



CITY COUNCIL - DIVISION INTRODUCTION

# Water Services

FEBRUARY 23, 2021

# Director's Overview

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- Located outside of City Hall
- Operations
- Distribution and Collection
- Water Production located at Lake Mary Water Treatment Plant
- Wastewater Treatment - 2 plants, Wildcat Hill WRP and Rio De Flag WRP



# Overview

## Public Utility

- Flagstaff Water business began in 1899
- Water and Sewer Services
- Fire Protection
- Stormwater Protection against flooding

## Business Values

- *Sound Planning*
- *Appropriate Investment*
- *Highly Reliable Water Service*
- *Protecting Public Health and Environment*
- *Exceptional Customer Service*
- *Sound Finances, Increasing Efficiency*
- *Transparency and Community Engagement*



**Delivers** 6-10 MG of drinking water per day  
**Treats** 5.6 MG of wastewater per day

**20K**  
Customers  
Served

**\$21M**  
FY 2021  
Operating  
Budget

**\$85.3 M**  
5-YR Capital  
Improvement  
Program

### WATER SYSTEM

425 miles of pipeline  
10,600 valves  
3224 fire hydrants  
5 pump stations  
2 water treatment plants

### WASTEWATER SYSTEM

274 miles of pipeline  
7403 manholes  
0 lift stations  
2 water reclamation facilities

### WATERSHED PROTECTION

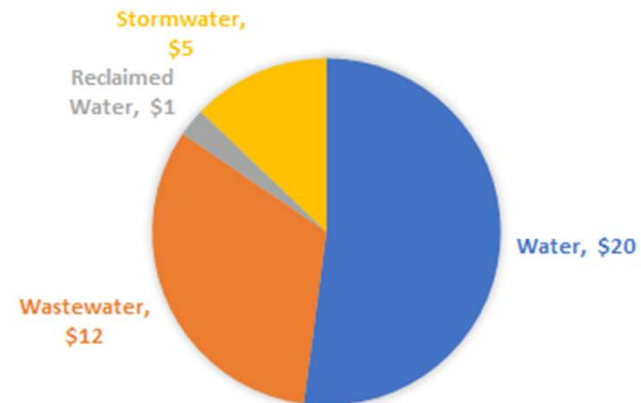
68 miles of pipe  
26 miles Open Channels  
551 inlets  
324 culverts  
964 outlets  
7 drainage basins



## WATER SERVICES

~ \$38 Million Utility Business

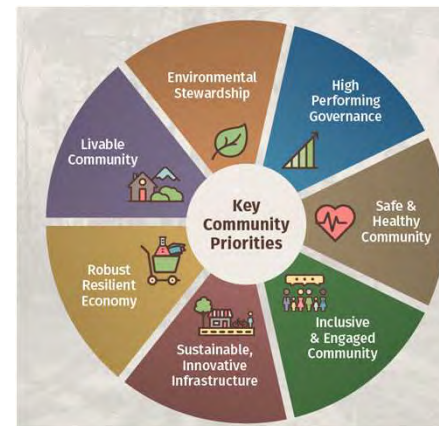
4 Enterprise Funds



## PRIORITY BASED BUDGET

### Key Community Priorities (strong alignments)

- Inclusive & Engaged Community
- Sustainable, Innovative Infrastructure
- Robust Resilient Economy
- Livable Community
- Environmental Stewardship

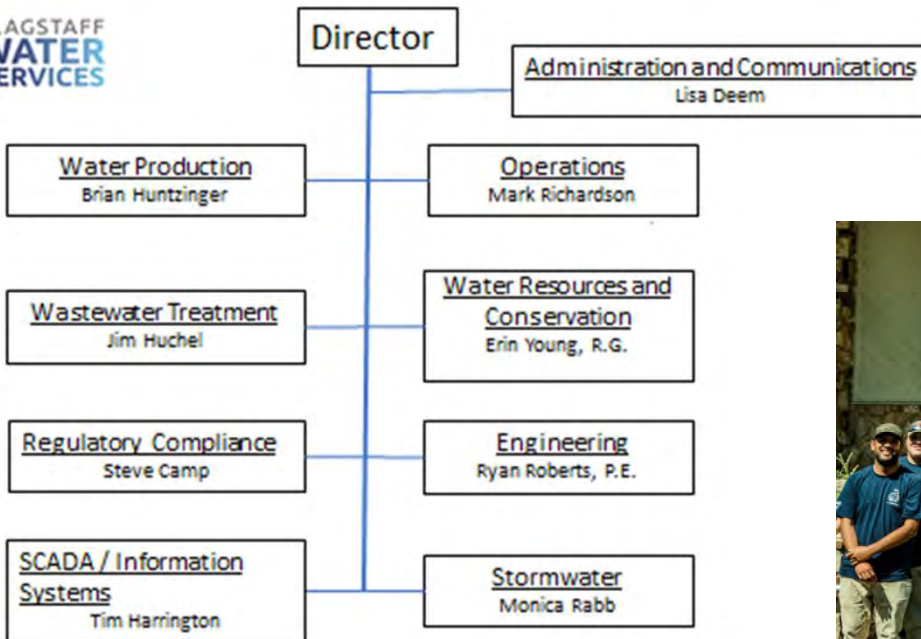




# Org Chart



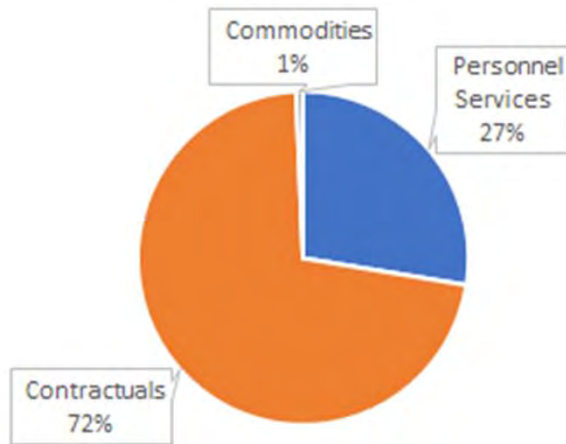
## Flagstaff Water Services Organization Chart FY2021



