



WATER SERVICES DIVISION



WS Monthly Update October 2021

Director

- Our Director and Stormwater staff hosted a tour and presentation to an “ad hoc” legislative committee on post wildfire/flood mitigation.
- The Water Services step pay plan has been completed to replace skill-based pay. Thanks to Mark, Jeannie, Jim, Brian for their work on this.
- The next all-staff meeting will be a holiday meeting, with recognitions.
- Andy is ready to get out in the field with staff to become more familiar with the work in each section.
- The recent Citizen Survey ranked Water Services favorably. Go Team!
- The next step from the Council retreat on infrastructure needs will be a bond discussion or other funding options.
- Andy joined Peter Bruce to interview on KAFF radio in mid-October. Our outreach plan has come a long way in development.

Recruitments

- Gary Miller has accepted the Engineering Section Director position, effective Nov 15. He will provide a great interface with the City’s Engineering-Capital group.
- We are recruiting for a Regulatory Compliance Lab Supervisor and Wastewater Collections technicians. We are releasing new job postings for Stormwater Projects Managers and a SCADA Analyst- Electrical.

Safety

- The Rio de Flag WRP safety project is wrapping up, with the final walk through in early November. This provides fall protection for the influent pump and clarifiers.

Accolades

Lisa Deem was awarded a Governor’s Heritage Preservation Honor Award, for her work as a volunteer for 20 years with the Elden Pueblo Project.

Water Commission Agenda

- Regulatory Compliance provided an update on Emergency Response Plan (ERP) revisions
- Staff presented an out of city sewer services request.

Water – Wastewater – Reclaimed Water – Stormwater

Administration Offices

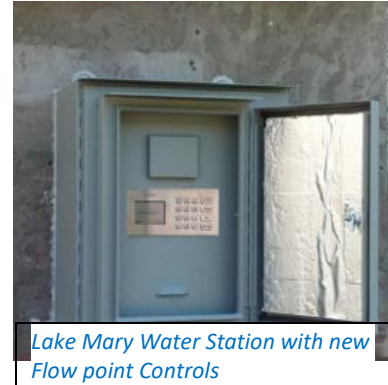
2323 N. Walgreens St., Suite 1
Flagstaff, Arizona 86004

- Commission was updated on the Council Retreat / infrastructure presentation.

Section Updates (alphabetically)

Customer Service

- The load out stations got a software upgrade. New keypads were installed as part of phase one. The next phase, planned for completion by end of December, will feature instant payment posting and an online customer portal.



Operations

- Red Gap Ranch now has cattle grazing, rotating around the ranch. Staff brought the twin tanks well up and running. They are waiting on pumps and motors to get the stock tanks filled. The grazing lease will be aligned with the Arizona State Land lease renewals.
- The land purchase for the Lake Mary Water Treatment Plant is waiting on a cost-share document from U.S. Forest Service. We are hoping to complete the purchase by the end of the year.
- The national WARN network (Water and Wastewater Area Response Network) reports shortages on chemicals that impact the water treatment processes. Transportation shortages are also an issue. We are urged to place orders early.
- Distribution crews will turn on reclaimed water to Snowbowl at midnight November 1.
- Tim (SCADA IS) and CJ (IT) will join an update with Department of Homeland Security (DHS) on cyber security. The city partners with DHS on security matters.
- Access to Water Services buildings will use new employee badges with photo ID's and can be programmed for use at various city facilities.
- Water Services will pay their share to fund new valve (water) and manhole (sewer) covers for the ADOT -Milton Road Improvement contract. We'll use cast iron material, for longevity.

Regulatory Compliance

- The water lab tested chlorine levels at the Railroad Springs reservoir.
- Pretreatment has one more annual inspection of Significant Industrial Users. They conducted follow up meetings with one user to discuss exceedances.
- Pretreatment staff have successfully renewed their backflow testing certifications.

- Reminder notices are going out to backflow device-owners delinquent in their testing requirements.
- Changes to the ERP presented to the Water Commission will include backflow tester requirement. Code amendments are scheduled for approval on December 7.
- Staff is adding discharge points to the de minimis permits to include reclaimed water flow for hydrant and system flow testing.
- The reclamation plants are due for quarterly and semi-annual sampling.

