




**City of Long Beach**  
*Working Together to Serve*

**R-22**  
**Office of Gerrie Schipske**  
**Councilwoman, Fifth District**  
**Memorandum**

Date: March 2, 2010

To: HONORABLE MAYOR AND MEMBERS OF THE CITY COUNCIL

From: Councilmember Gerrie Schipske, 5th District 

Subject: AGENDA ITEM: Rain Barrel/Water Harvesting Pilot Program

### DISCUSSION

During the recent storms a 5<sup>th</sup> District resident brought to the attention of the 5<sup>th</sup> District Solar and Sustainability Task Force the idea of capturing rain water in a barrel and re-using the water for their lawn and garden. In a time of higher water bills, global warming and water restrictions this idea has become more than a simple gardening tool.

Because residential irrigation can account for up to 40% of domestic water consumption, water conservation measures such as rain barrels can be used to reduce the demand on municipal water systems. Other benefits of a rain barrel include: providing oxygenated, un-chlorinated water ideal for plants, conserving a valuable resource, and saving money on the water bill.

Currently, the City of Santa Monica offers a "Rain Barrel and Cistern Rebate Program". The program was fully launched in the fall of 2009, and to date, approximately thirty Santa Monica residents have started the process. Eligible participants include any property owner (resident, institution, or business) in the City of Santa Monica and any tenant of said property with the permission of the owner. More information about the program can be found on website of the City of Santa Monica's Office of Sustainability and the Environment:

[www.smgov.net/Departments/OSE/Categories/Urban\\_Runoff/Rainwater\\_Harvesting.aspx](http://www.smgov.net/Departments/OSE/Categories/Urban_Runoff/Rainwater_Harvesting.aspx)

### RECOMMENDATION

Request the City Manager to work with the Office of Sustainability to establish a pilot rain barrel program to encourage the capture and re-use of rain water for watering of gardens and lawns.

## Rainwater for life

Photo: Trisha Macomber



*Underground catchment tanks can also be hidden by a lanai, which saves space, looks nice, and still provides access to the water.*

Some people specifically choose homes with water catchment because it is environmentally friendly and is part of a self-sufficient lifestyle.

### Rainwater catchment:

- Makes use of a natural resource and reduces runoff
- Encourages conservation or wise water management
- Supports replenishment of groundwater for our earth
- Is ideally suited to agriculture because it contains few salts, which are hard on plants
- Makes it possible to live "off-grid," for those who desire to live in non-invasive ways, using solar, hydro, or wind power and water which do not deplete the earth
- Rainwater is soft water, lessening the need for soaps and detergents, which saves money, is gentle to clothing and hair, and also tastes great.

### Interesting facts about rainwater catchment:

- As of 2003, about 30% of homes in Hawai`i County are on rainwater catchment
- In some districts, as many as 60-70% of the area's homes are on rainwater catchment
- Rainwater catchment is a viable option of obtaining water and is used worldwide
- Rainwater catchment meets household, commercial and agricultural needs
- Many design and function options are available
- Catchment is a "green" alternative and a vital part of the reduce/reuse/recycle process.

### For more information, contact:

University of Hawai`i, Mānoa  
College of Tropical Agriculture & Human Resources  
Hawai`i County  
Cooperative Extension Service

808-981-5199

[www.hawaiiirain.org](http://www.hawaiiirain.org)



Thanks to the County of Hawai`i for making this brochure possible through a grant.

## RAINWATER CATCHMENT SOLUTIONS:

# Welcome to Rainwater Catchment



An equal opportunity/affirmative action institution providing programs and services to the people of Hawai`i without regard to race, sex, age, religion, color, national origin, ancestry, disability, marital status, arrest and court record, sexual orientation, or status as a covered veteran.

## What is a rainwater catchment system?

Users catch rainwater from a surface (generally a rooftop), transport it through a gutter system, where it empties into a storage tank. The water is then pumped into the house, usually through a purification system, for everyday use such as showers, laundry, cleaning, cooking, and drinking. It can also be used outdoors. The purification system can be located where the water enters the house (point-of-entry) or at the faucet (point-of-use).