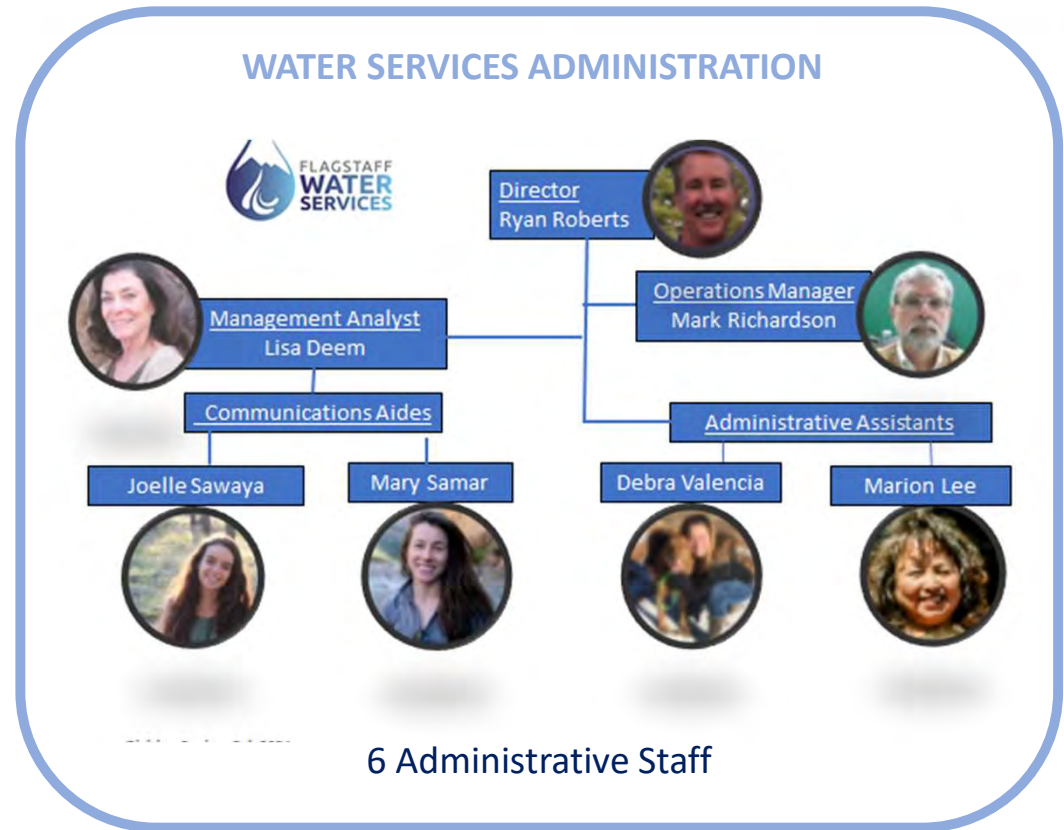
83 Division Staff



# Administration Overview



- \$2.1 Million Budget
- Includes \$1.35 Legal Fees
- Water Services Admin Building expense
- Oversight on Finance and Budget



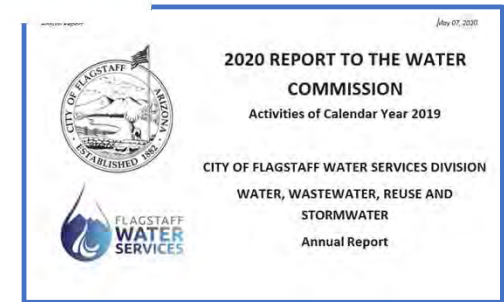


# Administration Overview



## Goals and Accomplishments

- Track *Strategic Plan 2025* performance
- Keep public substantively informed
  - Monthly Blogs & News Pieces
  - Easy to use Web pages
  - Public Service Announcements
- Annual Report to Water Commission
- Outreach for Capital Projects
  - Rio De Flag Flood Control Project
  - Coconino Estates, Fort Tuthill



"Create a reliable brand"





# Water Production



## Operations



Lee Williams  
Operations Supervisor



Brian Huntzinger  
Water Production Manager

## Maintenance



John (Danny) Hickey  
Maintenance Supervisor



Tim Hourihan  
MSW-Operations



Kristian Heckard  
MSW-Operations



Stuart Penoff  
MSW-Operations



Taylor Prichard  
MSW-Operations



James Holsten  
MSW-Maintenance



Ladd Steele  
MSW-Maintenance



# Water Production

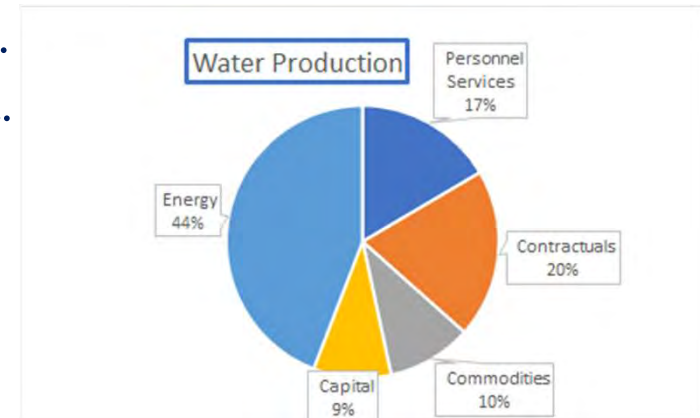
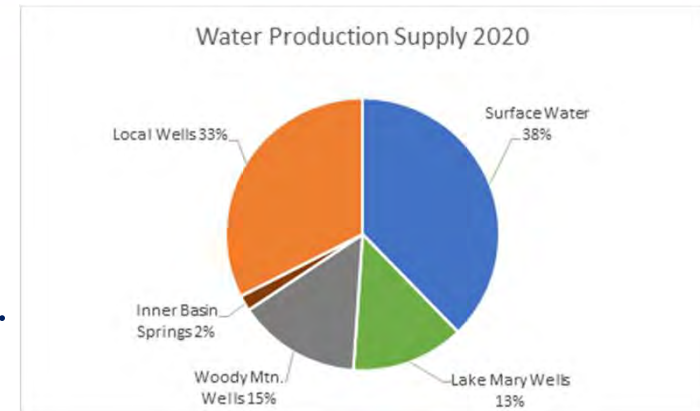
55 Facilities: 28 Wells, 19 Tanks, 6 Booster Stations, LMWTP (8mgd) & NRFP (4mgd).

## Fiscal 21 Accomplishments

- Produced over 1 billion gallons surface water (CY20).
- Rehabbed the Woody Mountain Booster Station Clarifier.
- Completed Back-Up Power Generation Project.
- Repaired 6 tank mixers & cleaned the RWPS CW.
- Replaced the variable frequency drive for Foxglenn Well.
- Replaced the Master Flowmeter for Lake Mary Wellfield.
- Completed design of LMWTP Sed. Basin Project.

