



**RRWA Environmental Column – January 2007**  
***Recycled Water***

Recycled water, reclaimed water, purple pipes, advanced treatment.... are these unfamiliar terms? It's likely that you'll be hearing these terms more and more as many communities, including some in the Russian River watershed, are developing or expanding recycled water systems as traditional sources of fresh water become more and more scarce.

Recycled water (sometimes called reclaimed water) is highly treated wastewater that is used for beneficial purposes such as agricultural and landscape irrigation, industrial processes, and replenishing groundwater basins. In California, recycled water must meet strict standards similar to drinking water standards before it can be used. Recycled water systems are monitored extensively to ensure that water quality standards are met at all times. However, these standards are not necessarily designed for the protection of aquatic species, so excess water that must be discharged may face additional, or different, requirements before it can be released into local waterways.

Because it stretches existing natural resources, recycled water is valued by many water utilities as a way to reduce the impact that communities can have on the environment. What was once seen as waste product to be disposed of, is now highly valued as a beneficial contribution to a community's water supply. Recycled water systems increase sustainability and enhance the environment by keeping this resource local, reusing it and offsetting the need for developing new fresh water sources. Recycled water is a reliable water supply even during periods of drought. This reliability benefits both the environment and the economy by preserving limited freshwater supplies during shortages and maintaining a consist supply at a predictable cost to businesses.

As is the case for most water resources in California, the availability of recycled water varies throughout the year. Recycled water production generally peaks during the winter months and then drops during the summer months when it is most needed for irrigation. Utilities are looking at how to compensate for this by building storage facilities so that recycled water produced in the winter can be stored until the warmer seasons. Even with storage, most utilities will have times when there is too much water to store, requiring the excess recycled water to be discharged to an outlet, such as a river. For agencies that are not permitted to discharge, or have discharge flow or volume limits, managing the excess water is challenging and can severely limit recycling potential by making it prohibitively expensive for communities to undertake.

Despite the challenges, the use of recycled water is becoming increasingly common in many water-scarce areas of the world. In California, the Department of Water Resources (DWR) projects that current recycled water use of 525,000 acre-feet per year will increase to over two million acre-feet per year by the year 2030 (one acre-foot is the equivalent of nearly 333,000 gallons, which can serve the water needs of approximately 2 households for one year).



## RUSSIAN RIVER WATERSHED ASSOCIATION

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Here in the Russian River Watershed, Windsor's Vintage Greens community is the second dual-piping residential development in northern California and the first in Sonoma County. Dual-piping (regular white plastic or copper pipes for drinking water, purple plastic pipes for recycled water) enables homeowners to use recycled water outside their homes and potable (drinking) water inside their homes. The dual-piping system also results in significant cost savings for Vintage Greens residents on their water and sewer bills. Recycled water is also used by the Windsor Unified School District to irrigate landscaping and sports fields.

With a growing population and continued development, recycled water use is likely to become an increasingly important component of the State's water resources. Further information about recycled water can be obtained on the following websites:

- US Environmental Protection Agency: [www.epa.gov/region09/water/recycling/index.html](http://www.epa.gov/region09/water/recycling/index.html)
- California Department of Health Services: [www.dhs.ca.gov/ps/ddwem/publications/waterrecycling/index.htm](http://www.dhs.ca.gov/ps/ddwem/publications/waterrecycling/index.htm)
- California Department of Water Resources: [www.owue.water.ca.gov/recycle/](http://www.owue.water.ca.gov/recycle/)

*The Russian River Watershed Association ([www.rrwatershed.org](http://www.rrwatershed.org)) is an association of eleven cities, counties and special districts in the watershed that are working together on programs for clean water, fisheries restoration and watershed enhancement.*