

Citizens' Water Advisory Committee, Technical/Planning and Policy Subcommittee

Summary Minutes

March 23, 2016

- 5. Recycled Water System** – Tucson Water staff members Melodee Loyer and Wally Wilson presented a PowerPoint on the Recycled Water System. An overview of the reclaimed system infrastructure was provided; the system extends up to the Dove Mountain/Oro Valley area, runs through the center of the service area, out to Houghton, and down to Mission. Golf makes up 52.67% of reclaimed users, parks make up 15.34%, Oro Valley makes up 15.21%, and the remaining users are divided between schools, commercial, residential, Pima County, the University of Arizona, and Flowing Wells. Reclaimed allocation and use from 2008 to 2015 was reviewed. The breakdown of effluent production and ownership was provided. Contractors La Paloma, Sunrise, and Ventana received lower than standard contract rates for their participation in establishing the system. The contracted rates increased annually until, this year, their rates equal the standard rate. The University of Arizona also has a special rate for a specific service by contract. That rate is \$.06/ccf and is in perpetuity, services not specific to this contract are paid at the standard rate. Rates from 2011 to the present were reviewed, as well as the revenues and expenditures of the system from 2014 to present. Unused reclaimed water is discharged to the river, a portion of which the City receives long-term storage credits for. Currently reclaimed is recharged into the Sweetwater facility, the Managed In-Channel recharge, and the Lower Santa Cruz Recharge Managed Project. In the future, the utility will also recharge at SHARP. Storage at Sweetwater is currently at 11,059 AF, the storage limit is 32,458 AF. After considering production, allocation, and use, there may be around 7,553 AF of effluent available for other uses, including the Conservation Effluent Pool (CEP). The CEP allocation is about 7,000 AF. Reclaimed water delivery to Agua Caliente Park would require developer funded infrastructure, as well as delivery costs. The County could look into sending its water to the lake and recharging it, which may mitigate some of the costs. Challenges to delivery in the area include permitting, possible treatment costs, lake liner requirements, and infrastructure costs. Future plans include a larger wet well between Agua Nueva and the reclaimed facility, re-permitting reclaimed to A+, and bypassing/eliminating filters.
- 6. Micro-Hydro Generation** – Tucson Water staff members Dan Quintanar and Tom Victory presented a PowerPoint on Micro-Hydro, or the extraction of energy from flowing water in area with excess energy. The Utility has been evaluating Micro-Hydro since 1992. Micro-Hydro is consistent with the Utility's and City's goals for sustainability. High volume, constant flows, with a large change in elevation, and sufficient onsite load are all needed for Micro-Hydro to be viable. Five sites have been looked at, Ironwood, 3rd Avenue, 24th Street, Tech Drive, and CAVSARP. Each site was reviewed for the energy available, impact to water operations, infrastructure leases, economies of scale, and customization. The CAVSARP PRV site was selected. This site captures energy as it comes from the CAP, is not part of the distribution system, has high volume, decent head and flow, and a large on-site load. CAVSARP flows versus Water Horsepower were reviewed. The latest research reevaluated PRV locations and turbine efficiencies. Tucson Water approached procurement for a Lucid PowerPipe in conduit system; however, it did not qualify for sole source procurement. Next steps include consideration of purchasing a Lucid system, NLine Energy Assessment, possible grant funding, and request for proposals.
- 7. Future Meetings/Agenda Items** – See projected agenda for further information.
- 8. Adjournment** – Meeting adjourned at 1:01 p.m.

Approved 4/27/16