SCADA Information Systems

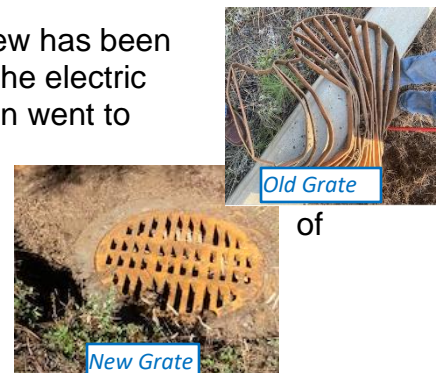
- Radio Network upgrades. We are implementing UHF network sites with master radio sites to solidify communications. Letters went out for Planning & Zoning on a master tower radio site at the Public Works building.
- We're working on the county permitting process for Lake Mary #2, with two towers planned to be operational by spring.
- North Reservoir Plant site and Woody Mountain #4 well are getting communication equipment upgrades.
- SCADA is assisting with the PEPS (Primary Effluent Pump Station) design specifications for Water Reclamation plants, to call out operator needs in the design. The intent is to create a document for future design teams incorporating our standards in projects. We are also developing consistent tags (names) for assets across the Division.
- The Continental Well upgrades posed new challenges to SCADA programming staff, in developing new standards and wiring solutions to interface different models of Variable Frequency Drives (VFDs) into our system.
- Ft. Tuthill #2 well is undergoing flow tests. Ft. Tuthill #1 well is being monitored to identify trends- how the existing #1 Well is affected by Well #2.
- Live testing was performed on McAllister well and it performed as programmed in SCADA, shutting down in response to appropriate signals/alarms.
- We are still revising job descriptions to hire an electrician with SCADA-specific skills.
- Staff met with ESRI, the GIS asset management software manufacturer to plan presentations at a few conferences, including hosting one in the next year.
- We are using flow level sensors to identify total flow coming into the Rio de Flag Water Reclamation Plant. We'll utilize this information for Influent Pump Station re-design.

Stormwater

- While Ed Schenk, Stormwater Manager, took a well-deserved vacation, Water Services and Grants staff covered the site visit review with FEMA/ Arizona Department of Emergency Management (ADEM) personnel. There is a six-month reimbursement window, for 123 damaged sites; we're trying to repair to pre-damage condition with financial support from ADEM.
- Staff is working with WARF- Watershed Alliance for the Rio de Flag. They have an EPA Watersmart grant to create a prioritized watershed plan.
- We're still working on finalizing payments related to last summer's Museum Flood events. Emergency services were called in by the EOC and we're circling back with P.O.'s and invoices for payment.
- Frances Short Pond draft Operations and Maintenance Manual is undergoing review and revisions, clarifying the roles of Stormwater and Parks to maintain this community amenity.
- Staff is still short-handed and covering needed tasks, such as development review.
- Chris Palmer was reclassified to a Project Manager, a well-earned promotion. Congrats, Chris!
- Arizona Department of Environmental Management (ADEM) is finally releasing pre-disaster mitigation funds from 2019, starting with the FUTS low water crossing project.
- The Spruce Wash- Dortha inlet channel project is moving forward with Christine Cameron as Project Manager.
- Ed Schenk co-authored a Geological Society of America presentation in Portland, on stormwater monitoring methods.

Wastewater Collections

- The Stormwater Closed channel maintenance crew has been systematically clearing culverts making repairs. The electric mini-dozer got lighting and cameras installed, then went to work cleaning out culverts on Cedar Ave, Lone Tree near CCC, Fanning Wash and the Country Club box culverts. It can clear out 12-18" depth debris; a slow and steady process. Two storm drains on Rockridge were cleared before the truck went out of service, waiting on a new harness.
- Collections did presentative maintenance on Empire. Maintenance in the wastewater collections system is minimized, due to COVID.
- Four flow meters were installed in the system, for IS asset management.



- The TV van is inspecting collections systems at new multi-housing units on Butler. It was also used to inspect piping at Lake Mary dam.

Water Distribution

- The utility locator (blue stake) job description is under review. A proposal was submitted to HR, as this position requires a high level of knowledge of the distribution and collection systems.
- Parts shortages are driving crews to closely track inventory lists, and place orders well in advance.
- Two crews worked on a damaged fire hydrant replacement along El Paso Road, as identified in the ongoing hydrant inspection program. Over 3,800 hydrants are inspected annually.
- Patrick O'Connor, Distribution Supervisor, is helping out with IDS plan reviews, until the position is filled.
- We are finally receiving a large water meter order, which was months in coming. We'll resume the meter replacement program.
- Crews completed abandonment of a 16" sliding gate valve at the North Reservoir plant that had been consistently bleeding by, allowing small flows to seep past the valve.
- Crews were assisting with flow tests on reclaimed hydrants for the reclaim water modeling project – 16 city-owned and three NAU hydrants.

Water Production

- Woody Mountain #9 well is back up and running. Woody Mountain #4 well functionality is down; it needs a SCADA upgrade.
- McAllister well is running with a drawdown near 500 feet, though still within an acceptable distance above the pump. We're monitoring drawdown with alarms set if water drops to a certain depth, thanks to SCADA personnel.
- Railroad Springs tank has not undergone a fill cycle since September, as nearby McAllister Well is meeting the demand in A+ zone. Water quality checked out just fine at the tank, although after an APS power outage, the well will be left off until demand increases in the zone.
- Christmas Tree, Paradise and the Main Storage tank levels were not reading correctly. At Paradise, we found graffiti and vandalism; someone threw boulders at the solar panels, which impacted the batteries and level sensors. All three tanks received new level sensors.
- Due to the Paradise vandalism, and graffiti seen there and elsewhere, we will be installing signage at all Water production locations, advising that vandalism to a water system is a federal offense.
- After issues maintaining the clearwell level and running the booster pump, the Shop well variable frequency drive (VFD) was replaced with a back-up on hand.

