



CASE STUDY

PROJECT NAME

RMS Residential Rainwater Capture Potable Water System

SYSTEM SPECIFICATIONS

1700-gallon rainwater collection, filtration, and reuse system

INFILTRATOR PRODUCTS USED

Infiltrator IM-1760C

INSTALLATION DATE

Summer 2015

DESIGNER/INSTALLER

Rainwater Management Solutions
Salem, Virginia

Rainwater Capture Potable Water System Provides Primary Water Source for Virginia Vacation Home

SUMMARY

Poor well water quality spurred a Virginia vacation residence owner to look for alternatives to a traditional water well for the potable water supply.

CHALLENGES

Faced with elevated iron levels in area well water needing multiple filtration units and water softeners to make water palatable, the homeowner decided instead to install rainwater capture potable water system that includes an Infiltrator IM-1760C Potable Water Tank. Designed by Rainwater Management Solutions, the system provides a clean steady supply of water at a rate of 15GPM without the groundwater quality worries.

SYSTEM DETAILS

The potable water tank was installed downhill from the home so that the rainwater from the downspouts gravity flows to the tank. Sewer and drain pipe was placed in trenches from each downspout towards the tank and directed into one single line feeding the WISY WFF 100 filter. After drilling holes in the tank, the 4" smoothing inlet, ½ horsepower pump, and multifunction overflow device were placed in the tank. Tank overflow runs down the hill to daylight. Pipe and electrical wire for the pump runs from the tank to the home through the purification unit that includes UV light, sediment filter, and carbon filter to bring the water to a potable standard. The water then moves into the pressure tank. The rainwater is connected from the pressure tank with the main water supply line for the home.

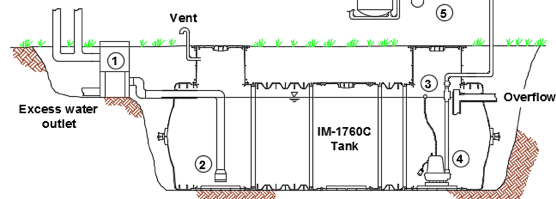
The UV light disinfects the water, eliminating any need for chlorine. All of the water used in the home comes from the rainwater harvesting system. An existing well on the property supplies water for lawn irrigation and outside uses.

RESULT

"We found the two-piece tanks easy to assemble and were extremely impressed at the tank construction and reliability. We plan to incorporate these tanks into our product line," TJ Smith, Director of Technical Support, Rainwater Management Solutions.

Total cost of the rainwater collection and reuse system at \$7000 was considerably less than the potential cost to drill a new well on the property.

Rainwater collection point (roof drains, gutters, etc.)



RAINWATER HARVESTING PRIMARY COMPONENTS

1. WISY Vortex filter
2. 4" Smoothing inlet
3. 2" Floating filter
4. Submersible feed pump
5. Purification Unit
6. 20-Gallon pressure tank



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