



November 15, 2023

ITEM TITLE: RAIN BARREL AND CISTERN GUIDELINES FOR IMPERIAL BEACH. (0230-70)

ORIGINATING DEPARTMENT:

Community Development

EXECUTIVE SUMMARY:

On May 3, 2023, the City Council directed staff to research and schedule for future discussion, a city-wide ordinance related to the conservation of the City’s water resources, with an emphasis on rain barrels as a water conservation method.

On August 2, 2023, staff presented research findings to the City Council on existing rain barrel and rainwater harvesting ordinances that have been adopted by other public agencies.

Staff found that to promote and incentivize the use of rain barrels as a rainwater harvesting method, many agencies and conservation organizations have adopted guidelines for the installation and maintenance of rain barrels and instituted rebate programs. Rain barrel guidelines enhance the available water conservation resources for residents, help ensure that rain barrels are being installed in accordance with best practices and provide solutions to help mitigate common issues associated with rainwater collection systems.

After the council’s discussion at the August 2nd meeting, the City Council directed staff to develop guidelines for Imperial Beach residents. The proposed Imperial Beach Rain Barrel & Cistern Guidelines are provided as Attachment 2 of this report.

RECOMMENDATION:

That the City Council receive the report and adopt Resolution 2023-103 Recommended Rain Barrel and Cistern Guidelines.

OPTIONS:

In addition to receiving this report and adopting staff’s recommendations, the City Council can:

- Request that staff conduct further research and schedule the item for a future City Council meeting; or
- Not adopt the recommended guidelines

BACKGROUND/ANALYSIS:

On May 3, 2023, the City Council directed staff to research and schedule for future discussion, a city-wide ordinance related to the conservation of the City's water resources, with an emphasis on rain barrels as a water conservation method.

Rainwater harvesting laws vary greatly by state, and in most states, rainwater harvesting is either not regulated, or it is encouraged. In California, rainwater harvesting is regulated through the Division of Water Rights. In 2012 Assembly Bill 1750, known as the "Rainwater Capture Act of 2012" authorized residential, commercial, and governmental landowners to install, maintain, and operate rain barrel systems and rainwater capture systems for specified purposes, provided that the systems comply with specified requirements.

In recent years, an increasing number of southern California residents are now harvesting rainwater to irrigate their gardens or landscaping. Rainwater harvesting is the process of capturing, storing, and making use of rain as close as possible to where it falls. Rainwater harvesting is not a new concept, however, due to population growth, urban sprawl, and the establishment of municipal water supplies, the practice of rainwater harvesting as a primary water supply has become lesser known.

Rainwater harvesting benefits communities and the environment in many ways. Replacing municipal water use with rainwater reduces energy use and thus carbon emissions. Because collected rainwater can be used for outdoor applications that do not require filtration, energy is not used on filtering water that does not need it. Rainwater harvesting prevents water treatment plants from using excess electricity, pumping stations from using extra power, and sewer and water line repair machines from burning more fossil fuels than necessary. In addition, rainwater harvesting reduces the amount of pollutants that are typically present and picked up by stormwater flows off roofs, streets and storm drains that are then carried into groundwater, streams, and the ocean. Collecting rainwater before it reaches the ground prevents some chemicals, sediment, and debris from entering water sources.

Rainwater harvesting also allows for the slow down, spread, and infiltration of water, which can replenish groundwater supplies, improve the health of soil and plants, and reduces flood risks. On an individual level, rainwater harvesting can reduce water bills and make people less reliant on imported water sources.

On August 2, 2023, staff presented research findings to the City Council on existing rain barrel and rainwater harvesting ordinances that have been adopted by other public agencies.

Staff found that to promote and incentivize the use of rain barrels as a rainwater harvesting method, many agencies and conservation organizations have adopted guidelines for the installation and maintenance of rain barrels and instituted rebate programs. Rain barrel guidelines enhance the available water conservation resources for residents, help ensure that rain barrels are being installed in accordance with best practices and provide solutions to help mitigate common issues associated with rainwater collection systems. While staff was not able to locate an adopted rain barrel ordinance, research showed that many agencies adopt guidelines and rebate programs consistent with the American Rainwater Catchment Systems Association (ARCSA), which follows building codes.

The proposed Imperial Beach Rain Barrel & Cistern Guidelines are provided as Attachment 2 of this report and provide reference to the American Rainwater Catchment Systems Association (ARCSA) while also incorporating best practices commonly found throughout various resources including that the barrels/cisterns 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.

Additionally, the guidelines provide a method for calculating how much water can be collected, guidance on when a permit would be required, and a recommended maintenance schedule based on the California Plumbing Code, including tips to prevent mosquito breeding.

ENVIRONMENTAL DETERMINATION:

Not a project as defined by CEQA.

FISCAL IMPACT:

There is no fiscal impact associated with this report and guidelines.

ATTACHMENTS:

ATT 1 - Resolution 2023-0103

ATT 2 - Imperial Beach Rain Barrel & Cistern Guidelines