Rainwater Harvesting in Millbrae

A Guide on How to Reduce Stormwater Run-Off Pollution and Reuse Rainwater

PREVENT WATER POLLUTION

You can help to protect our water resources by installing a rain barrel or cistern to collect and reuse the rain water. Capturing rainwater before it hits the ground reduces pollutants that are carried via rainwater, car washing and from other activities into storm drains, local creeks and ultimately into the Bay. This also helps to prevent sewage overflows.

The storm drains prevent flooding by sending water run-off to the Bay, but this water is NOT treated and does NOT go through the wastewater treatment plant.

ABOUT POLLUTANTS

The pollutants ending up in our waterways are from automobiles, car washing, pesticides, fertilizers, litter, soap, and any other material or chemical in the environment. Runoff occurs because impervious surfaces like parking lots, roads, buildings, pavement, and compacted soil, do not allow water to infiltrate into the ground.

Once urban water runoff enters the storm drain it goes directly into the nearest body of water and, in Millbrae, it ends up in the San Francisco Bay.

SAFETY AND MAINTENANCE

Be sure that your rain barrel or cistern is sited on a stable, flat area near your downspout. Secure barrels up to 55 gallons in size to your house with two 3/4-inch, 24-gauge steel straps. Barrels over 55 gallons require three straps; be sure that one strap fits around the center of the barrel.

Keep your system clear of debris and maintain all screens to prevent mosquito breeding. Clean your rain barrel or cistern annually with a non-toxic cleaner such as vinegar.

Pipes conveying rainwater to indoor fixtures must be yellow. Label all rainwater harvesting system pipes and fixtures, including toilet tanks: NON-POTABLE WATER, DO NOT DRINK.

REBATES

Rebates are available for rainwater harvesting systems including rain barrels and cisterns. Please refer to the Rainwater Harvesting Rebate Program application for details or call 650.259.2348.

www.ci.millbrae.ca.us/waterconservation
650.259.2348

WHAT IS RAINWATER HARVESTING?

Rainwater harvesting is the practice of collecting and using rainwater from hard surfaces such as roofs. It is an age-old technology; communities in ancient Rome were designed with individual cisterns and paved courtyards, which captured rainwater to augment supply from the city's aqueducts. Today, rainwater harvesting is growing in popularity as people look for ways to use water resources more wisely.

Cisterns and rain barrels allow rainwater to be stored in containers and reused. They save on the use of potable water and prevent water pollution by capturing the rainwater rather than allowing it to pour off roofs, through yards and streets to the Bay.

WHY HARVEST RAINWATER?

When you install a rainwater harvesting system at home, you are helping to maintain the health and beauty of San Mateo County's urban watershed in many ways. By harvesting rainwater you:

- ◆ Conserve valuable Hetch Hetchy water by reusing rain water;
- ◆ Reduce the volume and peak flows of rainwater entering the storm drains. This reduces flooding and prevents pollution from rainwater run-off and protects water quality;
- ◆ Reduce the volume of potable water used for non-potable applications such as for watering lawns and gardens;
- ◆ Reduce the energy expended transporting water from far away; and
- ◆ Save on utility bills.

GETTING STARTED

Rainwater can be harvested from most types of rooftops. The first steps are to clean your roof, install a diverter on your downspout, and connect it to a storage container. Rainwater harvesting can retain up to 100% of roof runoff on site during small rain storms. In larger storms, water in excess of the system's storage capacity is discharged just like before to your yard or the storm drain system.

RAIN BARRELS

Rain barrels are containers designed to capture rainwater runoff from your roof so that you can use it for irrigation or other non-potable applications. Rain barrels are inexpensive, easy to install and maintain, and well suited to small-scale residential sites. They typically range from 50 to 100 gallons, and the water they collect is most often used to water plants.

System components

Your rain barrel should have a spigot and/or hose bibb so that you can access the water, an overflow pipe, a sealed and screened lid with an opening to attach your downspout, and screens on all vents.

Permits

All rainwater harvesting systems will require an initial review by the Community Development Department to determine if a building permit and/or further planning review is warranted. Please contact Community Development at (650) 259-2341 for more information.

CISTERNS

Cisterns are larger than rain barrels, ranging from 100 gallons on a small residential site to millions of gallons beneath schools and parks. They can be installed above or below ground, or even on the roof, depending upon site conditions and permitting requirements. Water from cisterns can be stored until needed and used for irrigation and toilet flushing.

Cisterns not connected to indoor plumbing

A basic system used for irrigation typically includes fully screened gutters, downspouts, and piping; a fully closed storage tank; a spigot and/or hose bibb for access; and an overflow pipe.

Cisterns connected to indoor plumbing for toilet flushing

A system designed to provide water for toilet flushing has more detailed specifications. It should have nontoxic, fully screened gutters, downspouts, and yellow piping; an automatic self-draining first flush diverter; a fully closed storage tank approved for use with potable water; an approved backflow prevention device and an air gap; a spigot and/or hose bibb for access; and an overflow pipe.

Permits

Contact Community Development at (650) 259-2341 about Building and Planning Division requirements. To install a cistern for irrigation or toilet flushing, you will need plumbing and building permits from the Building Division. If your system includes a pump or will be installed on the roof or underground other permits may apply.