## Fiscal 22 Goals

- Upgrade Lake Mary Wellfield Communications.
- Recoat the interior of the LMWTP Water Tower.



Water Production Total FY21 Budget \$4,679,605



# Operations



Operations Manager  
Mark Richardson



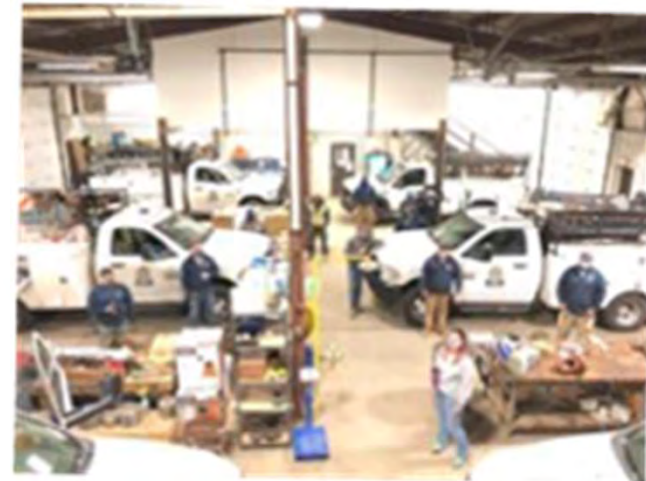
Distribution Supervisor  
Patrick O'Connor



Collections Supervisor  
Joe Almendarez



**Water Services**  
**Sections 303 and 313**  
➤ **26 FTE**





# Water Distribution



- Potable

- 438 Miles Water mains
- 3,397 Hydrants
- 11,377 Valves ( 469 16" and larger)
- 21, 250 Meters



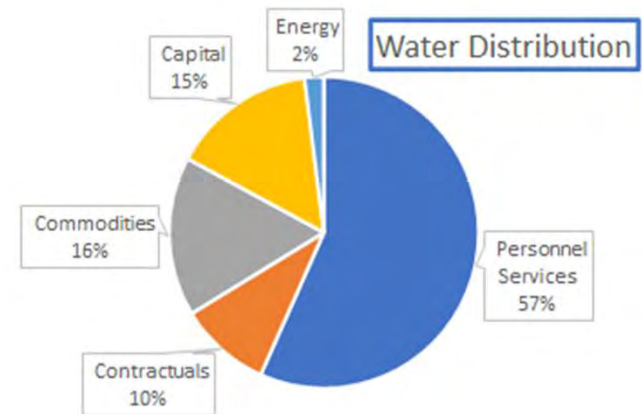
- Reclaim

- 25 Miles
- 14 Hydrants
- 250 Valves



## Distribution Section 303

15 FTE Total \$2.44M

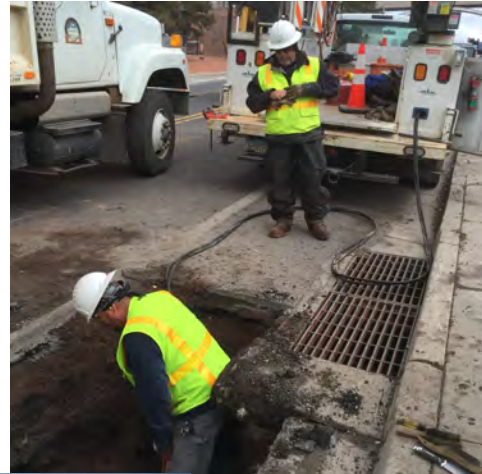


Reclaim Water  
Section 321  
Total \$11.5 K



# Water Distribution

TEAM FLAGSTAFF  
WE MAKE THE CITY BETTER





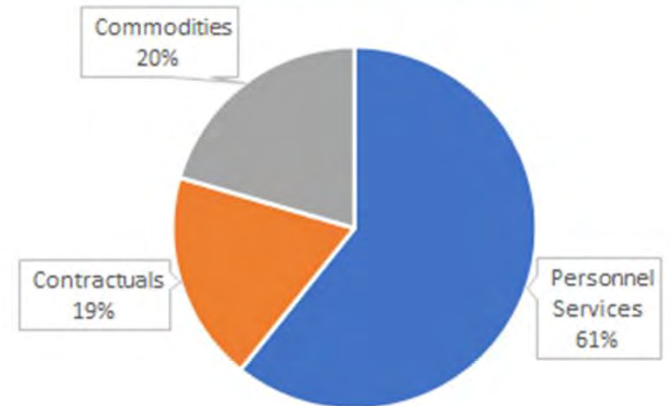
# Wastewater Collection



## Water Services Section 313

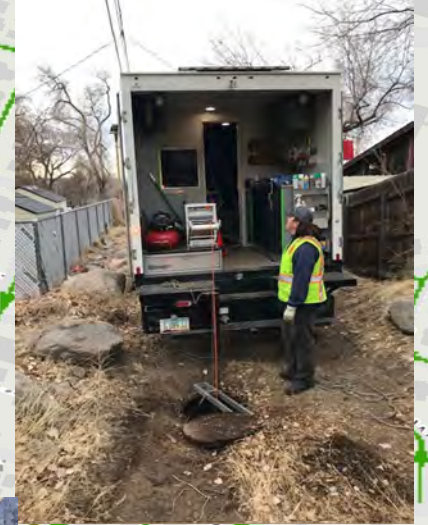
11 FTE Total \$1.24 M

### Wastewater Collections





# Wastewater Collection





# Wastewater Treatment



**Water Services  
Section 203**

➤ 13 FTE Total \$3.7 M



Jim Huchel Manager

## Operation & Maintenance Supervisors



Troy Dagenhart Wildcat



Rick Wright Rio de Flag

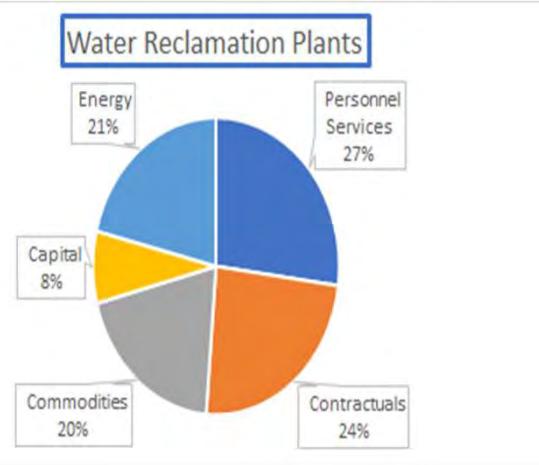


Scott Gede Maintenance



Shawn McKee Electrician

## Operations & Maintenance staff



Bill Case



Kyle Nelson



Cory Mueller



Paul Adams



Matt Black



Kiley McCormack



Tim McGinnis



Ryan Urena



# Wastewater Treatment Wildcat



## Water Reclamation Plants

- Wildcat Hill 6 MGD design
  - Wildcat Hill FY 20 flow – 1.220 Billion Gallons
  - Septage Received FY 20 Flow – 3.25 Million Gallons
  - Grease Received FY 20 Flow – 450 Thousand Gallons





