

Application Note

🛡 Rainwater harvesting

With all the press about outbreaks of waterborne illnesses, boil water advisories, and water infrastructure issues, safe water is top of mind – and so it should be. Contaminants can infiltrate wells and aquifers, and aging infrastructure can lead to increased risk of contamination. In fact, boil water advisories are becoming more and more common, even in large cities.

What can you do?

Start collecting rainwater!

Rainwater harvesting offers a secure source of water, free of the chemicals found in municipal water and contaminants that can taint wells as a result of seasonal run-off, fracking, and mining. It allows you to take control of your water and ensure your family is safe from potentially contaminated water.

What's involved in harvesting rainwater?

Collecting rainwater is an essentially simple process that involves three steps:

1 Collection

Determine the collection surface for the rainwater (usually a roof) and how to best channel that water into the catchment container.

2 Storage

The size and type of catchment container will depend on several factors, including how much water you expect to collect and its end usage.

3 Treatment

While rain water is a relatively pure form of water, it still absorbs debris and biological contaminants from the atmosphere and collection surface, be it a roof, parking lot, etc. As a result, you need a filtration system to remove debris (leaves, dirt) and treat taste and odor issues. There are multiple options to treat rainwater for microorganisms, but not all water purification technologies are created equal. The safest and most environmentally-friendly option is ultraviolet (UV) water purification.

Why treat rainwater with UV?

All rainwater used indoors should have some level of treatment, regardless of whether the intended use is laundry, flushing toilets, or drinking. Treating for biological contaminants is recommended, and the easiest way to ensure this water is safe for all uses is to treat it with ultraviolet purification.



How it works

UV water purification is a safe, natural, chemicalfree way to treat water. Even chlorine-resistant microorganisms are made harmless through UV exposure. VIQUA's UV systems install easily into existing water lines and provide clean, safe water to every tap in the house.



Water is purified as it runs through a stainless steel chamber containing a UV lamp. As water flows past the lamp, illness-causing microorganisms receive a lethal dose of UV light that attacks their DNA and alters their ability to reproduce. Harmful bacteria and viruses are deactivated, and the water is completely safe to drink.

Easy maintenance

Rainwater doesn't contain any of the minerals (iron, magnesium, calcium, etc.) present in most ground water and is considered "soft" water. Water devoid of these minerals is ideal for UV purification as the softness reduces maintenance of the UV system. Changing the lamp annually should be the only maintenance required.

Our UV systems are also extremely economical to operate. A typical system uses the same power as a 40 watt light bulb.

Why harvest rainwater?

There are countless good reasons for collecting rainwater, from the environmental implications to the cost savings. But in addition to that, rainwater harvesting allows you to provide safe, chlorine-free water for your family. You can take comfort knowing you have control over your own water supply.

Not only that, but rainwater is soft water, which means it won't leave mineral scale, there's less mineral buildup in pipes which can extend the life of many water-using appliances, laundry is softer and fades less, and hair is shiny and soft. And, to top it all off, it tastes great!

About us

We are the world's largest supplier of residential UV water purification systems. Our systems treat nearly 20 million liters of water every minute, protecting millions of people in over 100 countries. The same UV technology is used by our municipal business (TrojanUV) to disinfect the drinking water for some of the biggest cities in the world. New York, Paris, Vancouver, Rotterdam, and Las Vegas are just a few of the cities who have recognized the benefits of UV. Do a quick online search for "New York City UV disinfection", and you'll see what we mean.

For more information about the benefits of UV and how it can be integrated into a rainwater harvesting system, visit info.viqua.com/rainwater



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