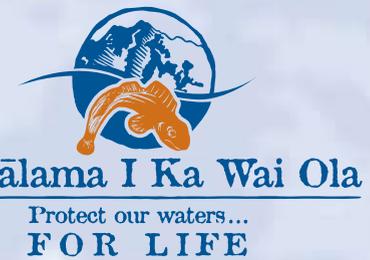
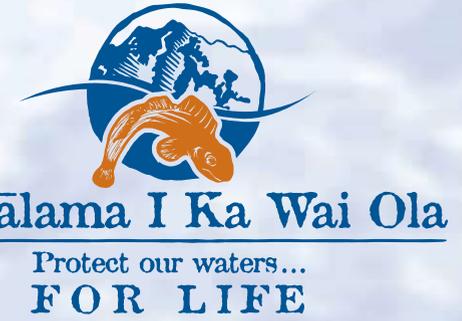
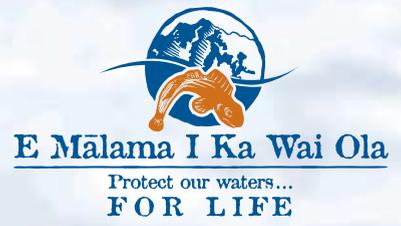




VISIT THE WEBSITE
www.CLEANWATERHONOLULU.com
 OR
 CALL THE
 ENVIRONMENTAL CONCERN LINE
768-3300

STORM WATER BEST MANAGEMENT PRACTICES



BEST MANAGEMENT PRACTICES LANDSCAPE MAINTENANCE

Landscaping activities such as mowing, tree trimming, pruning, and leaf blowing have the potential to pollute storm water runoff with grass clippings, tree branches, leaves, dirt, and fertilizers. Storm water runoff can wash these pollutants into the City's storm drainage system, which flows directly into our streams and coastal waters.

Pollutants from landscaping activities can have a big impact on the environment. As plant material decomposes in water, it uses up oxygen in the water that aquatic life needs. Dirt, also called sediment, can clog fish gills, cloud water, block sunlight needed by aquatic plants, and smother coral reefs. Excess nutrients from green waste and fertilizers can promote the growth of algae blooms, which block sunlight and reduce oxygen in the water. In addition, loose plant material and dirt can block or reduce the capacity of the storm drain system, causing flooding.

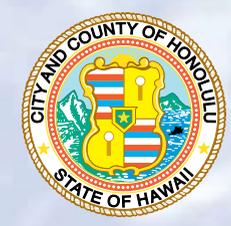
Best Management Practices (BMPs) are simple and effective methods that should be implemented to prevent the pollution of storm water. Implementing storm water BMPs is a vital part of protecting Hawaii's waters for life.

The Law: The Federal Clean Water Act gave the Environmental Protection Agency (EPA) the authority to implement water pollution control programs. Local statutes and ordinances address compliance and enforcement of the EPA's mandates.

The Ordinance: The revised Ordinances of Honolulu, Section 14-12-23(a) Environmental Quality Control-Violation states, "It shall be unlawful for any person to discharge or cause to be discharged any pollutant into any drainage facility which causes a pollution problem in state waters, or causes a violation of any provision of the City NPDES [National Pollutant Discharge Elimination System] permit or the water quality standards of the State of Hawaii."

Discharging pollutants to the storm drain system is against the law. Violations can result in fines of up to \$25,000 per violation, per day.

LANDSCAPE MAINTENANCE TREE TRIMMING • GRASS CUTTING YARD FERTILIZATION



*City and County of Honolulu
 Department of Facility Maintenance*

STORM WATER MANAGEMENT PROTECTING OUR WATERS

Rain falling in urban areas flows along streets and gutters, and collects in drain inlets and catch basins. Storm water is then carried by drain pipes and channels into streams and the ocean. Dirt, plant material, debris, grime, automotive fluids, and other such loose materials on the ground can be picked up by storm water and end up polluting our island waters.

