

## **Arizona Perspectives and Priorities of State and Municipal Reclaimed Water**

Reclaimed water has had an interesting history in Arizona. Historically, reclamation plants either discharged their wastewater or tried to find any end user to take this water free or nearly free of charge. Direct effluent reuse systems or tertiary “purple pipe” systems were constructed to convey this water to these end users which were primarily water intensive uses like golf courses, agricultural districts, rivers, and even nuclear power generating stations. What was once considered nuisance water and is still called wastewater in some industries is now more often referred to as effluent, reclaimed, or recycled water and is considered a vital water resource for the State. With reclamation plant technology improvements enhancing water quality, increasing water quality discharge requirements and with the significant increase in the value of water resources, there are fewer and fewer “purple pipe” systems being constructed for direct deliveries. A paradigm shift has occurred within Arizona towards recharge, storage, and recovery of reclaimed water. The State of Arizona passed legislation in 1994 that created the legal framework for entities to recharge, store, and recover Colorado River water, in-state surface waters and reclaimed water. The law provided significant water management benefits to the State’s water users. First, it helped ensure the beneficial use of the State’s Colorado River water allocation each year, either by direct use or through recharge and underground storage to firm against future shortages. Second, it allowed for the aquifer to be used as a water treatment and storage plant instead of building expensive new water treatment plants and storage tanks. Lastly, it allowed the aquifer to also act as a conduit where water could be stored at one location and recovered at another location instead of building expensive infrastructure. In particular, municipalities have embraced this law as an effective way to manage short term and long term water resources. An entities’ reclaimed water can be recharged and stored underground at or near where the water is produced and then recovered for indirect potable reuse closer to where it is needed. That water can then be delivered within the existing potable water delivery systems directly to the end user rather than building a tertiary purple pipe system and is sold at potable water rates which bolster conservation, efficiency, and sustainability of the water provider.

Drinking Water and Wastewater Professional CEUs are available from Idaho Bureau of Occupational Licensing for this session.

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### Professional Background:

1997 - Bachelor of Science – University of Wisconsin  
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1999 - Master of Science – University of Minnesota  
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2000 – 2005 Hydrologist III Arizona Department of Water Resources  
2005 – 2010 Water Resources Director for the Town Chino Valley, Arizona

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2010 – 2012 Water Resources Advisor for the City of Mesa, Arizona

2012 – Present Water Resources Manager for the City of Goodyear, Arizona

Professional Registered Geologist – Arizona

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