

City Talk Column for Nov. 13, 2024
Wastewater Department
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One Water and what it means for Sedona

I was born and raised in Northern Arizona. During my adolescence, water supply wasn't something I ever thought about. We had plenty of water to irrigate green yards, to run in the sprinklers on hot summer days and to leave water running when we brushed our teeth. There was what seemed to be an endless supply of safe, clean water. As populations increased and climate change impacted water in Arizona, more education was provided on water conservation, the importance of treating water as a precious resource and protecting water quality.

As a civil engineering major at NAU, I took a few courses in water resources, but I didn't focus my studies surrounding wastewater treatment. It just happened that I began my career in water after graduating and I wouldn't have it any other way. Water resource professionals truly are stewards of the environment. Water managers, engineers and operators provide clean water to the communities they serve. We strive to protect the quality and quantity of water in our waterways and aquifers to ensure adequate water supply for future generations.

The concept of One Water is a relatively new concept. The theory of One Water focuses on the "value of water at every stage, in every form," whether that be rainwater, streams, rivers, oceans, underground aquifers or wastewater. As residents of the desert southwest, it is a concept we should all embrace. The city's Wastewater Department has welcomed the theory of One Water. Our wastewater is treated to the highest standards before it is returned to the environment to be used once again in the future. We manage our treated effluent by returning it to the environment through irrigation, wetlands and aquifer recharge. We use a biological treatment process, along with filtration and disinfection to achieve the highest recognized quality of water in the state. As water becomes more of a finite resource in our dry climate, we are looking to the future on how we can support the continued supply of clean, safe and affordable drinking water to our community. The city has partnered with Arizona Water Company to develop an Integrated Demand Management Program in which we look to future regulations on water quality and water supply, and how the way our community uses water might be impacted.

The Integrated Demand Management Program aligns with the concept of One Water. The program team consists of engineers and managers in stormwater, potable water supply, wastewater, reclaimed water and sustainability. One of the aspects of the program is to explore how wastewater plays a role in drinking water supply. This is done either through offset of ground water pumping by utilizing reclaimed water as a source of irrigation, dust control, toilet flushing and other beneficial uses. It is also done by exploring Advanced Water Purification (AWP), where wastewater effluent is treated further and returned directly to a potable water supply. The state of Arizona is currently developing standards for AWP to provide municipalities and water corporations with the guidance and regulations to consider implementing AWP in their systems. The team has also launched Ripple Effect Sedona – a public outreach campaign to educate citizens on the importance of water conservation and water quality. More information can be found at www.rippleeffectsedona.com.

Additionally, the Wastewater Department is currently undergoing a Wastewater Reclamation Plant Facility Plan. The facility plan will evaluate the capacity of our reclamation plant for adequacy of future

increases in flow and strength of wastewater. Furthermore, the facility plan is evaluating the feasibility of delivering reclaimed water to Sedona city limits for use in landscape irrigation as well as the potential for AWP in the future. While AWP is not certain for our future, evaluating the feasibility of implementation is a step to learning more. The facility plan will provide the framework for decision making on the future of effluent management at the wastewater reclamation plant. The plan is scheduled to be complete in early 2025 and will be presented to City Council for review soon after.

The city of Sedona's Wastewater Department team are champions of water quality. To learn more about how we treat Sedona's wastewater and support the One Water concept, consider a tour of the Wastewater Reclamation Plant. Tours are offered on the third Thursday of every month, and you can reserve your spot by calling (928) 204-2234.