Streams and oceans are homes to fish, plants, and other aquatic life, and serve as major recreational areas for the Oahu community. They offer opportunities for activities such as fishing, swimming, surfing, diving, and paddling. Keeping storm water as clean as possible is in everyone's interest. The information in this brochure provides guidance on how to protect our streams and the ocean by reducing storm water pollution.



GENERAL PRACTICES

- Prevent soil, plant debris, and fallen fruit from leaving the property by sweeping up the excess material and disposing of it properly.
- Control soil erosion by planting ground cover and stabilizing erosion-prone areas. Mulch and plant areas of exposed soil as soon as possible.
- Avoid loosening the soil and leaving bare soils exposed, as this can cause erosion.
- Plant buffer strips of natural vegetation and woody plants alongside waterways to filter and slow runoff.
- Consider native or low water use groundcovers when planting and replanting.
- Secure stockpiles of material under tarps or plastic sheeting to protect them from the wind and rain.
- Place temporarily stockpiled material away from watercourses and storm drain inlets.
- Schedule mowing, trimming, and other landscaping activities when dry weather and low winds are forecast.
- Consider installing grass pavers, brick, gravel, or other surfacing that allows water to infiltrate into the ground, as opposed to concrete or asphalt paved surfaces that facilitate water runoff.
- Plan landscaping with mature plants' effect on waterways in mind (e.g., fruit trees overhanging streams may cause decaying organic matter).

IRRIGATION

- Do not over water the lawn or garden. Use water-saving methods such as soaker hoses, micro-sprinklers, and timers.
- Design irrigation systems to suit each landscape area's specific water requirements.
- Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface infiltration.
- Inspect irrigation systems periodically to ensure that the right amount of water is being applied and that the system is working properly.

FERTILIZERS AND PESTICIDES

- Practice integrated pest management, combining limited pesticide use with other pest control techniques to minimize economic, health, and environmental risks. For more information, see the EPA's fact sheet at <http://www.epa.gov/pesticides/factsheets/ipm.htm>, and an article from the University of Hawaii at <http://www.ctahr.hawaii.edu/oc/freepubs/pdf/pp-05.pdf>.
- Follow the instructions on chemical packaging to avoid overuse.
- Attach its label to the new container if a chemical is transferred from its original container.
- Store fertilizers, pesticides, and other toxic landscape chemicals in sealed, waterproof containers in covered areas.

- Avoid spreading fertilizers on impervious surfaces such as pavement or concrete.
- Use slow-release fertilizers, which can be applied less frequently than conventional fertilizers.
- Do not wash fertilizer spills into the street or onto hard surfaces because the runoff can easily enter storm drains.
- Consider using only natural fertilizers, such as compost, manure, or vermicast.
- Do not apply pesticides or fertilizers while it is raining.
- Properly dispose of excess fertilizers and pesticides. Do not pour pesticides, oil, or lawn care products into the street or storm drains. For more information, to schedule a drop-off appointment, or to get information on disposal companies, call 768-3201.

YARD WASTE

- Use dry methods like sweeping or leaf blowing to gather yard waste into a pile for collection.
- Do not blow or toss leaves or other yard waste into the street, storm drains, or streams.
- Grasscycling, or leaving grass clippings on the lawn, helps return moisture and nutrients to the soil.

- Compost yard waste, mulch it into fertilizer, or recycle it through the City by placing it in green bins for recycling collection. Yard waste can also be dropped off at City Convenience Centers. Large commercial generators of green waste should deliver it to the Hawaiian Earth Products composting facility. For more information see http://www.opala.org/solid_waste/what_goes_where_table.html#green.

For More Information

Environmental Concern Line 768.3300
or www.cleanwaterhonolulu.com

REPORT ANY SITUATION THAT MAY POLLUTE STORM DRAINS, WATERWAYS AND BEACHES
REPORT A CLOGGED STORM DRAIN OR CATCH BASIN
GET FACT SHEETS AND EDUCATIONAL MATERIALS
GET MORE INFORMATION ON VARIOUS STORM DRAIN PERMITS