



Imperial Beach Rain Barrel & Cistern Guidelines

Value of Rain Barrels and Cisterns

When it rains, stormwater flows from roofs, sidewalks, and other urban surfaces onto city streets, picking up pollution and trash along the way. Water that enters the stormwater system flows untreated directly into our creeks, rivers, bays, beaches and, ultimately, the ocean. Instead of letting this rainwater flow off your property, you can collect it in rain barrels and cisterns (also referred to as rain tanks) for usage onsite. Collecting rainwater from your roof before it washes across the landscape and storing it in rain tanks can provide the following benefits:

- Rainwater that you collect during the rainy season can be used to irrigate your plants, reducing the need to use potable municipal water for irrigation and contributing to water conservation efforts.
- Keeping rainwater onsite helps protect water quality with our local waterways by reducing the volume of stormwater and pollutant flows to our storm drains, creeks, bays, and beaches.
- Collecting rainwater in a rain tank can help reduce flooding around your property and neighborhood.

Recommendations for Installation

Rainwater catchment systems for collecting precipitation from rooftops shall comply with the American Rainwater Catchment Systems Association ASPE 63. Installed rain barrels and cisterns should also incorporate the following:

- The manufacturer's installation and maintenance instructions must be followed.
- Rain barrels/cisterns should be connected to a rain gutter downspout.
- Rain barrels/cisterns must not block emergency access routes around the home.
- Ensure that barrels/cisterns are placed on a level surface so that the weight of the water is equally distributed across the tank.
- The containers used for water catchment should be large enough to capture the minimum rain harvest volume for the relevant impervious area, or all the overflows must infiltrate into adjacent landscaping.
- Openings must be protected from pests, unintentional entry by humans, and tampering. Barrels/cisterns must have a secured lid (for example, a lid secured by screws or clips, a threaded lid, or similar). All open inlets and outlets must be screened with at least 1/16 inch screen or other equivalent method to prevent mosquito entry and breeding.
- To reduce algae growth and protect the barrel/cistern from degradation, the barrel/cistern must be constructed of opaque, UV resistant materials (e.g. heavily tinted plastic, metal barrel/cistern with lining, concrete, etc.) or must be protected by specially constructed sun barriers (e.g. installed under a shed, shade structure etc.).
- Overflow from the barrel/cistern must be directed away from buildings and/or adjacent properties. Routing overflow to a vegetated area, swale, or rain garden where overflow can soak into the soil is preferred.
- Barrels/cisterns shall be labeled "NONPOTABLE RAINWATER – DO NOT DRINK."
- Rain barrels/cisterns must not be connected to the potable water irrigation system. Water from the rain barrel/cistern must be distributed through a hose or bucket only and must not be connected to a spray or overhead irrigation system.

Calculate Your Rainwater Harvest Volume

You can estimate the amount of rainwater that can be harvested from a catchment surface – that is, any surface used to collect rainwater such as a roof – by using this simple calculation provided by the American Rainwater Catchment Systems Association (ARCSA):

$$\begin{aligned} & \mathbf{1 \text{ square foot}} \text{ of catchment area} \\ & \quad \mathbf{\times 1 \text{ inch}} \text{ of rainfall} \\ & \quad \mathbf{= 0.6 \text{ gallons}} \text{ of water} \end{aligned}$$

For example, if you have a 1,000-square foot roof, for every inch of rain that falls you could yield 600 gallons of water (1,000 x 0.6 = 600). An additional resource for calculating minimum harvest volume is available through the County of San Diego [Waterscape Rebate Program](#).

Permits Required

In accordance with California Plumbing Code Chapter 16, section 1601.3 Permit. It shall be unlawful for a person to construct, install, alter, or cause to be constructed, installed, or altered a nonpotable rainwater catchment system in a building or on a premise without first obtaining a permit to do such work from the authority having jurisdiction.

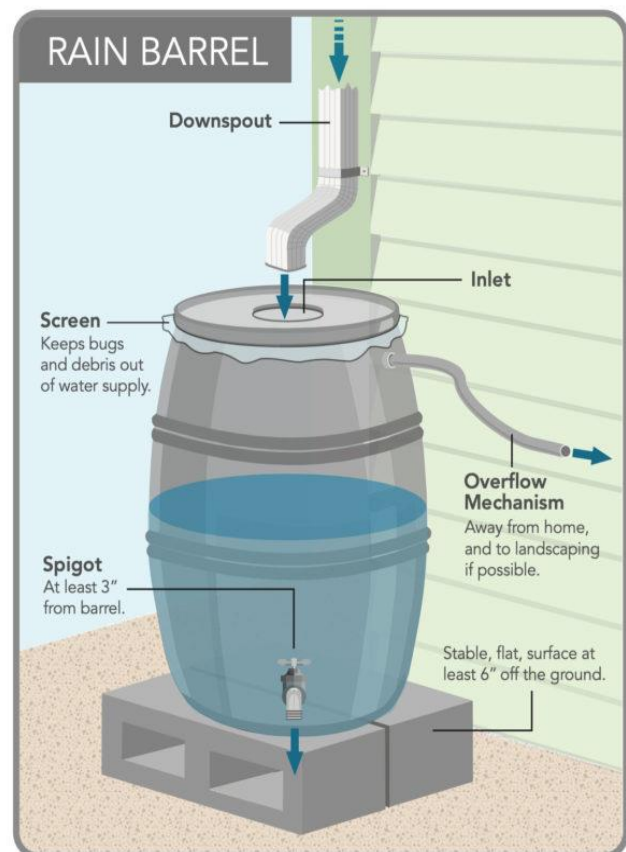
Exceptions:

- (1) A permit is not required for exterior rainwater catchment systems used for outdoor non-spray irrigation with a maximum storage capacity of 5,000 gallons where the tank is supported directly upon grade and the ratio of height to diameter or width does not exceed 2 to 1 and it does not require electrical power or a makeup water supply connection.
- (2) A permit is not required for exterior rainwater catchment systems used for spray irrigation with a maximum storage capacity of 360 gallons.

Maintenance Schedule

Following is a recommended maintenance schedule based on Table 1601.5 Chapter 16 of the CA Plumbing Code.

- Place gutter guards and/or screens on top of the roof downspouts and on top of the barrel to keep leaves and debris from entering the rain barrel.
- Inspect, clean, and repair filters and screens every 3 months.
- Inspect and clear debris from the roof, rainwater gutters, downspouts, and roof washers every 6 months.
- Clean the barrel. Drain and clean the system annually.
- Consider mosquito larvicide. Time-release tablets or “mosquito dunks” may be used in a rain barrel. These contain bacteria that kill mosquito larvae, but do not harm people, animals, or plants.
- Regularly inspect for cracks or leaks. Ensure that all fittings and seals are intact. Make sure no water is accumulating on the ground around the barrel.



For questions, contact the Community Development Department Planning Division at (619) 628-0858.