# Wastewater Treatment Rio de Flag

## Water Reclamation Plants

- Rio De Flag WRP 4 MGD design
  - Rio de Flag FY 20 Annual flow 654 Million
  - Replaced 7 non-operational slide gates and restored the concrete



Old Valve – Replaced



New Stainless Steel valves



Existing concrete

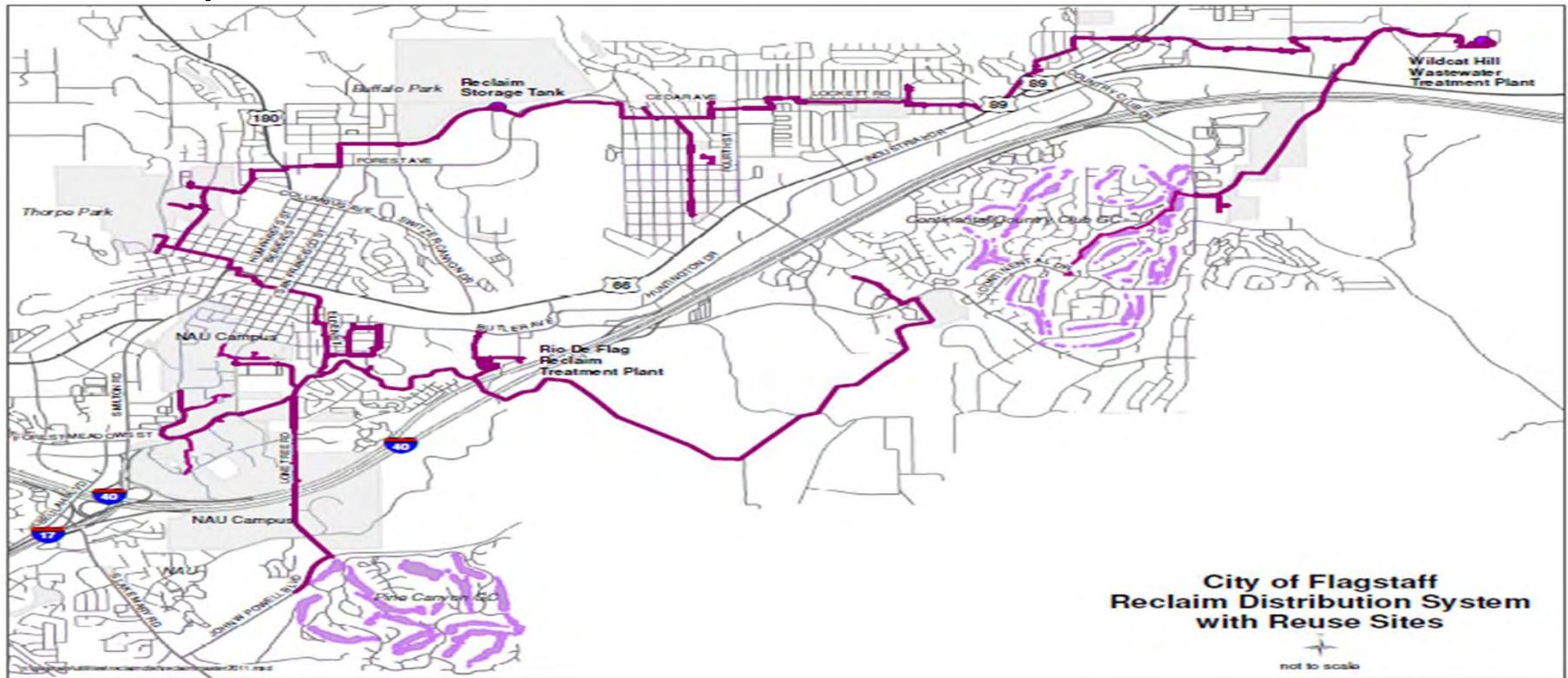


Repaired and coated concrete



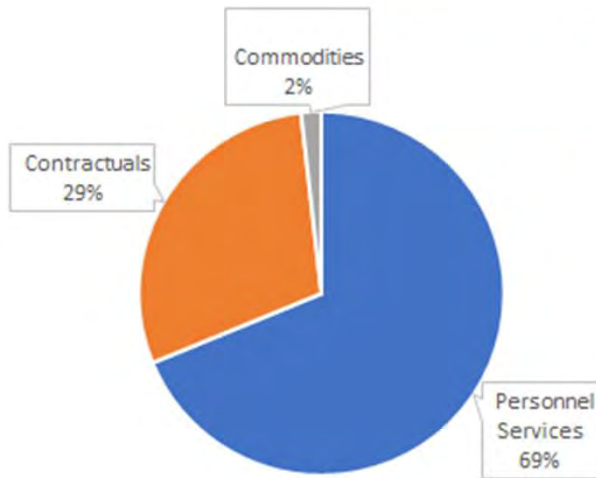
# Reclaimed Water

- Reclaim annual consumption – 650 Million Gals
- Reclaim production – 668 Million Gals

