

**FUNCTIONING OR FAILING?**

Rain gardens are not designed to hold water for long periods of time like wetlands or ponds. Rain may accumulate in the garden temporarily, but should infiltrate into the ground within 48 hours. Accumulated sediment will reduce the garden’s functionality over time.

**Signs of Failure:**

1. Water does not infiltrate within 48 hours of a storm event.
2. Ponding/pooling and creates ongoing wetland conditions in your rain garden.

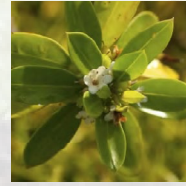
**What If My Garden Is Failing?**

1. Perform the maintenance activities outlined in this brochure.
2. If failure continues:
  - the soil media at the surface may have become clogged and should be replaced,
  - your rain garden may need to be designed in an area with better drainage, or
  - your soils may not have suitable drainage to host a functional rain garden.

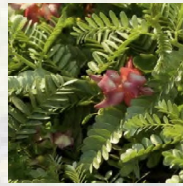
**Test soil infiltration rates prior to installing a rain garden!**  
Infiltration rates must be at least 0.5"/hour.

**NATIVE PLANT RECOMMENDATIONS**

**For Rain Garden Berms & Slopes**



**Naio Papa**  
GROWTH:  
Low Shrub



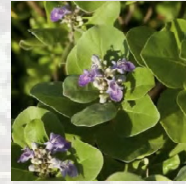
**'Ohai**  
GROWTH:  
Low Shrub



**Hinahina Ewa**  
GROWTH:  
Bush



**Maiapilo**  
GROWTH:  
Low Shrub



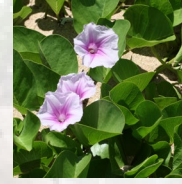
**Pōhinahina**  
GROWTH:  
Low Shrub



**Kāwelu**  
GROWTH:  
Bunching Grass



**Kuluī**  
GROWTH:  
Shrub

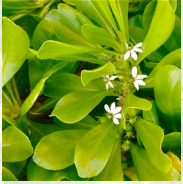


**Pōhuehue**  
GROWTH:  
Vine

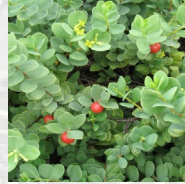
**For Rain Garden Basins**



**Kupukupu**  
GROWTH:  
Fern



**Naupaka**  
GROWTH:  
Shrub



**Ākia**  
GROWTH:  
Low Shrub



**'Ilie'e**  
GROWTH:  
Low Shrub



**'Ahu'awa**  
GROWTH:  
Sedge



**Koki'o ke'oke'o**  
GROWTH:  
Tall Shrub



**Carex**  
GROWTH:  
Sedge



**Ko'oko'olau**  
GROWTH:  
Low Shrub



**Alahe'e**  
GROWTH:  
Tree



**'Uki'uki**  
GROWTH:  
Sedge



**Pili**  
GROWTH:  
Tufted Grass



**'Iliahialo'e**  
GROWTH:  
Tree

For more native plant suggestions:  
[Hui o Ko'olaupoko, Hawai'i Residential Rain Garden Manual](#)



*Caring for your*  
**RAIN GARDEN**

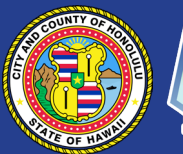
For more information visit  
<http://bit.ly/SWQLID>

**TIPS FOR PLANTING:**

Choose hardy plants that are suited for well-drained soils, salt tolerant and tolerant of variable moisture conditions. Using plants with large root systems will increase filtration.

Native plants are best, but common landscaping plants that meet these criteria and are not invasive can also be used.

**CITY & COUNTY OF HONOLULU**  
Department of Facility Maintenance





*Congratulations on your new*  
**RAIN GARDEN**

*Mahalo for doing your part  
to protect our island's water quality!*

Rain gardens are specially designed to allow rainwater to soak into the ground. They also help to capture pollutants such as nutrients, oils, and soil before they can be carried to our streams and ocean waters.

Here is guidance to keep your rain garden functioning for years to come!



Rain gardens are not maintenance-free!

