

Water Reuse

According to the Oklahoma Comprehensive Water Plan (OCWP), recapturing highly treated wastewater from municipal water reclamation facilities for beneficial use, often referred to as “water reuse” or “water recycling,” is a potentially viable source of supply for many communities. Already, many communities in Oklahoma are putting recycled water to beneficial use for non-potable uses, and several communities are considering augmenting their potable water supply sources with recycled water to increase reliability and efficient use of supplies.

In fact, the OCWP found that the greatest near-term opportunity to increase the beneficial use of marginal quality water (MQW) is the use of recycled water in urban settings for certain non-potable applications.

Public water suppliers and users are encouraged to consider treated effluent reuse where it is both cost-effective and supported by the public. The OCWP recommends continued support for the development of more detailed reuse regulations to provide a framework for utilizing this MQW source while recognizing downstream uses of that water.

In 2012, the Oklahoma Department of Environmental Quality (ODEQ) issued regulations for non-potable uses of recycled water to ensure continued protection of human health and the environment. Today, the ODEQ and OWRB are actively working on regulations for potable water reuse.

There are several water reuse systems in Oklahoma. A few examples are included below:

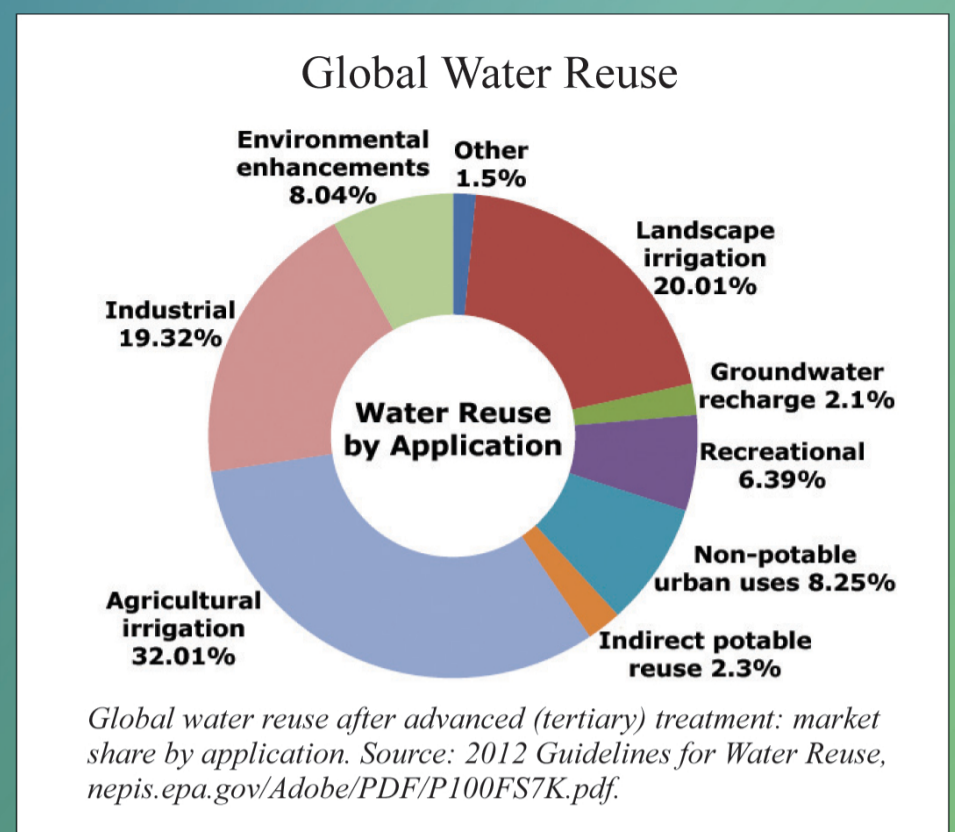
Industrial Use

The City of Oklahoma City, in partnership with wastewater treatment company Veolia Water, has been offering recycled water to large industrial water users since 1996. Three out of the city’s four wastewater treatment facilities have been retrofitted to deliver recycled water, producing about 15 million gallons of recycled water per day (mgd). This saves more than 1 billion gallons of drinking water each year.

Golf Course Irrigation

The Gaillardia Country Club began receiving recycled wastewater from Oklahoma City’s Deer Creek wastewater treatment facility in 1996. To transport the water, a 5-mile pipeline was built. Today, up to 3 mgd of treated effluent can travel through this pipeline from the Deer Creek facility to the golf course, where it is used to irrigate more than 600 acres of greens and landscaped property.

The City of Norman also utilizes treated wastewater to irrigate a golf course on the campus of the University of Oklahoma. The university pays for electricity and pumping costs, and utilizes this water instead of potable



water, helping reduce Norman’s peak day potable water demands.

Cooling Towers

In 2003, the Redbud Electrical Company outside Luther, OK, built a 10-mile pipeline from Oklahoma City’s North Canadian wastewater treatment facility to their operations to transport treated effluent for cooling tower use. In 2004, OG&E began utilizing treated effluent from Oklahoma City’s South Canadian plant through a two-mile pipeline to its facilities. The pipelines ensure that the recycled water stays separate from municipal drinking water and wastewater collection. Together, these two customers use up to 13 mgd of recycled water for cooling towers.

Crop Irrigation

In the City of Guymon, water reuse has been ongoing since 1985. Guymon is located in Texas County in the Panhandle region, the state’s largest agricultural producer with accompanying high demands for water. The city reuses treated wastewater by pumping it onto crops such as alfalfa and wheat, and is exploring additional opportunities for beneficial reuse.

For more information on water reuse, see the EPA’s “2012 Guidelines for Water Reuse” report at nepis.epa.gov/Adobe/PDF/P100FS7K.pdf. The WaterReuse Association also offers a wealth of information on water reuse at <http://www.athirstyplanet.com>.



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