mālama maunalua

PROPERY WATER RUN-OFF ASSESSMENT GUIDE

Water run-off is one of the main cause of damage to Maunalua Bay.

PROPERY WATER RUN-OFF ASSESSMENT GUIDE

Name: _____ **Address:_____**
Email:_____ **Phone: _____**

DESCRIPTION OF PROPERTY:

Entry Driveways/Parking Areas: ☐Impervious ☐Pervious

Exposed Walkways & Patios: ☐Impervious ☐Pervious

Slope of Land/Surface Drainage: ☐Level Grade ☐Sloped Lot ☐Ravine Lot

Retaining/Privacy Walls: ☐Yes ☐No

Drain Weeps Installed in Retaining/Privacy Walls: ☐Yes ☐No

Low Elevation Point on Property: ☐Northeast ☐Northwest ☐Southeast ☐Southwest

Obvious Water Ponding Areas: ☐Yes ☐No

Gutters: ☐Yes ☐No

Downspout Discharge Locations: ☐Impervious Surface ☐Pervious Surface

Drain Discharge Locations: ☐Impervious Surface ☐Pervious Surface

Slope of Driveway: ☐Flat ☐Towards Home ☐Towards Street

Exposed Impervious Surfaces: ☐Driveway ☐Walkways ☐Patios

Roof Slope Direction: ☐Towards Impervious Surface ☐Towards Pervious Surfaces

Drainage Issues Adjacent to Homes Foundation: ☐None Visible/Obvious ☐Possible Drainage Issues

Bare Soil Areas: ☐Yes ☐No

Erosion Issues: ☐None Visible/Obvious ☐Possible Drainage Issues

Is Irrigation/Sprinkler System Installed: ☐Yes ☐No

Is There Risk of Water From This Lot Draining Onto Neighbors Lot: ☐Yes ☐No

Is There Risk of Water from Neighbors Lot Draining Onto This Lot: ☐Yes ☐No

Landscaping/Vegetation: ☐Trees ☐Shrubs ☐Lawn ☐Other

Nearest Storm Drain Distance from Property:` Approx. _____ feet

Notes:

GENERAL ASSESSMENT:

How "Bay Friendly" is Your Home?

Instructions: Use this self-assessment form to gain a better understanding of your home and how you can help protect Maunalua Bay.

Score Yourself			
Category	**1 Score**	**2 Score**	**3 Score**
Driveways, Walkways, and Parking Areas	All driveways and sidewalks are gravel or another porous material such as bricks. **1**	Some of the driveways and/or sidewalks are gravel or another porous material. **2**	Driveways and sidewalks are asphalt, concrete or other nonporous material. **3**
Drainage from Rooftops	Downspouts are directed to lawn or vegetation. **1**	Some of the downspouts are directed to lawn or vegetation and others are directed to paved surfaces. **2**	All downspouts are directed to paved surfaces, or downspouts are directly connected to storm drains. **3**
Yard	Most of the yard is planted with plants that are drought tolerant and absorb rain. **1**	Most of the yard is in turf grass. **2**	There are areas of exposed bare soil. **3**
Handling and Use of Outdoor Chemicals (fertilizers, pesticides, cleaners, etc.)	Spills are cleaned up, especially on paved surfaces. Minimum amounts of chemicals are applied. Application is delayed to avoid rain. **1**	Applications are not delayed to avoid rain. **2**	Spills are not cleaned up. Products are used in higher amounts than recommended by the label. **3**
Pet and Animal Waste ***(If no pets, leave blank)***	Pet wastes are flushed down the toilet; buried away from ditches or where children play; or wrapped and placed in the garbage for disposal. **1**	Wastes are left to decompose on grass or soil, and scattered over a wide area. **2**	Wastes are left on paved surfaces, concentrated in a pen or yard area, or dumped down storm drains or in ditches. **3**
Outdoor Water Conservation	Collect water in a rain barrel or use a rain gauge to tell you when you need to water the lawn (before 10 a.m. or after 4 p.m.) **1**	Water when the lawn looks dry. **2**	Water the lawn whether it looks like it needs it or not. **3**
Score			

Total Score: _____ Average Score: _____ Highest Ranked Activity: _____ Lowest Ranked Activity: _____

How'd you do? Total Score:

6-9 Congratulations, you are really doing your part to keep our waters clean and clear!

