

Water Programs

Onsite Water Recycling Guidelines for Residential Users

As California continues to experience one of the most severe droughts in history, many residents and businesses are looking for innovative ways to conserve and reduce consumption of drinking water. Simple methods to conserve water can include:

- limiting showers to five minutes or less
- capturing water in a bucket while washing produce or waiting for your shower water to heat up and then using the water for irrigating or for flushing your toilets
- upgrade appliances and fixtures to devices that are energy and water efficient
- repair any leaking faucets
- replacing lawns with drought-tolerant landscaping or xeriscaping¹

The San Mateo County Health System encourages you to check with your water provider for incentives to conserve water.

Another, more complicated option to conserve water is to capture and use alternative water sources, such as rainwater and gray water, to use for non-drinking water purposes like landscaping. The San Mateo County Health System encourages safe use of several alternative water sources for non-potable applications in a manner that also protects public health. **The purpose of this document is to relay San Mateo County Health System's requirements homeowners must meet in order to use an onsite water recycling system.**

Non-Potable Water Sources and Intended Uses

There are several types of non-potable water sources that can be generated on-site that can potentially be used at the **residential scale** for non-potable beneficial uses after appropriate treatment. These sources include:

- **Gray water:** includes wastewater from bathtubs, showers, bathroom sinks, clothes washing machines, and laundry tubs. It **does not** include wastewater from toilets, utility sinks, kitchen sinks, or dishwashers.
- **Rainwater:** precipitation collected from **roof surfaces** or other approved **above-grade** collection surfaces, and that limits potential pollutants.
- **Stormwater:** precipitation collected at- or below-grade (ground) through approved collection surfaces. This type of non-potable water source is typically dirtier than rainwater.
- **Foundation drainage:** Nuisance groundwater that is extracted to maintain the structural integrity of a building.
- **Irrigation well:** groundwater from a permitted well that has not been certified as a potable water source.

¹ landscaping that requires little or no irrigation
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The Environmental Health Division **does not allow blackwater** (even if treated) for residential or commercial use. This is due to the advanced water treatment methods that are necessary, and the higher, more costly water quality monitoring requirements associated, and other public health considerations.

Residential Use of Non-Potable Water Sources

When an Environmental Health Review and/or Permit is NOT required:

- A gray water system that is comprised solely of a clothes washer system that diverts gray water to sub-surface irrigation or an appropriately configured and maintained mulch pile as long as it meets all requirements specified in Section 1602.1.1 of the Uniform Plumbing Code (UPC). This is often referred to as **Laundry to Landscape**.
- Standalone rainwater barrels that are not connected to the home's internal plumbing supply.

Please be advised that all non-potable water recycling systems may require a permit from your local building department.

When an Environmental Health Review and/or Permit IS required:

In addition, to building department permits, plan submission to the Environmental Health Division is **required** for any residential project proposing to use:

- **treated**-rain, -gray, or -foundation drainage water used for **surface** drip and/or spray irrigation
- treated rain or well water for non-potable applications inside the home such as toilet flushing and clothes-washing
- untreated gray water used for subsurface distribution (if scope is beyond simple clothes-washer diversion)

All equipment including treatment components must meet NSF/ANSI Standard 350. Non-potable sources should not be intermingled and must be separate water treatment and/or delivery systems.

Refer to the section below entitled *How to Submit Plans to Environmental Health*. Environmental Health will determine minimum water quality and monitoring requirements based on the type of non-potable water source, treatment, and intended uses proposed for the project.

Cross-Connection Control Requirements

A cross-connection refers to an unprotected actual or potential connection between a potable (drinking) water system and any source or system containing unapproved water or a substance that is not, or cannot be, approved as safe, wholesome and potable. **The requirement to install meter backflow protection for such systems may vary among water purveyors and is dependent upon the design and size of the system. You should call your water purveyor to determine if a backflow prevention assembly will be required.**

Additional requirements may be required depending on the water purveyor and the scope of your project. These requirements may include having the assembly that is USC-certified, is tested by a County-certified Backflow Assembly Tester, and having a cross-connection control test performed by an approved Cross Connection Control Program Specialist prior to use of the alternative water system.

How to Submit Plans to Environmental Health

Applicants wanting to install a non-potable water system must submit an Environmental Health Review Application and three sets of plans. The application fee for the plan review may be required. Additional fees and/or information may be required depending on the complexity of the project. This is in addition to any potential building department permits that must be obtained. **Please contact Environmental Health at (650) 372-6200 for an application.**