

# Rainwater Harvesting for Toilet Flushing & Clothes Washing

Case Study: Contractor-Installed System for Two-Person Household

Average  
Water Savings

625  
gal/ month

7,500  
gal/ year\*

Total 20-Year  
Lifetime System  
Savings

150,000  
gallons

% of Annual Indoor  
Water Use Offset by  
Rainwater

26%

Lab Results from  
*E.Coli* Testing



Meets  
Water  
Quality  
Standards

## How it Works

### Step 1 –System Sizing

High efficiency toilets (0.8 gpf) and clothes washer (15 gal/load) are installed first to reduce water demand from the system. 6" of rain collected from the 1,500 ft<sup>2</sup> roof is enough to fill the 4,995 gallon tank and provide the household with an 8-month supply to last through the dry season.

### Step 2 – Screen Debris

Stainless steel mesh gutter guards keep debris out of rainwater before it is diverted to the tank through downspouts and buried drainage pipes.

### Step 3 – Filter Sediment

A 100 micron filter is installed before the pump to remove fine sediment.

### Step 4 – Pump Water

Water from the tank is pumped into the building through a dual plumbing system (purple pipe). There is no cross-connection with potable water lines.

### Step 5 – Connect System

Toilet and clothes washer supply lines are connected to the rainwater dual plumbing system.

### Step 6 – Plan for Dry Months

No rain? No problem! When rainwater supply is low, a mechanical fill valve opens to let municipal water into the tank through an air gap.



Need Help Getting Started?

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for more information



### Cost Summary for Contractor-Installed System

Design	\$1,000	Gutter Guards	\$630
Permit	\$892	Indoor Dual Plumbing	\$280
4,995 gal. Cistern	\$3,090	Site Work	\$6,308
Cistern Plumbing	\$1,890	Potable Water Back-Up	\$730
Pump and Electrical	\$1,210	<b>TOTAL COST</b>	<b>\$16,030</b>
		Lifetime Cost per Gallon	\$0.11/gal

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