



Clackamas Review

Greywater reclamation system at Rose Villa first of its kind in a senior-living community

By Ellen Spitaleri
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This graphic shows how the ROSIE system works to reclaim greywater from kitchen and laundry usage and recycle it for flush toilets and for irrigation.

As Oregonians, we tend to take water for granted. After all, we have rain, we have melting snowpack, we have rivers. But there will come a time in the future when everyone will have to make changes to curtail the usage of that valuable resource. And for Rose Villa's ROSIE, that time is now.

ROSIE, short for Recycled Stuff Is Everywhere, is a greywater reclamation and water conservation system used to filter greywater from 35 new apartment homes for seniors in Oak Grove. That greywater then goes

through a system of filters to supply water for toilet flushing and irrigation in Rose Villa's newest campus development, which was completed in 2022.

So, what exactly is greywater?

"It's not the water that comes from the toilet but is the water that comes from the bathroom sink, from the kitchen faucets and from doing laundry; it is relatively clean and can be recycled," said Vassar Byrd, Rose Villa's CEO.

That greywater goes through a multi-step process, including a pre-filter, a textile filter, an ozone filter, and a micron filter. Then that filtered water is used to flush toilets; any water left over can then be used for irrigation.

This reclamation and water conservation system is the first of its kind in a senior-living community in Oregon and one of few installed in a residential building, Byrd noted.

"We are saving approximately 300,000 gallons of water every year; we are using clean water responsibly," she added.

Pump basin, tanks

"This water is not for drinking," noted Sid Scott, president of Scott Edwards Architecture, the firm that built Rose Villa's new Madrona Grove Supportive Living and Schroeder Lofts neighborhoods.

"The two buildings share an underground level that has a greywater pump basin and a reuse tank within the garage; the water is pumped back into the homes and used only for flushing toilets," Scott said.

"It's a shame to use potable water to flush toilets," Byrd added.

"Of course, the filter system costs more to install, but it's worth it," she said.

"We are creating a sustainable building and it can be used as an example to show other senior living communities across the nation. This is doable, you just have to start doing it," Byrd added.

Environmental focus

"Our residents are focused on the environment. They want to reduce the load on city infrastructure; they are very educated, very aware," Byrd said.

"Rose Villa is committed to the system; the residents were really interested in a sustainable project," Scott said. He added that ROSIE was designed

by Biohabitats, a national firm with a local office dedicated to conserving natural resources.

“Our team was pleased to have a client like Rose Villa. It is inspiring that the residents were committed to doing this,” Scott said.

“We can use this as a model for other projects, to share it with others,” he added.

Long-term goals

Right now, the three newest building are the only ones at Rose Villa with a water reclamation system, but “we hope that in the future every home on our campus will have a system to use greywater,” Byrd said.

“Our overall goal is to lower usage and consumption of this precious resource,” she added.

Rose Villa is looking at a much longer integrated plan as to how the entire campus can be more efficient in the long term, Byrd said. “Senior living is at the forefront of technology; elders know they are the stewards of nature and a meaningful future.”

Byrd added, “You don’t have to know technology to save energy. Rose Villa residents understand about saving things for the next generation.”

For more information on Rose Villa, contact Jennifer Werdel at jwerdel@rosevilla.org or 503-652-3076.

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