

**RESOLUTION APPROVING OWASA'S
RAINWATER HARVESTING SYSTEMS REQUIREMENTS AND CHARGES**

WHEREAS, Orange Water and Sewer Authority (OWASA) highly values water use efficiency and strongly encourages water conservation practices by all customers; and

WHEREAS, "rainwater harvesting" (the collection, storage, treatment, and use of rainwater for beneficial purposes) helps to conserve our essential drinking water supplies and reduce demand on our reservoirs, provide increased capacity and security, reduce the rate and volume of stormwater runoff and maintain site-scale hydrologic balance, and can have an important role in permaculture design; and

WHEREAS, rainwater harvesting systems and other non-potable water supply systems have the potential to result in wastewater discharges to the OWASA sanitary sewer system, thereby requiring the collection and treatment of those discharges at a cost to OWASA; and

WHEREAS, OWASA services are paid for by OWASA's customers through rates and fees, and under the legal requirement that "there will be no free service rendered" and that charges for service will reflect the cost that OWASA incurs to provide that service; and

WHEREAS, OWASA wishes to implement a simple and straightforward administrative process for determining, applying, and collecting the charges applicable to the collection and treatment of wastewater resulting from rainwater harvesting systems and other non-potable water systems; and

WHEREAS, OWASA wants to ensure that rainwater harvesting systems and other non-potable water supply systems used within its service area are designed, operated and maintained to protect public health and the safety and integrity of our water and wastewater systems;

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF ORANGE WATER AND SEWER AUTHORITY:

1. That the Board of Directors authorizes and directs staff to apply sewer charges to wastewater discharges resulting from rainwater harvesting and other non-potable water supply systems provided that the minimum threshold for which the charges shall apply is 3,000 gallons per month. Individually-metered single family residential customers with such systems are hereby deemed to fall below the threshold.
2. That this policy shall become effective upon adoption.
3. That the Executive Director is authorized and directed to implement and interpret this policy and incorporate it into OWASA's Standards and Specifications.

Adopted this 13th day of September, 2007.



Michael A. (Mac) Clarke, Chair

ATTEST:



Gordon Merklein, Secretary

OWASA Rainwater Harvesting Systems Requirements and Charges

General Requirements:

Rainwater harvesting is the collection and storage of rainwater from roofs or other catchment areas for future use. This stored rainwater may be for internal use within a building (flushing of toilets, etc.) or may be for external purposes such as irrigation.

OWASA encourages conservation of water through the use of rainwater harvesting systems by OWASA customers provided the following standards and specifications governing their use are met to protect the safety and integrity of the public water and sewer systems:

- Rainwater collection devices or cisterns that are capable of being fed from both a rainwater harvesting system or alternately from OWASA's Potable Water System must be designed, built, operated and maintained to ensure that the OWASA drinking water system is protected from cross-connection and contamination. This shall be accomplished by the installation of an air gap at the point where the potable water discharges into the non-potable water collection device. Air gap physical separation shall be at least double the diameter of the supply line measured vertically above the overflow rim of the containment device, but in no case shall it be less than 1 inch.
- Piping for rainwater harvesting systems shall be separate from any potable piping system (includes both domestic and/or fire suppression systems which use water supplied by OWASA). A physical separation of piping is required between any potable and non-potable water system. The use of backflow devices to separate two piping systems is not allowed. There must be an air gap.
- A detailed written description of a proposed rainwater harvesting and plumbing system shall be submitted to OWASA Engineering Staff for review and consideration. This shall include narrative sufficient to explain how the proposed system will operate along with plumbing drawings detailing potable water piping and harvested rainwater piping. All air gaps between potable and non-potable piping systems must be clearly indicated on drawings.
- No rainwater harvesting system or other non-potable water supply system shall be installed and used by a customer connected to the OWASA Potable Water System and/or the Sanitary Sewer System unless first reviewed and approved by OWASA.