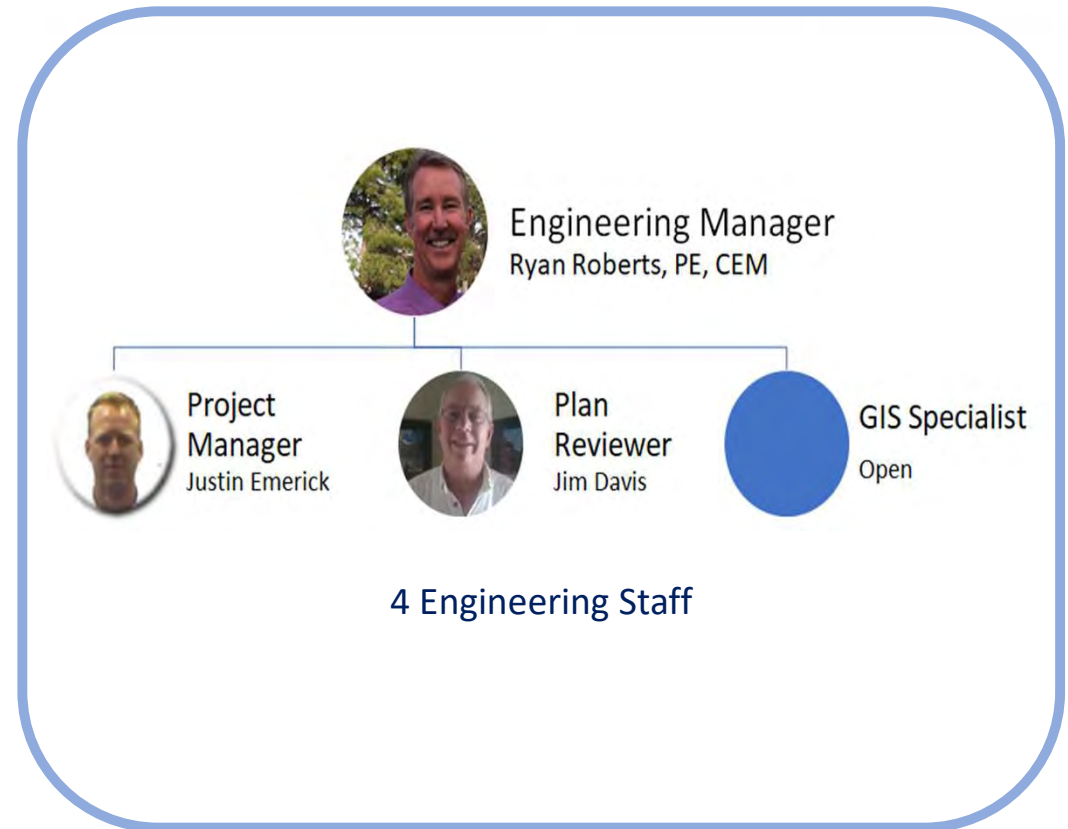




# Engineering



- \$571K Budget
- 29% Contractual





# Engineering



## CORE RESPONSIBILITIES

- \$14M Capital Improvement Program
- Asset Management-Pipe Replacement Program
- Project Management
- Plan Review and Permitting
- Geographic Information System (GIS)
- Regional Plan and Utility Master Plans

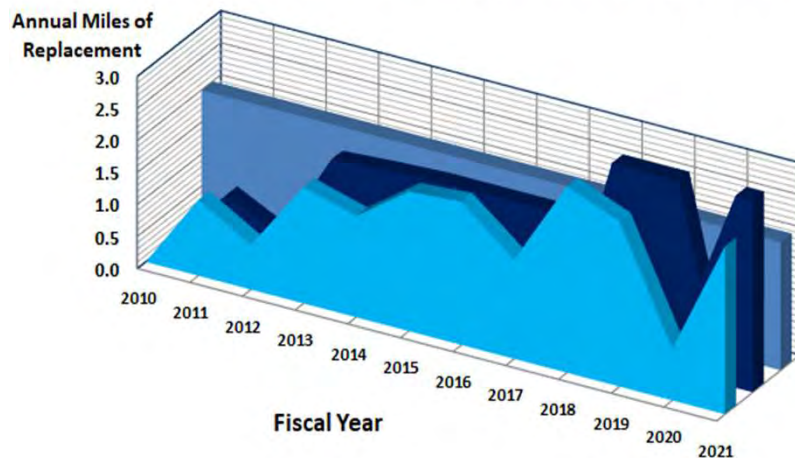




# Engineering-Look at FY21



Projected Water Main Replacement -Aging Mains



## FY21-22 PROJECTS

- Replace Aging Water and Sewer Infrastructure
- Increase solids capacity at Wildcat WWTP
- Add New Water Well at Fort Tuthill
- Implement Energy Efficiency Projects
- Lower Greenhouse Gas Emissions
- Increase Reclaimed Water System Capacity



# SCADA and Information Systems



**Brain Dennis Gaon**  
Information Security  
Officer



**Rod Liebe and Lorne  
Cargill**  
I and C Supervisors



**Unfilled**  
I and C Supervisor



**Tim Harrington**  
SCADA/IS Manager

**Corryn Smith**  
Water Serves IS Administrator





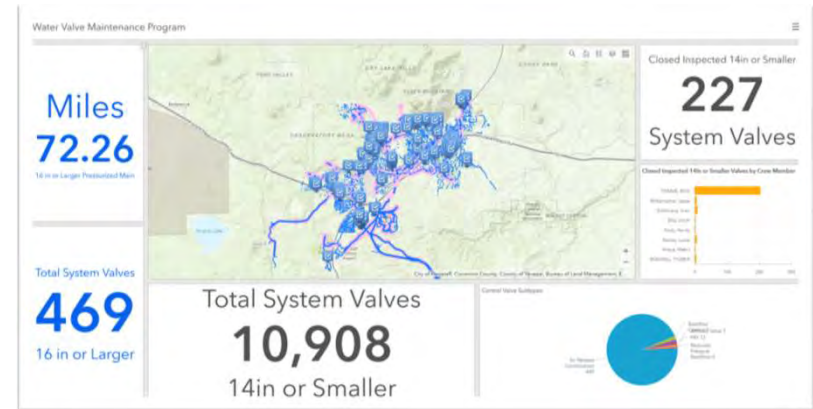


# SCADA and Information Systems

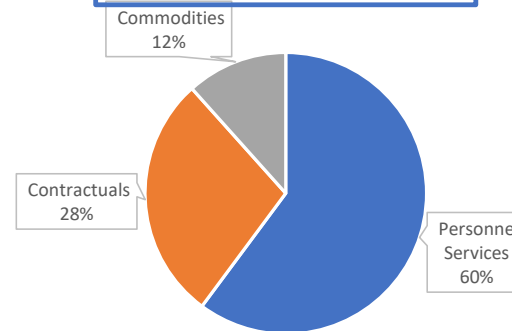


## What We Do

- We give Water Services the ability to monitor, remotely control and automate processes.
- Our work order management system helps to proactively maintain our infrastructure and assets.
- We visualize the information needed for Water Services to make data driven decisions.



