

SAFEGUARDING CORAL REEFS

Wash Down Stations to Reduce Stormwater Runoff and Water Pollution

Demonstration Project: Building a Wash Down Station at Slappy Cakes Restaurant in Kahana, West Maui






Designed and produced with support from:



The Coral Reef Alliance (CORAL) is an international nonprofit that unites communities to save coral reefs. In Hawai'i, CORAL is working with local partners to improve water quality for reefs and people through its Clean Water for Reefs Initiative.

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Problem

For much of the last century, the prevailing philosophy guiding stormwater management in the United States was to protect homes and businesses from flooding. This resulted in infrastructure, such as storm drains, which are designed to quickly remove rainwater from the streets and convey it directly to the ocean. Most people don't realize that the storm drain system is separate from the sewage system, and that storm drain water in Hawai'i is not treated before flowing directly into waterways and the ocean. Certain activities – like hosing leaves or dirt into the street, not picking up your pet's waste, dropping cigarette butts or washing your car – result in pollutants entering storm drains. It is everyone's responsibility to keep our storm drains free and clear of pollutants. Remember: "Only rain belongs in the drain!"

Solution

Wash down stations are dedicated areas for washing or rinsing, but with a drain that leads to the municipal sewer system instead of the ocean. They provide a very simple solution to preventing certain kinds of waste from reaching the ocean. For example, wash down stations can offer local businesses like restaurants an alternative to washing down rubber kitchen mats in the street or parking lot. In this way, industrial degreasers, soaps and other harmful chemicals are prevented from entering storm drains.

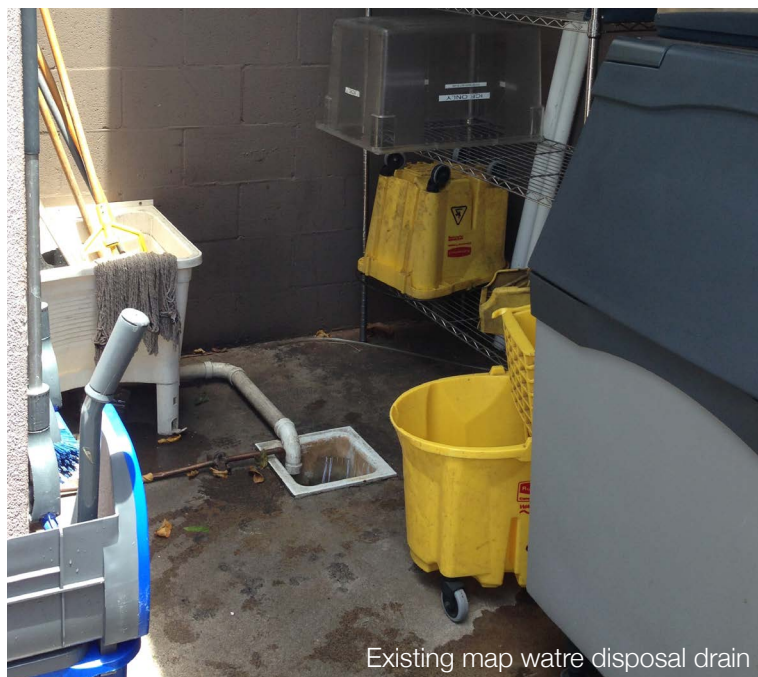
Other "green" practices that restaurants can implement to protect our coastal resources include:

- Washing down mats in a grassed or vegetated area where the water can be absorbed into the ground instead of flowing down a storm drain.
- Using a mop water disposal drain – which many restaurants and businesses already have outside – to wash down mats or dump contaminated water.
- Purchasing and using nontoxic and biodegradable soaps and cleaning products.

Demonstration Project

Demonstration Site

Like many business establishments, Slappy Cakes Restaurant in Kahana, West Maui used the parking area to wash down kitchen mats each day. Aside from the environmental concerns associated with this practice, it also left a smelly and unsightly trail of standing water and food particles that was visible to customers as they approached the front door of the building.



Demonstration Project (cont'd)

Objectives

1. Demonstrate how restaurants can do a simple retrofit with a limited budget.
2. Showcase how a simple wash down station can significantly reduce the amount of polluted water entering storm drains.
3. Improve the customer experience by eliminating the unsightly trail of standing water and food particles in the parking lot.

Constructing the Wash Down Station

Step 1: Choose the location

Choose the site for the wash down station. Slappy Cakes already had a mop water disposal drain that leads to the local sewage treatment facility. We decided to modify the area around that drain to create a wash down station.

Step 2: Construct the containment curb

Construct a low curb around the existing drain to contain wash down water.

Step 3: Install the hooks

Install hooks on an adjacent wall so that the mats can be hung up and sprayed.

Step 4: Level the drain

Re-level the drain to ensure all the wash down water goes down the drain and not into the parking lot.



Project Costs

Item	Cost
Materials	\$200
5 bags of cement	
Shovel	
Plastic tub for mixing cement	
Scree	
Float	
Wall anchors and bolts for hooks	
Labor	\$300
Total Cost	\$500

Demonstration Project (cont'd)

Results

One day of standard cleanup operations at Slappy Cakes uses approximately 17 gallons of wash down water. This relatively simple and inexpensive retrofit to the facility will prevent approximately 6,205 gallons of polluted water from entering the storm drain each year. Constructing a wash down station that drains to the municipal sewer system is an easy and cost effective solution to reduce pollution to the ocean.

Mahalo to those that helped make this project a success, including:

- Ali Isabelle, Slappy Cakes Restaurant
- County of Maui Reclamation Branch

Additional Resources

Learn more about ways to reduce water pollution in Hawai'i's marine environment at coral.org/our-publications.

To visit the demonstration site or to learn more about this solution, contact maui@coral.org.

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