**Low Maintenance - Not No Maintenance**

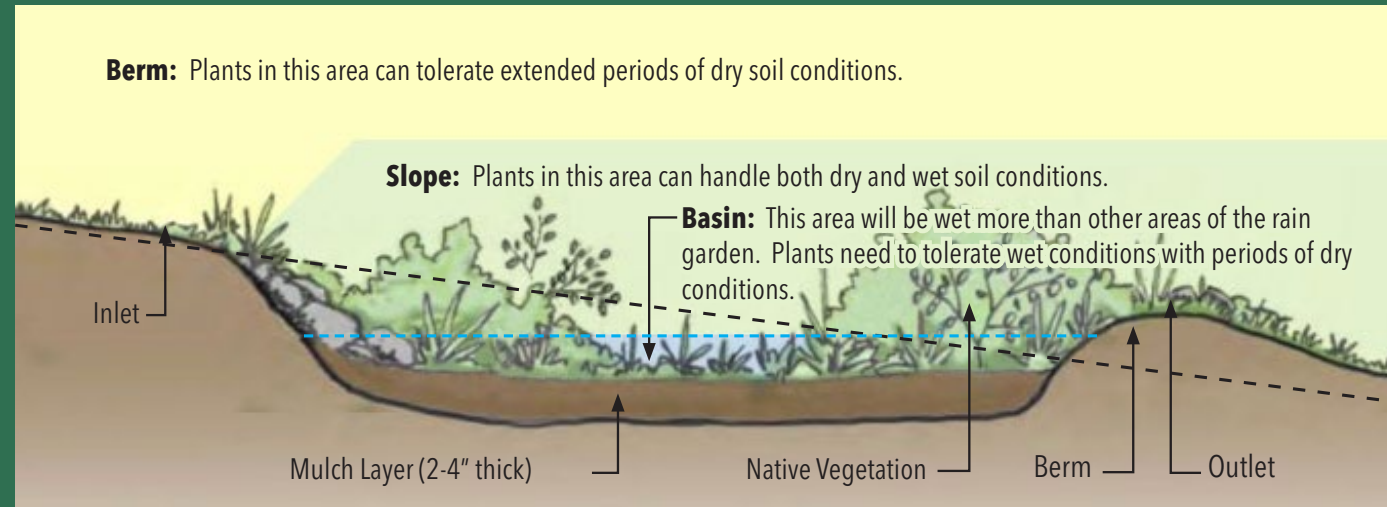
Proper design of a rain garden can help ensure long-term success by making it easier to maintain; however, regular maintenance is still required.

**Rain gardens are planted more densely than typical landscaping projects.**

Rain gardens need the most care during the first two years following installation as plants become established.









**ANATOMY OF A RAIN GARDEN**

Understanding the structure of your rain garden will help you with selecting the right plants, preserving important garden features and finding solutions to issues.




**ROUTINE MAINTENANCE ACTIVITIES**


Rain gardens are site-specific. The routine maintenance activities are provided as guidelines: not all may apply.

Schedule	Activity
As Needed (Following Construction)	<ul style="list-style-type: none"> <li> Water to promote plant growth and survival, especially during the first two years and during dry spells.</li> <li> Inspect site following rainfall events. Add/replace vegetation in any eroded areas.</li> <li> Weed as needed until vegetation is established.</li> </ul>
Regularly (Monthly)	<ul style="list-style-type: none"> <li> Prune and weed to maintain appearance.</li> <li> Remove accumulated trash and debris.</li> <li> Replace mulch as needed.</li> </ul>
Annually (Semi-Annually During First Year)	<ul style="list-style-type: none"> <li> Inspect inflow area for sediment accumulation. Remove any accumulated sediment or debris.</li> <li> Inspect site for erosion and the movement of sediment and mulch.</li> <li> Add/replace vegetation as needed.</li> </ul>
Every 2-3 Years	<ul style="list-style-type: none"> <li> Remove and replace mulch.</li> <li> Add/replace vegetation as needed.</li> </ul>

**TIPS FOR MAINTENANCE**

 **Planting:** Hardy plants that are tolerant of salt and variable moisture conditions are the best choices for your rain garden. Using plants with larger root systems will increase filtration.

**Rain gardens do not need fertilizer.**

 **Weeding:** Remove weeds as they appear to prevent them from becoming established and affecting garden functionality.


 **Pruning:** Trim vegetation - but not too much! Encourage dense shrub growth to increase your garden's filtering capacity. Aim for 100% vegetation cover.

**Avoid using herbicides, pesticides and fungicides**

 **Mulching:** Replace mulch at a depth of 2-4" until vegetation covers all exposed dirt to retain soil moisture and reduce the need to water.

Rock mulch is the preferred choice. Shredded hardwood mulch can also be used, but will have the tendency to float when the garden floods.

It is important to ensure that mulch does not contain diseases or pests (check with your supplier). Bagged mulches available in stores may contain chemicals, dyes and herbicides. **DO NOT USE:** grass clippings, animal waste, or compost.

 **After storm events:** Inspect your garden for disturbed areas. Remove accumulated sediment and debris from garden bed, inlets and outlets. Add large rocks at inlets to prevent erosion. Replace lost berms, mulch or plants.