10-14 You are moving in the right direction, a few small changes could help keep our waters clean & clear. See "Simple Actions for a Healthy Bay"

15-18 Consider making some simple changes around your home to make a big impact on water quality in streams and oceans. See "Simple Actions for a Healthy Bay"

WATER RUN-OFF ASSESSMENT OPPORTUNITIES

List of Improvements to Consider & Regular Maintenance Items to Reduce Storm Water Runoff from my Property into the Street: *(Note specific issues below as necessary after each numbered item).*

1. Increase pervious surfaces on the lot (e.g. driveways, walkways, etc.):

2. Investigate the possibility of installing intercept drains in impervious surfaces (as a cheaper alternative to replacing impervious surfaces. Drains can be directed to yard and vegetated areas on the lot.

3. Redirect downspouts into lawn, yard or garden areas. Maybe consider the installation of rain barrels at downspout locations:

4. Investigate the possibility of redirecting intercept drains, redirecting drain tiles and redirecting swales to keep water on the lot in rain gardens or other vegetative areas.

5. Plant as many drought tolerant plants in the yard as possible.

6. Maintain good plant, vegetation, and/or lawn coverage on all areas of the property to hold soil in place. There should never be any bare or exposed soil on the lot.

7. Be sure all vegetation and trees are trimmed back away from streams, canals, sidewalks and streets. Rubbish and plant debris obstruct tributaries and ultimately pollute Maunalua Bay.

8. Refer to the *General Assessment* (previous section) and *Actions You Can Take To Help Protect Maunalua Bay* (next page) sections of this report for specific recommendations on handling Pet Wastes, Chemicals & Fertilizers, Car Washing Detergents, etc.

9. Changes I plan to make on my property to reduce water, sediment & pollution run-off into Maunalua Bay.

Actions You Can Take to Help Protect Maunalua Bay

In The Yard

Our backyards, sidewalks, and streets are all connected to the Bay. Retaining runoff water on your property keeps dirt, and pollutants out of our streams and ocean environment, and helps Maunalua Bay to thrive.

1. Water your yard efficiently by watering only when necessary, applying the minimum amount, and making sure water does not run off your yard into streets, storm drains, ditches, or streams.
2. Redirect or remove any drain pipes that empty water from your house or yard directly into the storm gutters, street, or stream channels. See if you can use that water in your yard instead.
3. Install rain sensors that turn off your automatic sprinklers when it is raining.
4. Create a buffer strip of shrubs, trees, and unmowed natural vegetation to filter pollutants and prevent them from reaching the bay.
5. If you're living next to a gully, stream, or canal, take steps to ensure that materials from your yard do not end up in the waterway. In a rain, those materials will end up in Maunalua Bay.
6. During construction and landscaping projects, ask your contractors to take steps to prevent erosion and retain soil on site.

7. Minimize your use of chemical fertilizers by substituting compost for fertilizer. Compost will enhance soil and hold water for plants to use.
8. Be careful not to over-water after applying fertilizers or pesticides, and never apply fertilizers or pesticides before a rainstorm. The pollutants will be picked up by runoff and carried into the Bay.
9. Avoid or minimize clearing trees, shrubs, and native plants. Consider planting more. Plants filter water and help it soak into the ground.
10. Replace some of your grass (30%, for example) with plants and trees that require less water, less fertilizer, and fewer pesticides. (Refer to Mālama Maunalua's list of plants recommended for the Maunalua Bay Region at www.malamamaunalua.org).
11. Consider using pervious surfaces when it comes time to install or repair driveways and walkways.
12. Install rain barrels to catch and retain runoff water from your roof. Use that water to irrigate your yard or garden.
13. Retain rainwater on your property by installing planters, swales, terraces, and other landscape features that help retain water or percolate water into the ground, and prevent erosion.
14. Use mulch or plant ground cover plants on areas of bare soil to prevent erosion

For more information on each of these actions, visit the Mālama Maunalua web site : www.malamamaunalua.org

Actions You Can Take to Help Protect Maunalua Bay

In Your Neighborhood

Water that enters the storm drain system flows directly into Maunalua Bay carrying sediment and pollutants that are detrimental to aquatic plants, animals, and corals.

1. Sweep the street gutters in front of your residence and clear away debris, mud, rocks, litter, leaves, sticks, and sediment from on and around curbs, gutters, and storm drain grates that may wash down the storm drain. Put the debris and sediment in the trash.
2. Do not push dirt and debris from your driveway and sidewalks into the curb and gutter. Water carries these materials into Maunalua Bay.
3. Report accumulations of green waste, soil or litter in stream channels, sewage leaks, or someone dumping of trash and debris along streets and storm drains to the City & County of Honolulu Environmental Concern Line at **(808) 768-3300**.

Cars, Trucks, Motorcycles, & Boats

Vehicle & Boat Maintenance

The fluids that keep your vehicle or boat alive and running well, motor oil, anti-freeze/coolant, brake fluid, power steering fluid, transmission oils, and of course, gasoline, are exceedingly harmful to the ocean environment.