SCADA / Information Systems





# SCADA and Information Systems



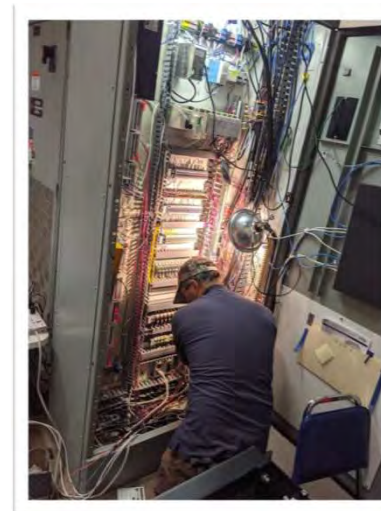
## FY 21 Accomplishments

- SCADA Network Redesign
- Cyber Security Planning
- Expanding Workorder and Inspections Infrastructure Monitoring
- Improve Physical Security



## FY 22 Goals

- Improved Vulnerability Management
- Next Phase of Network Refresh
- Improve Separation of SCADA Network
- Improved Network Monitoring





# Stormwater Section Overview



Monica Rabb  
Section Manager



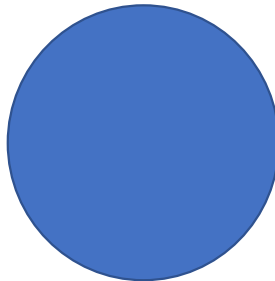
Doug Slover, PE, CFM  
Project Manager  
Plan Review



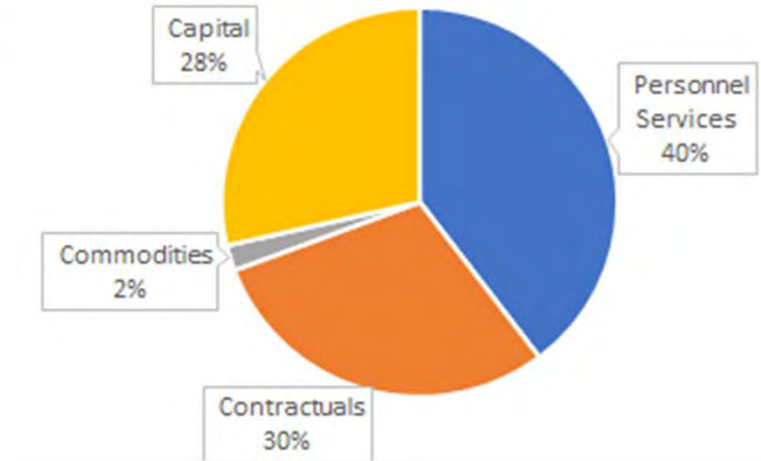
Chris Palmer, CPESC  
Watershed  
Specialist



Ed Schenk, RG,  
CFM  
Project Manager  
Open Channels



Vacant  
Project Manager  
Flood Issue



**Water Services  
Section 331**

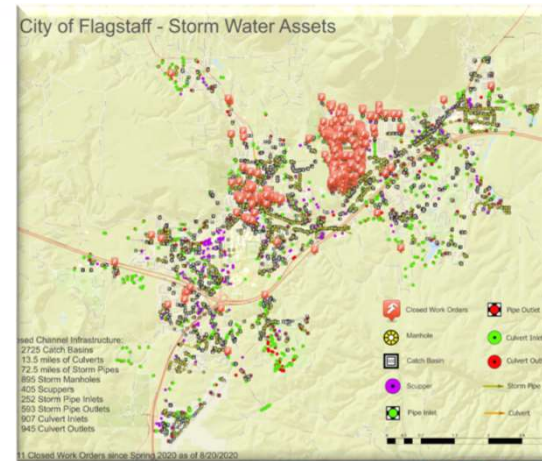
- 5 FTEs
- Budget: 1,799,939



# Stormwater Programs



- Capital Improvement Program
- System: Oversee Efficiency, Maintenance, Cleaning, Master Planning, Flow Modeling
- Army Corp Rio de Flag Flood Control: Review plans, serve as owner and manager upon completion
- Floodplain Administration and Drainage Investigations and Response
- Open Channel Maintenance: Hydrology on capacity and condition of system, emergency response planning, grants
- Development Review: Plan Review, Stormwater permitting for buildings, grading and drainage, erosion control plans
- Construction Site inspections, customer complaints, permit compliance





# What's Next – FY 2021



## CAPITAL IMPROVEMENT PROJECTS:

- Phoenix Avenue Bridge
- Spruce Avenue Wash Channel Dredging and Improvements (Dortha)
- Spruce Wash Resiliency (4<sup>th</sup> Street)
- Soliere Blvd. at Steves Wash Low Water Crossing Improvements
- Columbia Circle Flood Control Project
- Killip School Regional Retention Basin

**Ongoing** includes Rio De Flag Flood Control Project with ACE, Fanning Wash Improvements, Wildwood Hills

## IMPROVING QUALITY OF LIFE:

- Development of maintenance program that is proactive instead of reactive, based on asset management (maintenance and life cycles)
- Updates to zoning requirements
- Continued monitoring, stream science and flood preparation activities

