



# Quarterly Report



Drinking Water



Wastewater



Reclaimed Water



Stormwater

## Water Services Updates

2023 – It's a Wrap!

### Section Reviews

#### Stormwater

The Spruce Wash suite of projects have been rolled into one CMAR project which is underway and scheduled for completion in three years. Prop 441 dollars and Stormwater Utility rates are hard at work! On the other side of the city the Schultz Creek set of drainage improvements are also ongoing with completion of several stabilization projects this fall and the start of the Highway 180 culvert project this winter.

The updated Stormwater design manual is ready for *prime time*. The changes align to current industry standards and mirrors other Arizona drainage code including the County and Maricopa Association of Governments, providing a consistent interface. The manual's last update was in 2009. Next step, a public outreach and comment period.

#### Frances Short Pond



Frances Short Pond is back in action, as Flagstaff's premiere local fishing hole! Thanks to a dedicated team of city staff and public agencies working together to not only dredge, but make improvements to the pond's function. This is the second round of 500 fish released into the pond in November.

Photo courtesy Glenn Kuyper

## Water Education 101

### A Word about IIOT

In Water Services' world, *IIOT*, otherwise known as the *Industrial Internet of Things*, is a big deal. Big enough, to have its own program. These tools are sensors, used throughout the water system, tracking flows in drainages feeding into Upper Lake Mary, through the raw water pipelines, into the Water Treatment Plant and through the distribution system.

Sensors follow the wastewater collection system, alerting of possible leaks in the system or unusual flows. They also send out alarms set to trigger-points, monitoring chemistry levels of water at all stages of treatment. When too much, or too little pressure causes problems, these sensors track data, which helps with trouble-shooting and aids in future design.

Stormwater sensors are critical in early detection of possible flooding threats. Yes, rain gauges are also some of our IIOT devices!

Many of these sensors are remotely located, requiring battery operations, and staffing to replace or keep them clean and operational. This is an integral part

that crews work during low demand periods to perform maintenance. Crews worked into the night to replace a broken butterfly valve in the Paradise/Linda Vista neighborhood, completing the work as the sun rose.

The Schultz Creek Stabilization project is completed, within the time frame required by FEMA/DEMA. Interpretive signs will be installed at the Wye, as part of the outreach component.

### Wastewater Collections

We are finally on the home stretch to purchase a new Combo Vac Truck for Wastewater Collections. This purchase has been in the works for several years, taking two years of funding appropriations to complete.

### SCADA Information Systems

Thunderstorms can wreak havoc on electrical relay equipment in the field and at facilities. This summer and fall were no exception, as the SCADA IS Team works to re-connect the connections to Upper Lake Mary's Raw Water Pump station and communications with Lake Mary and Woody Mountain wellfields. New servers are upgraded for better functionality.

SCADA IS Section has also taken on security for the Division. They are bringing facility cameras and door locks up to city-wide standards, as well as migrating the OT system, from the IT servers the city uses, as a cyber security measure.

### Water Distribution

Keeping the water flowing often requires

Three broken water lines in Cheshire required strategic coordination to perform excavations safely. For aging pipelines, breaks become more common, as we enter into the winter season.

The bid for smart water meters resulted in contracts with multiple vendors, to allow greater flexibility with ongoing supply-chain issues.

## **Water Production**

Bi-annual basin cleaning at the Lake Mary Water Treatment Plant went well. The reduced surface water production allowed replacement of all four of the basin drain valves installed in the 1960's and helped to improve taste & odor issues experienced early fall. These issues are now resolved and surface water production is back up to 40-50%, despite manual operations of surface water pumps required until communications with the Raw Water Pump Station are upgraded.

Fall was a good time for Water Treatment tours for brew masters, with staff guiding both Mother Road Brewery employees, as well as NAU Brewing Science students through the facility.

The Upper Lake Mary aerator motor and surge suppressor at Lake Mary Well #8 have been replaced and are now fully operational. We continue to make repairs from lightning damage incurred during severe thunderstorms last monsoon season.

The Inner Basin pipeline flood mitigation project conducted a shutdown walk through on November 20. At site 3, gabion baskets were built up a 30 ft drainage to support the road and protect the pipeline where the pipeline was severed after monsoon damage, post Pipeline Fire. Road access to Snowslide spring was made and the intake was cleared of debris amongst many, many other achievements during a very production construction season with contractors Hunter/Jacobs. We'll resume work in the spring!



## **Water Reclamation Plants**

Water Reclamation Plants are running well. Both facilities have maintenance projects occurring.

Rio de Flag WRP bar screen project will be completed, as parts finally come in.

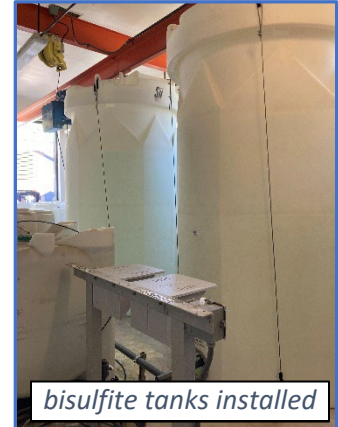


Wildcat Hill WRP took delivery on a new front-end loader after over a year-long wait. This piece of equipment will move solids, snow and a variety of functions around the facility.

Chemicals have been at a premium price, when available, causing staff to switch to a different de-chlorination process. The new sodium bisulfate tanks installed at the facility will save container charges of \$2,000 per delivery –

a worthwhile investment.

The west basin mixers have been replaced, however the Variable Frequency Drive (VFD – think efficiency) motor parts on backorder.



## Regulatory Compliance

Jolene Montoya, Regulatory Compliance Manager also serves as e chair of AZ Water's Industrial Pretreatment/FOG Committee. In November, she conducted a two-day workshop for over 100 Pretreatment/FOG professionals from around the state, Hawaii, Kansas and California, including some EPA representatives. Thanks, Jolene!

Regulatory Compliance is working with one of the City's significant Industrial users to bring them into compliance to their discharge permit.

## Water Resources and Conservation

Conservation is gearing up for the BOR Water Revenue Loss grant, with a meeting with a consultant to discuss strategy.

Conservation staff succeeded with corporate outreach at Home Depot, allowing them to post signs at the retail outlets on toilet rebates available. Hotel consultations for water efficiency measures continue, as well as working with the city's housing authority to updates fixtures on city owned property

Erin Young, Water Resource Manager, is project manager for the Rate Study in Water, Wastewater and Reclaimed funds. There will be much, more outreach in the coming months.

Water Resources is renewing their contracts for hydrological monitoring with USGS and JE Fuller.

Water Resources is involved in providing comments for the state's recent draft of a *Roadmap for Advanced Water Treatment*. Comments were due by Dec 2.

## **Partnerships**

A local research firm, T-Gen, is working with NAU and Water Services on an Intergovernmental Agreement (IGA) for viral tracking in the wastewater and reclaimed system.

## **Water Commission**

### **October Agenda**

- A. Watershed Alliance for the Rio de Flag (WARF) Resolution - Ed Schenk
- B. Rate Study Financial Planning Scenarios Presentation & Discussion - Erin Young

### **November Agenda**

- A. Rate Study Approach for Capacity Fee Calculations, Cost Allocations, Misc. Fees Informational Item - Frances Short Pond Refurbished and Refilled – Lisa Deem

### **December Agenda**

- A. Update on Capacity Fee Calculations, Cost Allocations, Misc. Fees - Erin Young
- Informational Item - Comment Period for Advance Water Purification Proposed Roadmap – Shannon Jones