For rainwater harvesting systems that will directly or indirectly result in the generation of wastewater to be discharged to the OWASA Sanitary Sewer System, OWASA will allow and accept such discharges provided they fully meet the requirements of OWASA's Sewer Use Ordinance.

Applicable Sewer Service and Commodity Charges:

Rainwater harvested solely for irrigation or other uses which **do not** introduce flows into OWASA's Sanitary Sewer System shall not be subject to any OWASA sewer charges.

OWASA's sewer charges shall be applicable to rainwater harvesting systems or other non-potable water supply systems that result in a wastewater discharge of 3,000 gallons or more per month to the OWASA Sanitary Sewer System. (Effectively, individually-metered single family residences connected to the OWASA Sanitary Sewer System would not incur a charge for use of the rainwater harvesting system or other similar system.)

The applicable sewer charges will be calculated to fairly and equitably recover the costs of collecting and treating the portion of the harvested rainwater that is being discharged into the OWASA Sanitary Sewer System. OWASA will bill the customer for those services on a monthly basis, and the applicable charges will be shown as a component of the monthly bill sent to the customer.

Sewer charges shall be subject to periodic increases to reflect the current cost-of-service, as determined by OWASA.

OWASA will use either of the following methods for determining sewer charges applicable to rainwater harvesting systems or other non-potable water supply systems:

1. Sewer Charges Applicable to Unmetered Discharges From Rainwater Harvesting Systems: OWASA may, at its discretion, determine that a separate meter does not need to be installed to measure the actual volume of discharge to the OWASA Sanitary Sewer System that the rainwater harvesting system or other non-potable water supply system may cause. For such cases where the estimated volume is 3,000 gallons or more per month, OWASA will determine and levy a flat monthly sewer charge based on the estimated average wastewater discharge anticipated from those plumbing fixture units that would be supplied by the rainwater harvesting system or other non-potable water supply system. This would assume a certain volume of the harvested rainwater is used for these plumbing fixtures each month.

In order for the service location to be eligible for this option, and for OWASA to estimate the expected volume and determine the applicable charge, the builder/owner/occupant must provide the following information to OWASA:

- (1) a list of the plumbing fixtures discharging to the OWASA Sanitary Sewer System that are supplied by the rainwater harvesting system or other non-potable water supply system;

- (2) a table showing the plumbing fixture unit values or applicable use volumes per unit of use for each of the plumbing fixtures discharging to OWASA Sanitary Sewer System;
- (3) a calculation of the anticipated daily use of each plumbing fixture; and
- (4) a calculation of the estimated daily and monthly wastewater volume that will be discharged by these plumbing units.

Once this information has been received, OWASA will determine the flat rate that will be applicable to the estimated sewer discharge for the facility.

2. Sewer Charges Applicable to Metered Discharges From Rainwater

Harvesting Systems: At the builder/owner/customer's request, or as otherwise determined necessary and required by OWASA, the customer shall at their expense install a special flow measurement system to accurately determine the volume of wastewater that is actually discharged to the OWASA Sanitary Sewer System as a result of a rainwater harvesting system or other non-potable water supply system. Such a measurement system would not include the volume of water used for irrigation/outside uses that do not result in a discharge to the OWASA Sanitary Sewer System. Under this alternative method:

- (1) The meter or flow measurement system would have to be designed and built according to OWASA standards, be accessible to OWASA meter reading and maintenance personnel, and have a remote meter readout installed in an accessible location. OWASA will own and maintain the meter installed for this purpose.
- (2) OWASA would bill the customer for the actual measured volume of sewer discharge, as well as a fixed monthly service charge for billing the customer and maintaining the sewer-only meter or flow measurement system. This would provide for an accurate measurement of the discharge to the sewer system, and cover OWASA's full costs of reading and maintaining the sewer-only meter as well as collecting and treating the wastewater discharge.

In general, to reduce total costs to the customer and provide for ease of administration, OWASA's preferred approach will be to base the applicable sewer charges on the estimated volume of wastewater discharge. However, metering of the actual sewer discharge may be necessary for large volume systems.