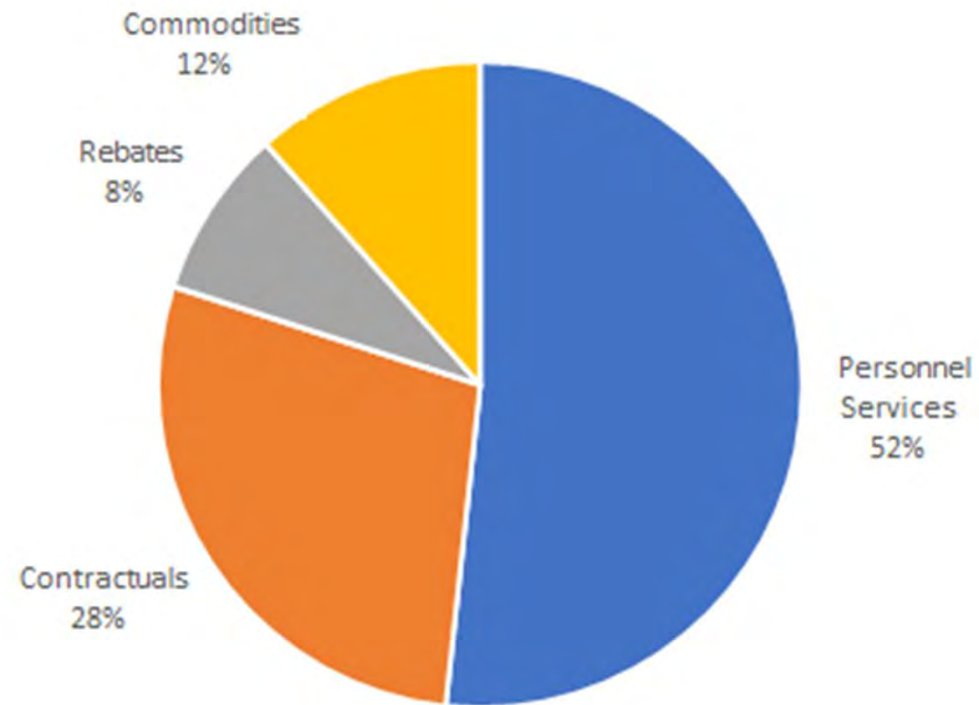




# Water Resources & Conservation



	FY21 Base + 1x
Personnel Services	\$366,000
Contractuals	\$200,000
Rebates	\$60,000
Commodities	\$82,000
SubTotal 304 Water Resources & Conservation	\$708,000





# Water Resources & Conservation



Erin Young, R.G. (AZ Registered Geologist)  
Water Resources & Conservation  
Section Manager



Tamara Lawless, PhD  
Water Conservation Program Manager



OPEN (Pete Morrow 11/19-12/20)  
PT - Water Resources Technician



OPEN (Kate Miele 11/19-2/21)  
Water Conservation Specialist



Intern, Arikah Peacock, 3/15/21  
Southwestern Indian Polytechnic Institute  
Keeps eagle scholarship  
Navajo (dinè)



Bob Rukavina  
PT - Water Conservation Aide



TBD  
PT - Water Conservation Aide



TBD  
PT - Water Conservation Aide

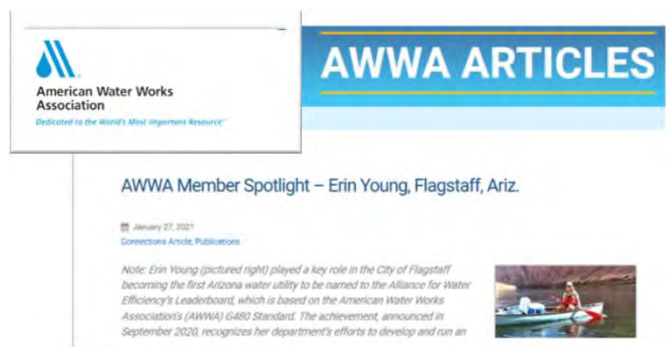


# Water Resources & Conservation



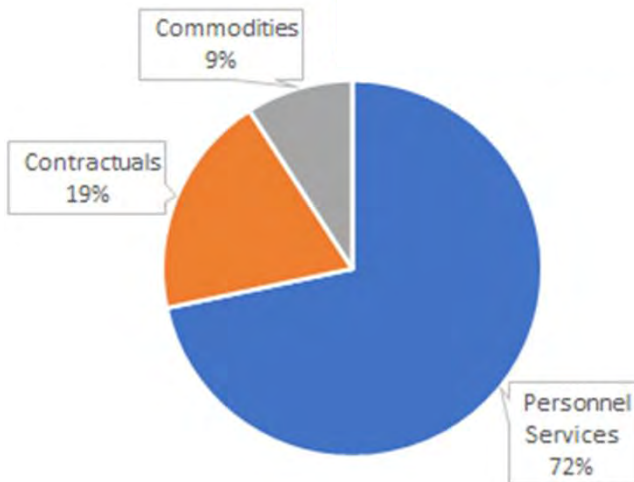
## FY21 Goals

- Water Conservation Implementation Plan
- Utility Non-Revenue Water Audit
- Reclaimed Water Master Plan
- Digital Water Demand Model
- Evaluation of Upper Lake Mary Watershed Monitoring Program
- 4x water well sites

