



Community Development Department

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RAIN WATER CATCHMENT SYSTEMS

Rainwater catchment systems shall comply with the requirements found in Chapter 16 of the 2016 California Plumbing Code (CPC).

If the rainwater catchment system includes a pump and/or is used to provide non-potable water to toilets or urinals, the code requires additional measures to be in place including treatment, additional filtration and cross-connection protection and testing.

The requirements for an outdoor gravity system are listed below:

Per the California Plumbing Code, a permit is required for a rainwater catchment system. Complete plumbing plans shall be submitted to the Building Division for review and approval.

Exceptions:

1. A permit is not required for exterior rainwater catchment systems used for outdoor **non-spray** irrigation with a maximum storage capacity of 5000 gallons supported on grade and a height to width ratio that does not exceed 2 to 1 and does not require electrical power or a makeup water supply connection.

Rainwater catchment systems shall have no direct connection to a potable water supply or alternate water source system.

Rainwater shall be collected from roof surfaces or other man-made above grade impervious surfaces. Rainwater collected from surface water run-off, vehicular parking or manmade surfaces at or below grade shall comply with the requirements for **on-site treated non-potable gray water in Section 1504.0 of the CPC** or be used exclusively for sub-surface irrigation.

Horizontal rainwater catchment system collection piping shall maintain a minimum slope and be sized using the Table-1.

ALLOWABLE ROOF AREA (2" per hour rainfall)				
Pipe slope	3" pipe	4" pipe	5" pipe	6" pipe
1/8" per foot	1644	3760	6680	10,700
1/4" per foot	2320	5300	9440	15,100
1/2" per foot	3288	7520	13,360	21,400

TABLE -1

The rainwater catchment conveyance system shall be equipped with a debris excluder or other approved means to prevent the accumulation of leaves, needles, other debris and sediment from entering the storage tank.

A filter permitting the passage of particulates not larger than 100 microns shall be provided for rainwater supplied to a drip irrigation system.

Rainwater Catchment Tanks

Rainwater storage tanks shall be permitted to be installed above or below grade and shall be provided with a means of draining and cleaning.

Above grade storage tanks shall be of an opaque material, approved for aboveground use in direct sunlight or shall be shielded from direct sunlight. The tank shall be installed on a foundation or platform that is constructed to accommodate imposed loads.

Rainwater storage tanks installed below grade shall be structurally designed to withstand anticipated earth or other loads. Holding tank covers shall be capable of supporting an earth load of not less than 300 pounds per square foot.

Below grade rainwater tanks shall be provided with manholes. The manhole opening shall be located not less than 4 inches above the surrounding grade. The surrounding grade shall be sloped away from the manhole. Underground tanks shall be ballasted, anchored, or otherwise secured, to prevent the tank from floating out of the ground when empty.

The overflow drain shall not be equipped with a shutoff valve and shall discharge in accordance with storm drainage requirements.

Where discharging to the storm drainage system, the overflow drain shall be protected from backflow of the storm drainage system by a backwater valve or other approved method

The overflow outlet shall be sized to accommodate the flow of the rainwater entering the tank and not less than the aggregate cross-sectional area of inflow pipes.

Rainwater tank openings shall be protected by screens with openings no greater than 1/16 inch to prevent the entrance of insects, birds, or rodents into the tank.

Rainwater tank access openings exceeding 12 inches (305 mm) in diameter shall be secured to prevent tampering and unintended entry by either a lockable device or other approved method.

Rainwater tanks shall be permanently marked with the capacity and the language: "**NONPOTABLE RAINWATER.**" Where openings are provided to allow a person to enter the tank, the opening shall be marked with the following language: "**DANGER-CONFINED SPACE.**"

Rainwater catchment system piping shall be identified by minimum ½ inch yellow lettering, with the words: "**CAUTION: NONPOTABLE RAINWATER WATER, DO NOT DRINK.**"

Outside hose bibs shall be allowed on rainwater piping systems. Hose bibs supplying rainwater shall be marked with the words: "**CAUTION: NONPOTABLE WATER, DO NOT DRINK**" and Figure 1702.9.



FIGURE 1702.9

No treatment is required for rainwater used for subsurface or spray irrigation where the maximum storage volume is less than 360 gallons