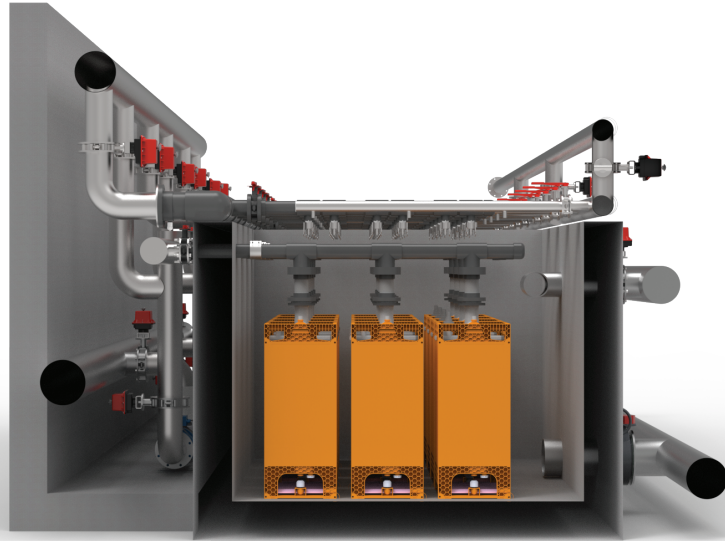


# SIC | Drinking Water

## RAIN WATER HARVESTING



Title  
22

**MADE IN USA**  
THE ONLY BABA  
COMPLIANT UF/MF  
MEMBRANE



Certified to  
NSF/ANSI 419

Certified to  
NSF/ANSI 61

Rain water harvesting is a common and effective practice to capture freshwater for numerous purposes, such as irrigation and other non-potable uses. The scarcity of viable fresh water sources throughout the world have spurred significant growth in the implementation of rain harvesting system, both privately and commercially.



A housing development looked to rainwater harvesting as means of supplementing their water supplies but needed an easy and reliable solution to treat the water cost effectively. Rainwater often contains numerous contaminants including atmospheric gases (CO<sub>2</sub>, NO<sub>x</sub>, and SO<sub>x</sub>) as well as pollutants on the catchment surface itself such as bird droppings, insects, and leaves. The combination of these contaminants can cause odors, encourage microbial growth, and spread diseases.

## THE SOLUTION

Silicon Carbide (SiC) membranes provide a physical barrier to many contaminants including those found in rain water catchments. The microscopic 0.1 micron pores physically block contaminants from passing through, producing a safe clean effluent. A rain water treatment system consisting of a collection tank and SiC ultrafilter was installed to capture rain water and treat prior to being used for toilet flushing, clothes washing, and other non-potable uses. Since rain is unpredictable, the ability for SiC to sit dry until the next storm arrives makes it the perfect fit for a rain water harvesting application.

The innovative rain harvesting system annually saves nearly 100,000 gallons of fresh water. The SiC membranes help preserve rare and precious fresh water sources while providing a clean and reliable water supply for various uses. The ability of SiC to block pathogens from passing through negated the need for post UV disinfection, which is typically used downstream of sand filters in the same application operation.



## THE OVIVO DIFFERENCE

Ovivo's SiC membranes continue to create new applications where membranes could not be used previously. Rain water harvesting is a perfect example of that as conventional membranes would struggle with the intermittent operation of a UF/MF plant. Not only can SiC meet the treatment goals of the project, but it can easily sit dry when there is no rain.

### RAW WATER QUALITY

pH	6.63
Turbidity	4 NTU
TSS	<2 mg/l

### PLANT DESIGN PARAMETERS

No. Trains	1
Plant Capacity	3,400 gpd (13 m <sup>3</sup> /day)
Design Flux	120 gfd (205 l/mh)