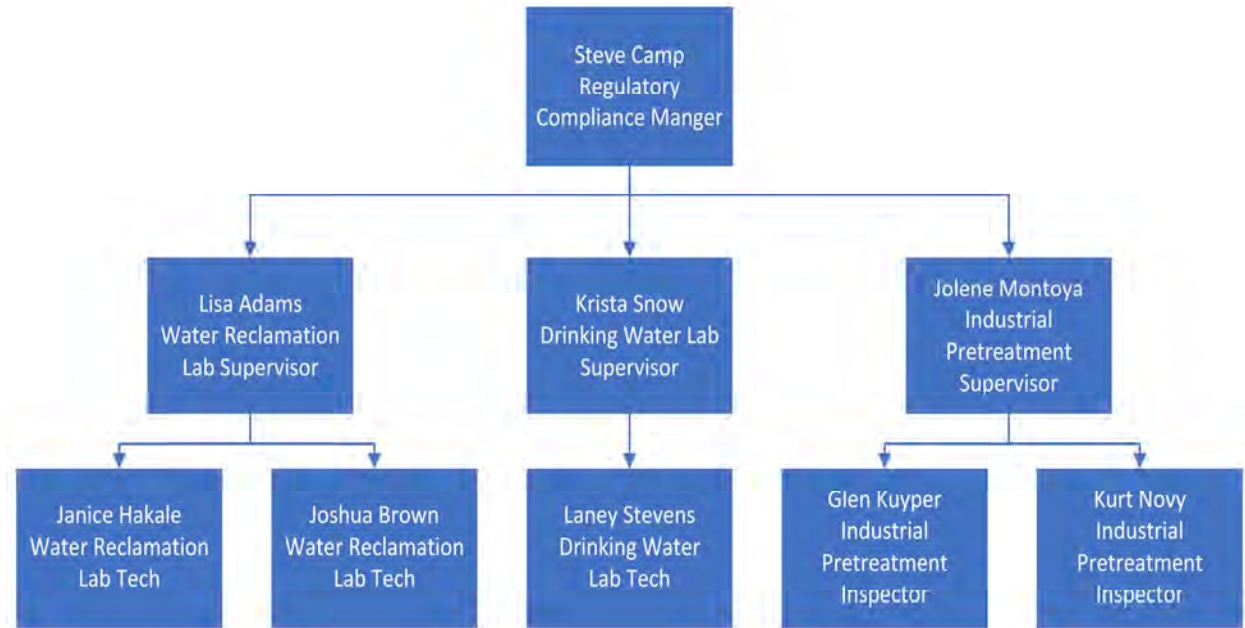




# Regulatory Compliance

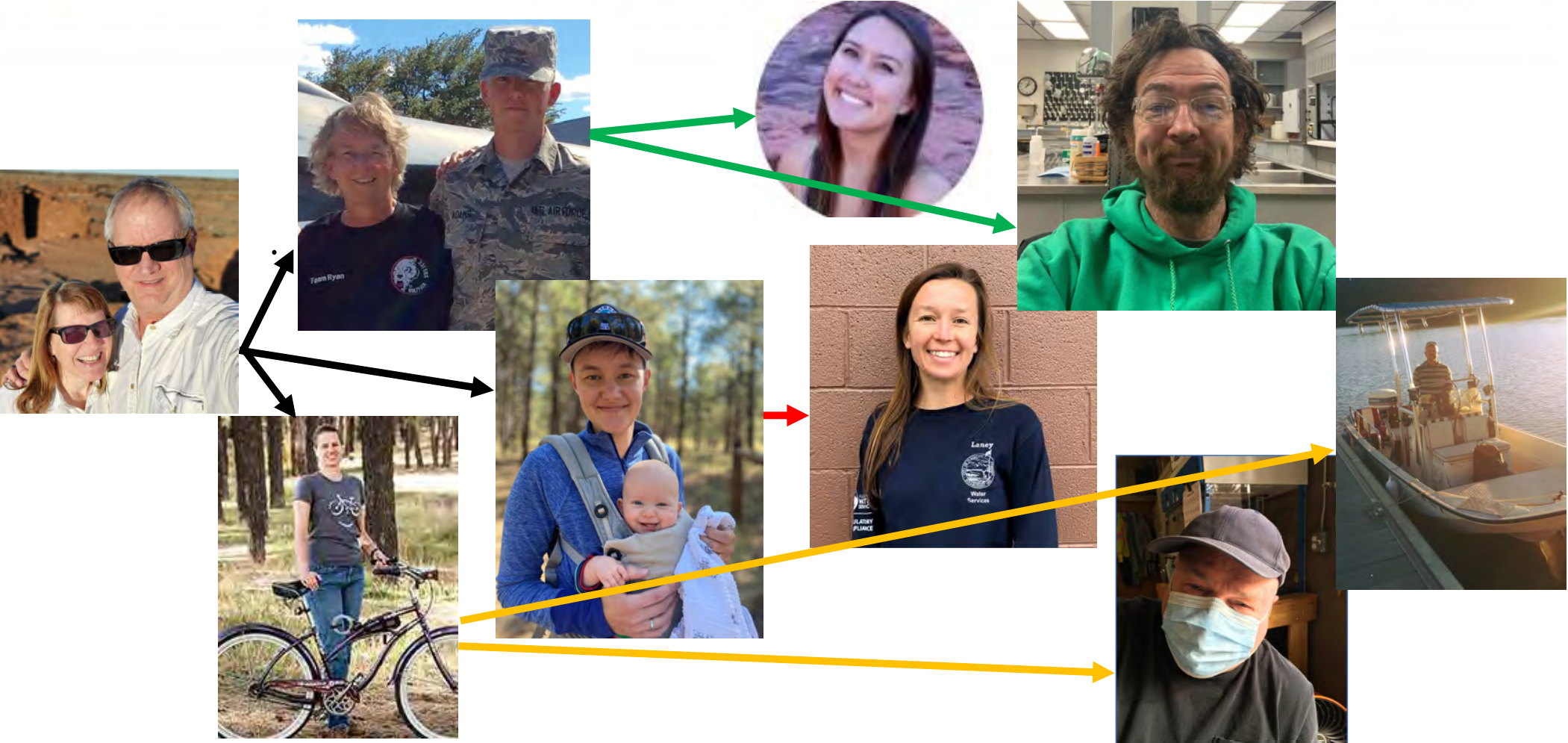


- \$1.1M Budget
- 20% Contractual





# Regulatory Compliance



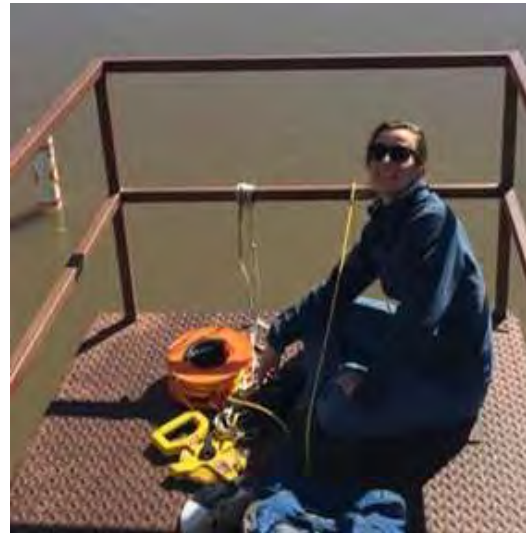


# Regulatory Compliance



## Drinking Water Lab

- Sampling and analysis to assure water is safe and compliant
- Address complaints to our drinking water system
- Reporting to State





# Regulatory Compliance



## Water Reclamation Lab

- Sampling and analysis of Wildcat Hill and Rio de Flag WRP
- Managing more than seven different permits with the State to keep plants in compliance
- Updating and submitting applications for new permits





# Regulatory Compliance



## Industrial Pretreatment Program

- Fats, Oil and Grease (FOG) Program
- Restaurant inspections and enforcement of oil/grease separators
- Protect sanitary sewer overflows (SSO) in collection system
- Permit Significant Industrial Users
- Manage Cross Connection Control Program





# Look at FY21



## Strategic Plan Objectives

- Wildcat Solids Processing Capacity
- Flood Management – Spruce Ave Wash
- Increase Stormwater Maintenance
- Water and Sewer Infrastructure Replacement
- Address Critical Workforce Issues





# Outreach



Want a quick and easy way to stay informed on Water Services projects?

Rio de Flag <https://www.flagstaff.az.gov/4189/Rio-De-Flag-Flood-Control-Project>

Coconino Estates <https://www.flagstaff.az.gov/4471/Coconino-Estates-Improvements>

Water Services <https://www.flagstaff.az.gov/4237/Capital-Improvement-Map>



**Thank you**