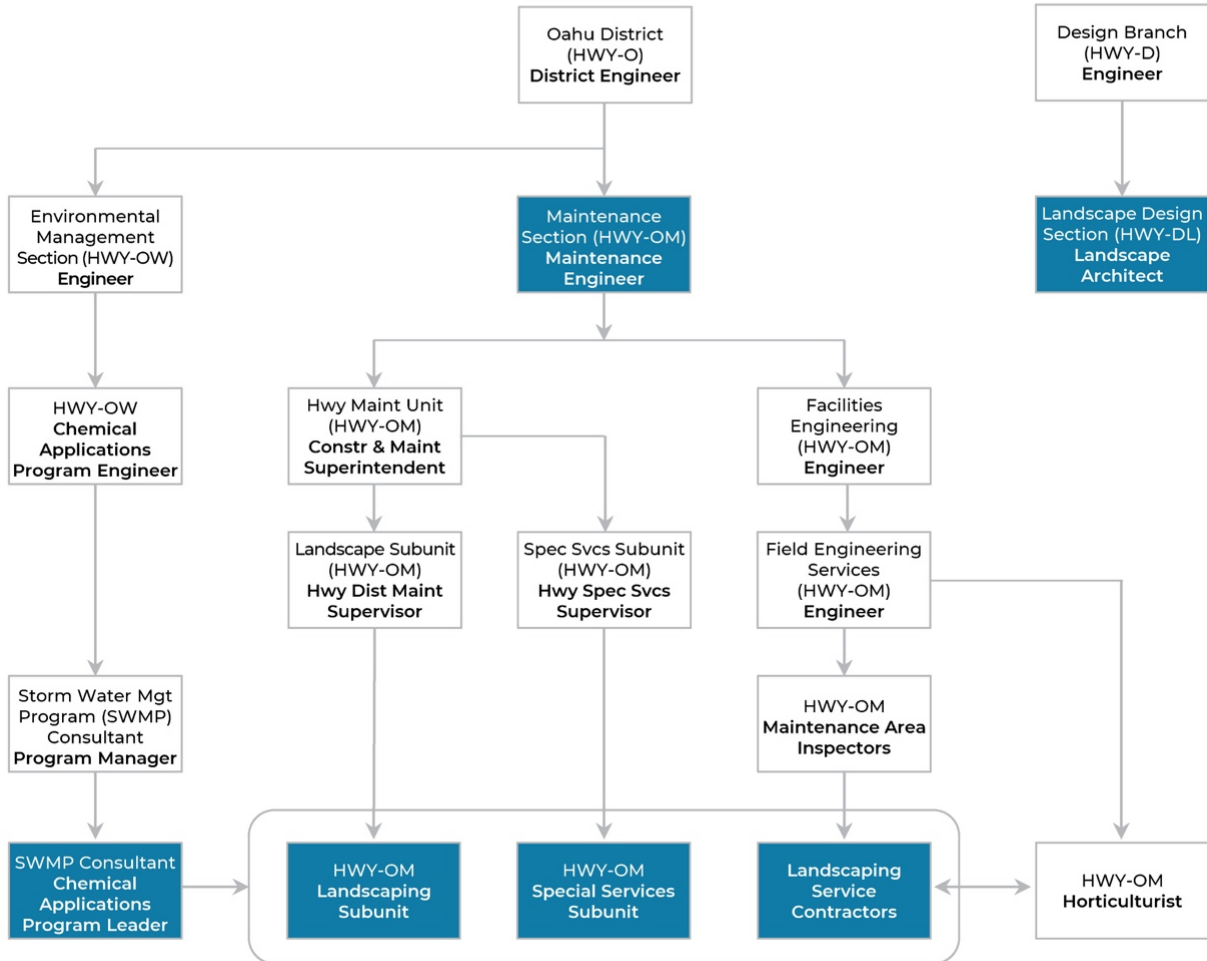


Figure 7-2. Chemical Applications Program Organizational Chart for Roles and Responsibilities Related to Chemical Applications BMPs.

## 7.2 Training | MS4 NPDES Permit Part D.1.h.(4)

DOT-HWYS has updated its Chemical Applications Authorized Use List (Appendix G.1), identifying the chemicals used by DOT-HWYS that have the potential to impact the MS4. The Chemical Applications Authorized Use List is reviewed and updated, as necessary, when contracts for purchasing chemicals are prepared, or on an annual basis. Any updates to the Chemical Applications Authorized Use List are provided in the Annual Report.



*The bulk application tank is labeled with General Pesticide Use Guidelines.*

DOT-HWYS provides annual Chemical Applications Training to DOT-HWYS staff and service contractors. The training covers chemical applications BMPs (Section 7.1) that reduce the amount of pollutants in storm water, information about the Pesticide General Permit, appropriate conditions for chemical applications, record keeping of chemical applications, and general storm water awareness. Topics and BMPs discussed can be found in the Chemical Applications Training section of Appendix G.2.