## From home to work to community

In addition to household use, rainwater catchment systems are also used for commercial or community purposes. Examples include agriculture, schools, businesses, hotels, camps, apartments and military installations. Accessibility to onsite water through rainwater catchment makes it possible to build and provide basic services in places where it would otherwise be impossible. Rainwater catchment systems can also be valuable for stormwater and flood control management. When integrated with landscape design, rain water catchment systems can allow the



Drawing: Linus Chao

earth to replenish and soak up some groundwater instead of being flooded or overrun. This prevents the pollution of lakes and streams—sources of most public water supply—and oceans.

## What will I need to do if I have a catchment system?

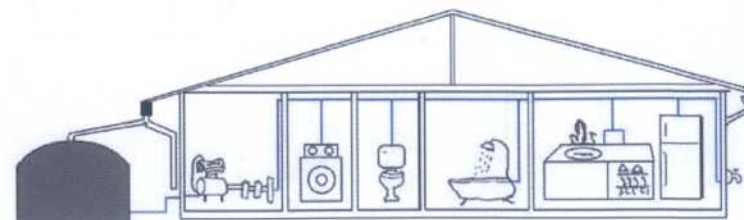
Users need to keep the roof, pipes, and tank clean. Filters, chemicals, or treatment systems like ultra-violet lights can screen or further treat the water to deactivate bacteria, viruses, and protozoa which may cause illness. Because you are responsible for your own water system, you need to be aware of its status on a regular, ongoing basis by testing your water. Simple, low-cost test kits are available on our website at [www.hawaiirain.org](http://www.hawaiirain.org), as well as at local hardware and catchment supply stores.

## Is the water safe?

There are no clear answers here. "Safe" usually means that no bacteria, viruses, harmful chemicals or metals are present, as defined by the Safe Water Drinking Act of the U.S. Environmental Protection Agency (EPA). Rain may arrive clean but get contaminated after it lands. In the end, water quality and safety depend on the system's design and maintenance, as well as the users and their health needs.

## Is Hawai'i the only place where rainwater catchment is common?

No. In fact, rainwater catchment or harvesting is not new. It has existed in some form since ancient times with simple to sophisticated designs. While it was traditionally used in arid or semi-arid places, today, rainwater catchment is used in many parts of the world with varying rainfall such as in India, England, Germany, parts of Africa, the Middle East, China, Japan, Australia, and Autea Roa (New Zealand). In the United States, rainwater catchment is common in many places including Ohio, Kentucky, Florida, Texas, California, Oregon, Washington, and Hawai'i.



Drawing: Trisha Macomber & Luisa Castro

**Rain Barrel/Cistern System Suppliers – Western U.S.  
And Information Resources**  
(9/14/09)



1. Aquascape™ RainXchange™ Rainwater Harvest Systems  
[www.aquascapeinc.com](http://www.aquascapeinc.com) [www.rainxchange.com](http://www.rainxchange.com) Check for local rep in Southern California,  
Unique system of combining a water feature, e.g. dry creek bed, fountain, waterfall, with sub-surface rainwater  
harvesting and use.  
Local Rep for Southern California: Ewing, Torrance, CA 90501-1515, (310) 782-7821
2. Bushman USA  
Temecula, CA 92589  
866-920-TANK  
[www.bushmanusa.com](http://www.bushmanusa.com)  
Wide variety of compete systems and accessories, first flush, pumps, above and below ground, produced  
locally. See price list in file
3. Desert Plastics  
Albuquerque, NM  
505-884-3889  
[www.desertplastics-abq.com](http://www.desertplastics-abq.com)  
Price list also in file
4. Hey Tanks LA  
877.64-TANKS  
[www.heytanksla.com](http://www.heytanksla.com)  
Wide variety of rain barrel and cistern systems
5. Knock Down Water Barrels  
Collapsible system that can be stored away during dry season and brought out for rainy months; includes filter,  
tap and overflow. 30-250 gallons.  
Heaven & Earth, Israel  
Kim Taylor  
[kimltaylor@hotmail.com](mailto:kimltaylor@hotmail.com)  
Available through Sears online:  
[http://www.sears.com/shc/s/search\\_10153\\_12605?vName=Lawn+%26+Garden&keyword=rain+barrel&sLevel=0](http://www.sears.com/shc/s/search_10153_12605?vName=Lawn+%26+Garden&keyword=rain+barrel&sLevel=0)
6. Loomis Tank Centers  
Mr. Dan Loomis  
800-549-5514  
805-473-7291  
Arroyo Grande, CA 93420  
[www.loomistank.com](http://www.loomistank.com)
7. Rain Bags  
Flexible, mobile, larger than rain barrel bags for collecting rain water directly from the downspout off your roof.  
Conversion kit, hose connection, and 125 gallon rain bag.  
Tuff Tech Bags of CA  
Rain Harvesting Solutions  
619-203-8850  
[info@tufftechbagsofca.com](mailto:info@tufftechbagsofca.com)  
[www.tufftechbagsofca.com](http://www.tufftechbagsofca.com)

