



Non-Potable Water Reuse

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Using Water Wisely: Water Reuse

Water conservation and efficiency have become increasingly important in recent years due to water scarcity, droughts, and water contamination in many areas of the world. As world water consumption rises, water reuse or water recycling, has become a manageable approach in enhancing water security, sustainability and resilience.

Have you ever thought about how much water you use daily? In the United States alone, the U.S. Environmental Protection Agency (EPA) estimates the average American family uses more than 300 gallons of water per day at home with 70% of this use occurring indoors. In addition, 30% of household water use in the U.S. is used outdoors, but in drier climates this amount can be much higher.

Water reuse is a safe, innovative practice where wastewater is reclaimed, treated and reused for different purposes.

Emerging as a non-conventional water resource, non-potable water reuse systems offer a viable approach to sustain potable water supplies.

What is non-potable water?

Non-potable water is water that is unsafe for human consumption, but can be treated to be safely used in applications such as toilet/urinal flushing, clothes washing, floor drain traps and irrigation. Some examples of non-potable water include:

- **Graywater** – water discharged from lavatories, bathtubs, showers, clothes washers, and laundry trays
- **Rainwater** – water from natural precipitation
- **Reclaimed water** – municipal wastewater or industrial wastewater treated to specified level for an intended use
- **Captured condensate** – condensate that collects on refrigeration equipment
- **Stormwater** – natural precipitation, including snowmelt, that has contacted a surface at or below grade



Why Use Non-Potable Water Reuse Systems?

While non-potable water sources do not undergo the same federally-mandated treatment requirements as drinking water, water reuse systems are designed to treat non-potable water to safe levels for purposes like toilet flushing, clothes washing and irrigation.

Non-potable water reuse can result in significant savings for the consumer. According to the U.S. Water Alliance and the Water Research Foundation, non-potable water reuse systems can save up to 25% of the total potable water use in residential buildings and as much as 75% in commercial buildings. Additionally, treated wastewater for non-potable applications is far less expensive to treat and can be as little as one third the price of treating potable water.

Ways to Recycle

Here are a few ways you can get started with recycling non-potable water:

- Check with your local wastewater treatment purveyor on programs and rules for rainwater harvesting. Where rules allow, the installation of rain barrels to collect rainwater runoff from your roof for outside watering purposes is a terrific way to help conserve the potable water supply.
- Install a graywater collection system. With a little plumbing work, you can minimize your potable water usage by using graywater as an alternative water source for flushing toilets and irrigating lawns and gardens. Be sure to check with your local building department for the most up to date requirements for graywater collection system installations and always be sure to use a licensed plumber for the installation to ensure protection from cross contamination of the potable water supply.



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- Build a rain garden to capture roof drainage and divert it to your garden or landscaping. Be sure to check your local rules on rainwater harvesting prior to installation.



For More Information



Building codes and standards like the [International Plumbing Code \(IPC\)](#) continue to build upon previously established water efficiency standards by going through a regular update process. In addition, here are some resources to learn more about properly utilizing non-potable water reuse systems and for protecting our world's water supply:

- [Water Reuse and Conservation Requirements by State](#)
- [National Blue Ribbon Commission for Non-potable Water Systems \(Making the Utility Case for Onsite Non-potable Water Systems\)](#)
- [United States Environmental Protection Agency's \(EPA\) How We Use Water](#)
- [U. S. Environmental Protection Agency's National Water Reuse Action Plan](#)
- [Seametrics 15 Facts About Water Recycling That You Should Know](#)



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