1. Ensure your vehicles and boats are well maintained to prevent fluid leaks and keep toxic substances such as oils, gas, and heavy metals out of the storm drains, streams, and ocean.

Vehicle & Boat Washing

Vehicle and boat wash water contains residues from soaps, exhaust fumes, gasoline, oils and heavy metals that pollute waterways and the ocean environment.

2. Wash your vehicle at a commercial car wash, designated car wash stall, or in a place where polluted vehicle and boat wash water will not get into storm drains, streams, or the ocean.

Vehicle & Boat Cleaning Products

Phosphates from car and boat wash detergents can contribute to algal blooms, which use up the dissolved oxygen in water that aquatic plants and animals need for survival.

3. Use the minimum amount of any cleaning product to get the job done and use low phosphate or phosphate-free soaps/detergents if possible.

Reduce Vehicle & Boat Use

Driving and boating less is the best way to prevent pollution from entering stream and ocean waters.

4. Reduce vehicle and boat use by doing multiple errands in one trip, carpooling, using public transportation, biking, and walking when possible.

For more information on each of these actions, visit the Mālama Maunalua web site : www.malamamaunalua.org

Actions You Can Take to Help Protect Maunalua Bay

Pet & Animal Waste

Pet and animal wastes contain bacteria, viruses, parasites, and nutrients that pollute water and are harmful to humans, aquatic life, and the ocean.

1. Pick up pet waste in your yard and on walks and dispose of it in the trash or toilet.

Household Products

Many household products contain substances that are harmful to humans, animals, plants, streams, and ocean waters and/or substances that are not easily broken down in the natural environment.

1. Keep all household products, including biodegradable soaps and detergents, from entering streams or storm drains. Goal: No household products ever enter streams or the storm drain system.
2. Use **phosphate-free** biodegradable soaps and detergents as much as possible; they are less harmful if they accidentally enter streams and/or the ocean.
3. Properly dispose of oil, paint, antifreeze, and other chemicals. The City and County of Honolulu recommends the "Absorb and Trash" method for disposal. For more information on disposing of hazardous products visit **www.opala.org**, or call The City & County of Honolulu's **Household Hazardous Waste Information Line** at **768-3201**.

Learn More

Just as thousands of small decisions can have a cumulative damaging effect, thousands of thoughtful decisions can help protect and enhance the Bay.

1. Sign the Malama Maunalua EDC Pledge to reduce runoff and pollutants.
2. Log on to the Mālama Maunalua web site (http://malamamaunalua.org) and learn more about what is happening in Maunalua Bay.
3. Sign up to receive the monthly Maunalua Bay E-mail Updates to stay informed.

MĀLAMA MAUNALUA

For more information on each of these actions, visit the Mālama Maunalua web site : www.malamamaunalua.org

It's going to take the cooperation of everyone in our community for this to succeed, but with Maunalua's 60,000 residents working together, we can make a big difference within our own lifetime.

You will see the success of these efforts as the waters of the bay become cleaner and clearer and marine life grows more abundant, all of which would not have been possible without the kuleana of the entire Maunalua community.

For more information:

Visit the Mālama Maunalua web site at: www.malamamaunalua.org
Or contact Mālama Maunalua:

By phone: (808) 395-5050
By e-mail: info@malamamaunlua.org

Mālama Maunalua is a community-based organization and all initiatives are supported with financial contributions from the community. Help conserve and restore Maunalua Bay with a tax-deductible donation! Make checks payable to Mālama Maunalua and mail to:

Mālama Maunalua
P.O. Box 240421 ♦ Honolulu ♦ Hawaii 96824

DISCLAIMER:

This report is prepared by volunteers and is intended to allow the recipient to identify areas on the property where there may be capacity to reduce runoff from the property into the storm water system and, ultimately, into Maunalua Bay. The report represents the opinion of the volunteer inspector and is not intended to constitute any warranty or guarantee concerning the condition of the property. Please remember that the following apply:

1. The inspection and report are furnished on an "opinion only" basis. Mālama Maunalua assumes no responsibility for the cost of repairing or replacing any unreported defects or conditions.
2. The inspection and report is not intended or to be considered as a guarantee or warranty, expressed or implied including any implied warranty of merchantability or fitness for use, regarding the conditions of the property, items and systems inspected and should not be relied upon as such.
3. Mālama Maunalua assumes no liability and shall not be liable for any mistakes, omissions, or errors of judgment. This limitation of liability shall include and apply to all consequent damages, bodily injury, and property damage of any nature.
4. The inspection and report are based upon observations of the conditions that existed at the time of the inspection only.
5. Only a licensed professional can provide definitive estimates as to the cost or feasibility of any changes to the property that may be made.