- The Continental well project is waiting on a pump and motor. The contractor was given a time extension to complete the project due to material shortages.
- Upon initial aquifer testing at Ft. Tuthill #2, the well did not perform as expected, with only an estimate of 300 gpm flows (rather than the 1,000 gpm anticipated). We will need to downsize the column pipe diameter and submersible equipment for reduced flows. We do have some smaller equipment on hand and most of the smaller column pipe as well (an additional 200 ft was ordered). We will resume aquifer testing in November, with Empire Pump and other contractors after swapping out column pipe, equipment and generator.
- The semi-annual basin cleaning is going well. We were able to conduct repairs to some of the infrastructure, including paddle straps, influent and drain valves. We also pulled our master meter at the Lake Mary Water Treatment Plant, which has not been working correctly for a while. The meter, only 1-1/2 years old – has been sent to the manufacturer for testing. Upper Lake Mary is currently 24% full, approaching target of at least 20% full by the end of the year.
- The Arizona Department of Water Resources (ADWR) conducted a dam inspection at Lake Mary. Only minor findings or maintenance was mentioned or recommended including concrete repairs and small tree removals. Collections assisted in videoing, to check out a drainpipe at the dam as requested by the inspector.
- Distribution assisted in abandonment of a leaking valve at the North Reservoir plant. Valve and associated piping are slated for abandonment with new Zone A lines, though early abandonment should save the city significant water on an annual basis.
- We received final plans on the 27" raw water pipeline mitigations, to protect the pipeline during Forest Service thinning project. Plans were shared with Forest Services and Fire personnel. A contractor should be selected to complete the work soon.
- Two operators passed Grade 3 certifications with ADEQ.

Water Reclamation Plants

- Plants running well.
- NAU labs are finding a low level of covid with delta variant at the influent, so staff is taking extra precautions, with 12-hour shifts and crew isolation practices.
- Concrete has been poured for the Safety project at Rio, providing fall protection at the clarifiers and bar screens.
- Staff did an in-house project, rehabbing the laundry room. They replaced damaged walls, floors, cabinets, with a separate dirty washer and dryer

- from the clean washer and dryer. There were a few plumbing issues, but it looks nice!
- All crews are receiving the first of “Saving your Assets” training.
 - ADEQ did a testing session at the Rio de Flag WRP. Another test session is scheduled for December.
 - Reclaimed is preparing for Snowbowl to go online at midnight, Nov. 1.
 - It’s dredging season, for the biosolids drying ponds. The old truck used for this purpose and inherited from Distribution has finally died, but Fleet has a dump truck we can use for transporting the geo bags.
 - We are beginning reclaimed pressure testing to establish a current reclaimed flow model; Flow and pressure testing was last done in 2012. Calibrations and testing will provide data to connect the reclaimed tanks and improvements in planning stages for the system.

Water Resources and Conservation

- Water Resources is contracting geophysics work in areas slated for future development, to determine if a suitable well site location exists before land development begins.
- Water Resources has a new technician working on the aquifer monitoring program and Upper Lake Mary Watershed Monitoring Program.
- Erin gave a webinar for AZ Water on the Future of Reclaimed Water in Flagstaff. She also did a water presentation on Indigenous People’s Day.
- Water Resources re-submitted a water rights claim at Red Gap Ranch for the stock ponds, transferring into the City’s name.
- A Five-year update is due to ADWR on the drought contingency plan.
- A Water Sewer Impact Analysis is underway for the Northern Arizona healthcare campus. It’s a complicated project, as they are still determining their needs.
- Water Resources is assisting with reimbursement to the county for the upsizing of the new sewer line.
- City’s vice mayor attended the Northern Arizona Municipal Water Users Association (NAMWUA) board meeting with a focus on Water Resources history of the member organizations.

Conservation

- Project WET Water Festival stats: 443 students from 20 classes, with 20 teachers from 6 schools. We had over 60 volunteers from NAU.
- Our Conservation Specialist, Emily Melhorn, conducted three school classroom presentations for 120 students.
- Project Wet may be doing an “on-demand” Water Festival for other classes with assistance from Lorie Cavalli (who has a part-time position with Project WET that we partially fund)

- The non-revenue water audit is underway, with some follow up data still being collected.
- School/business water audits: We've been working with Flagstaff Junior Academy, providing them with 5-7 new toilets and aerators for most of their faucets.
- Facilities has agreed to install 11 efficiency (Stealth) toilets at various City buildings.
- Conservation staff is working with the Aquaplex on efficient water use strategies.