Potential applicers of chemicals (bulk and hand-held) are required to attend the Chemical Applications Training prior to applying chemicals (e.g., fertilizers and pesticides including herbicides) within the DOT-HWYS ROW or at DOT-HWYS baseyard facilities.



The individuals highlighted in Figure 7-3 are responsible for implementing the control measures described in this section.

## CHEMICAL APPLICATIONS PROGRAM

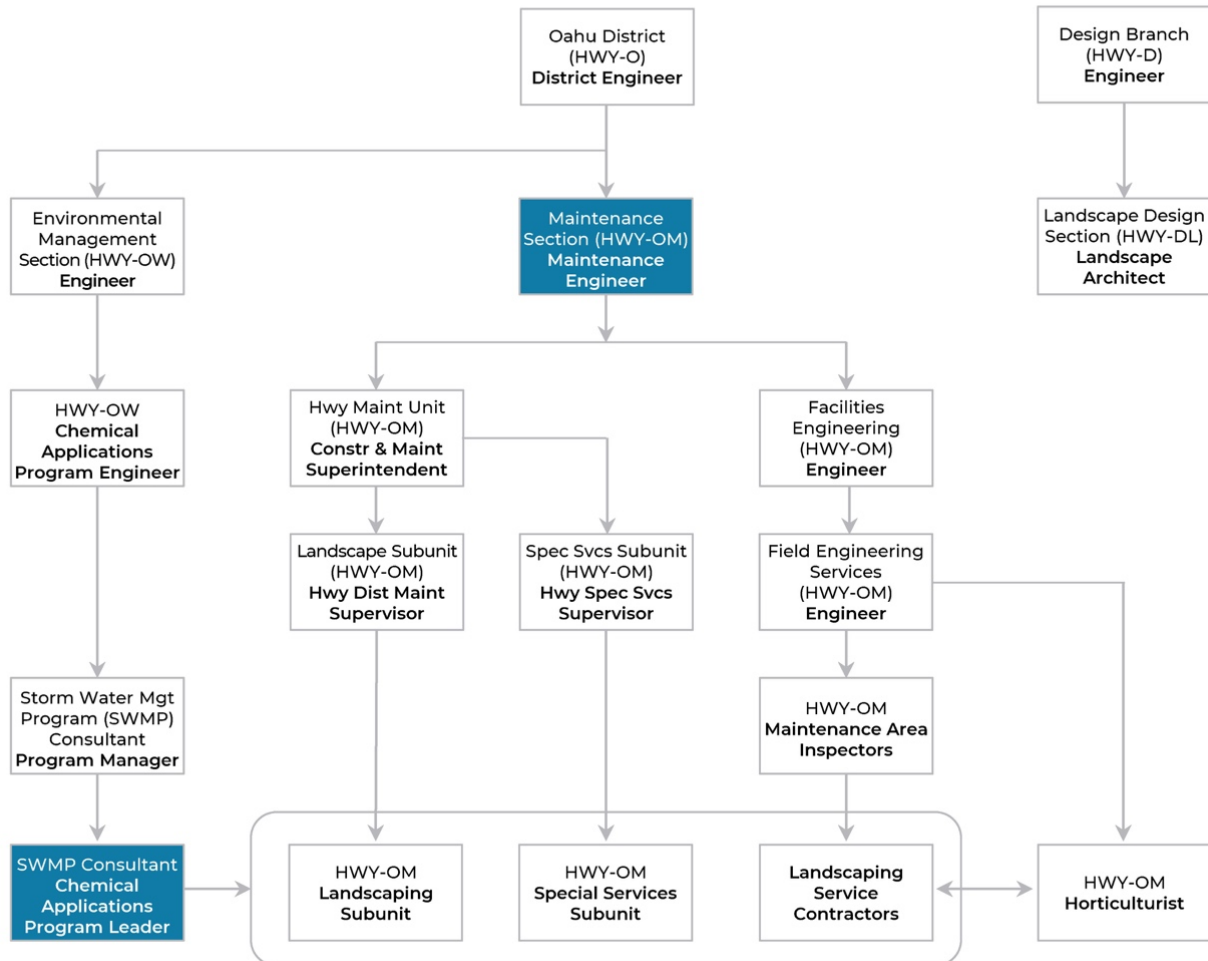


Figure 7-3. Chemical Applications Program Organizational Chart for Roles and Responsibilities Related to Training.

### 7.3 Monitoring Program Effectiveness

The *Program Effectiveness Strategy* (Appendix A.3, Table 10) provides the measurable standards and/or milestones for each Program BMP, including the outcome level, data collection method, and assessment parameter.