8. Rain Barrels & More  
Evansville, IN  
877-888-5609  
[www.midwestinternetsales.com/rainbarrels.htm](http://www.midwestinternetsales.com/rainbarrels.htm)  
[info@midwestinternetsales.com](mailto:info@midwestinternetsales.com)  
Free shipping, wide variety and selection, sizes, above ground tanks
9. The Rain Barrel Company  
Long Beach, CA (to come)  
919-602-6316  
[www.Rainwater-Recyclers.com](http://www.Rainwater-Recyclers.com)  
[RainBarrellady@yahoo.com](mailto:RainBarrellady@yahoo.com)  
Variety of colors; 55+ gallon size, vector control and spigot for hose
10. RainBud  
Local rain barrel supplier in Los Angeles area, Mar Vista, made from retrofitted, reused plastic barrels.  
Delivered locally and installed.  
Paula Henson, 310.954.1318  
[info@rainbud.com](mailto:info@rainbud.com)  
[www.RainBud.com](http://www.RainBud.com)
11. RainHarvest Systems  
Provider of full-line of products to build a complete commercial and residential rainwater harvesting system, including Graf, 3P, Wisy, Gould, DAB and plastic modular boxes.  
Cumming, GA  
770.889.2533  
[www.rainharvest.com](http://www.rainharvest.com)
12. RainSpace™ Cistern System  
Uses rain tubes to store water.  
415.321.0848  
[www.williamverde.com](http://www.williamverde.com), [www.raintube.com](http://www.raintube.com)  
Made from recycled post-consumer HDPE and can provide the cheapest most flexible solution for creating underground water storage.  
Also available, RainReserve, downspout diverter
13. Rainwater H<sub>2</sub>O<sub>G</sub>  
[www.rainwaterhog.com](http://www.rainwaterhog.com)  
888-700-1096  
A variety of rain barrels and cisterns, specially-designed for above ground in space-competitive areas.
14. Rainwater Pillow  
Jim Harrington  
770-853-9918  
[jim@rainwaterpillow.com](mailto:jim@rainwaterpillow.com)  
[www.rainwaterpillow.com](http://www.rainwaterpillow.com)  
Horizontal system designed to be stored in a crawl space or under a deck/porch. Sizes range from 1,000-40,000 gallons. Kit includes filter, pillow, pump, remote control and all fittings.
15. Roof to Ground Rainwater Services  
[rooftoground@gmail.com](mailto:rooftoground@gmail.com)  
[www.rooftoground.com](http://www.rooftoground.com)  
623.341.6308  
Phoenix, AZ  
System allows you to move water to dry trouble spots; dispense rainwater from a spigot to a watering can, or a hose bib to specific plants. No unsightly, high maintenance tanks requiring filters, pumps or seals. Low-tech installation, simply station the receptacle under your gutter's downspout

16. Stainless (Steel) Slimline Rainwater Tank  
[www.usstainlesssteelwatertanks.com](http://www.usstainlesssteelwatertanks.com)  
909-292-7388, 808-982-888  
Long-lasting stainless steel, specially-sealed, linerless tanks, no rivets, no screws, up to 5,000 gallons.  
Shaped to fit in most locations without being obtrusive.
  
17. Sym Living  
[www.SYMLiving.com](http://www.SYMLiving.com)  
888-700-1096  
Dana Point, CA  
A square rain barrel, 75 gallons, multiple units in line above ground system.
  
18. The Tank Depot Inc.  
[www.Tank-Depot.com](http://www.Tank-Depot.com)  
866.926.5603  
Chris Glen  
[cglen@tank-depot.com](mailto:cglen@tank-depot.com)  
A variety of competitively-priced above and below ground rainwater tanks and cisterns.
  
19. WATTS Radiant Inc.  
4500 E. Progress Place  
Springfield, MO. 65803  
800-276-2419 / 417-864-6108  
Fax: 417-864-8161  
Contact: Mr. Alex Green  
[greenag@watts.com](mailto:greenag@watts.com)  
[www.watts.com](http://www.watts.com)  
Offers the full line of Graf rainwater harvesting systems, from 55 gallon rain barrels to large, underground cisterns (see Graf Company, <http://www.graf-online.de/index.php?scriptlet=GRAF/Download&id=39&catID=102>)

## **ACCESSORIES and INFORMATION RESOURCES**

### Downspout Diverters

Rain Harvesting  
Jason Kerrigan  
[www.rainharvesting.com](http://www.rainharvesting.com)  
[Jason@rainharvesting.com.au](mailto:Jason@rainharvesting.com.au)

### RainReserve

[www.rainreserve.com](http://www.rainreserve.com)  
Device to divert rain from downspout into a barrel/cistern. Web site has a rain barrel locator feature to search for barrel suppliers by zip code.  
California rep located at 415.321.0848  
[www.williamverde.com](http://www.williamverde.com)

### Guttering

ACE Seamless Rain Gutters  
951.553.0348  
[www.aceraingutters.com](http://www.aceraingutters.com)

### Mid-America Regional Council

Disconnect or Redirect Your Downspout brochure,  
<http://www.marc.org/Environment/Water/downspout.htm>,  
<http://www.marc.org/Environment/Water/pdfs/downspouts.pdf>  
Conserve Water with Rain Barrels, <http://www.marc.org/Environment/Water/rainbarrels.htm>,  
<http://www.marc.org/Environment/Water/pdfs/rainbarrels.pdf>

### Rain Barrel Guide

<http://www.rainbarrelguide.com/>

### How to make your own Rain Barrel (for a few dollars)

<http://www.geocities.com/rainsystem/howto.html>  
[http://www.lid-stormwater.net/raincist\\_construct.htm](http://www.lid-stormwater.net/raincist_construct.htm) (Low Impact Development Center)

### General Rain Harvesting Website

[www.harvestH2O.com](http://www.harvestH2O.com)  
[www.harvestingrainwater.com](http://www.harvestingrainwater.com) (links to other web sites with a bounty of info)

<http://www.hawaiirain.org/resources/downloads.php> Download brochures on general rainwater catchment, clean water starts before your tank, and first-flush diverters.

### **Resources via the U.S. EPA**

- City of Tucson Water Harvesting Guidance Manual  
<http://dot.tucsonaz.gov/stormwater/downloads/2006WaterHarvesting.pdf>
- Santa Fe County Water Harvesting Guidelines  
<http://www.santafecounty.org/waterconservation/documents/Water%20Harvesting.pdf>
- Texas Manual on Rainwater Harvesting  
[http://www.twdb.state.tx.us/publications/reports/RainwaterHarvestingManual\\_3rdedition.pdf](http://www.twdb.state.tx.us/publications/reports/RainwaterHarvestingManual_3rdedition.pdf)
- Managing Wet Weather with Green Infrastructure  
<http://cfpub.epa.gov/npdes/greeninfrastructure/technology.cfm#rainharvesting>
- Stormwater Management Techniques—Low Impact Development (LID) Strategies  
<http://www.epa.gov/greeningepa/stormwater/stormwatertechniques.htm>

- Stormwater Menu of BMPS (Best Management Practices)  
[http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=factsheet\\_results&view=specific&bmp=81](http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=factsheet_results&view=specific&bmp=81)
- Promoting Low Impact Development  
<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=10&minmeasure=1>
- Lawson, Sarah. "More Than Just A Drop in the Bucket." Rainwater Harvesting. Plumbing Engineer. April 2009.  
[http://www.jrsmith.com/\\_marketing/mkpt/mk\\_products/articles/rwharticleinplumbingengineer0409.pdf](http://www.jrsmith.com/_marketing/mkpt/mk_products/articles/rwharticleinplumbingengineer0409.pdf)

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[www.sustainable-sm.org](http://www.sustainable-sm.org)