



HOTEL
MONTE VIS

Council Budget Retreat

January 16, 2019



Agenda

- Welcome and Retreat Objectives
- Water Services Presentation
- Council Objectives Prioritization
- High Performing Government
- Public Participation



Water Services

Brad Hill

FY 2019 Budget

\$49,774,337

FTE: 78.96



Sections

- Administration
- Water Production
- Water Distribution
- Water Resource Management
- Engineering
- Regulatory Compliance
- Wastewater Treatment
- Wastewater Collection
- Reclaimed Water
- Stormwater





Administration



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Accomplishments



- Developed and implemented Communications Plan
 - E-blogs
 - Community forum events
 - Recycled Water Survey
 - Capital interactive map on the City's webpage



Capital Improvement Map

Water Services Capital Improvement Projects 2019

Overview | **Water** | Wastewater | Reclaimed Water | Storm Water | Admin/Planning

- 1 Lake Mary Sedimentation Basins
- 2 Switzer Canyon Transmission Line
- 3 Lonetree Transmission Line
- 4 Fontaine Street Waterline Replacement
- 5 I 40 & Country Club Dr, Water Main Leak Repair
- 6 Plaza Way Waterline Relocation (ADOT)
- 7 Calvary Cemetery Waterline Replacement
- 8 Lake Mary Land Acquisition

County of Yavapai, Esri, HERE, Garmi...



Challenges



- Funding for outside legal counsel regarding the Little Colorado River adjudication trials
- New Water Services building acquisition and accelerated move
- Financially tracking our technology systems that monitor and control the operational sections



Priorities/Initiatives



- Moving out of City Hall and “White House” into the new Water Services Administration building
- Develop virtual tours for security-sensitive facilities and partner with NAU for Lake Mary WTP
- Consistent signage for capital projects within the community



Annual Sewer Replacement Program

Westside Sewer: Phase 2

West Side Sewer Improvements
Project Manager | Duane Hunn | (623) 640-8960

Contractor:
Hunn Development Company



Construction Cost:
\$1,283,000

Project Timeline:
October 2018 - May 2019





Water Production



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Accomplishments



- Back-Up power generators at key water production facilities
(aligns with Climate Action and Adaptation Plan)
- SCADA analog to digital upgrades



Before



After





Challenges



- Ensuring all water production facilities are at maximum capability and accessible
- Upgrades to water production facilities located on USFS lands

Lake Mary WTP



Water Line Road





Priorities/Initiatives





- Continued Supervisory Control and Data Acquisition (SCADA) communications equipment upgrade from analog to digital
- Complete McCallister Water Well





Water Distribution



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Accomplishments



- Updating pressure reducing stations
 - Installed PRV at Fire Training Facility at Wildcat Hill WRP
 - By reducing water pressure from 165 PSI to 60 PSI, eliminated a dangerous situation for FFD
- Customer water meter replacement program
- Leak detection program expanded to 98.3 miles



Challenges



- Aging infrastructure – old cast iron and AC pipe
- Technician training
- Increased number of service calls



Replacement of water line under I-40



Priorities/Initiatives





- Hydrant inspections / valve maintenance / meter replacement

The screenshot displays the Cityworks software interface. At the top, there is a navigation bar with the Cityworks logo, a search bar, and a user profile for RICHARDSON, MARK. Below this is a menu with options: Inbox, Designer, Inspections, and WorkOrders. The main area is divided into two panels under a 'New User Panel' header. The left panel, titled 'Open Fire Hydrants', shows a map with numerous blue hydrant icons. A blue callout box at the bottom of this panel states '3,263 Hydrants'. The right panel, titled 'Open Work Orders', shows a map with red hydrant icons, some of which have red arrows pointing to them, indicating they need repair. An orange callout box at the bottom of this panel states 'Hydrants need repair'. Both maps include standard GIS controls like zoom, pan, and search, and are powered by Esri.



Water Resource Management



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Accomplishments



- Water supply alternatives
- Water Conservation Strategic Plan (in-progress)
- Future Water Well Siting Study
- Water well drilling
- Statewide Water Loss Control Program sponsored by Arizona Department of Water Resources

City of Flagstaff
Water Supply
Alternatives Costs

Richard Humpherys
Corin Marron
Eva Steinle-Darling

WATER
OUR FOCUS
OUR BUSINESS
OUR PASSION

carollo
Engineers...Working Wonders With Water®



Challenges



- Linking and processing City data to make informed decisions
- Tracking current and committed water demands – 100 year designation of adequate water supply

The Journey to Results: How Data Discovery Fits In



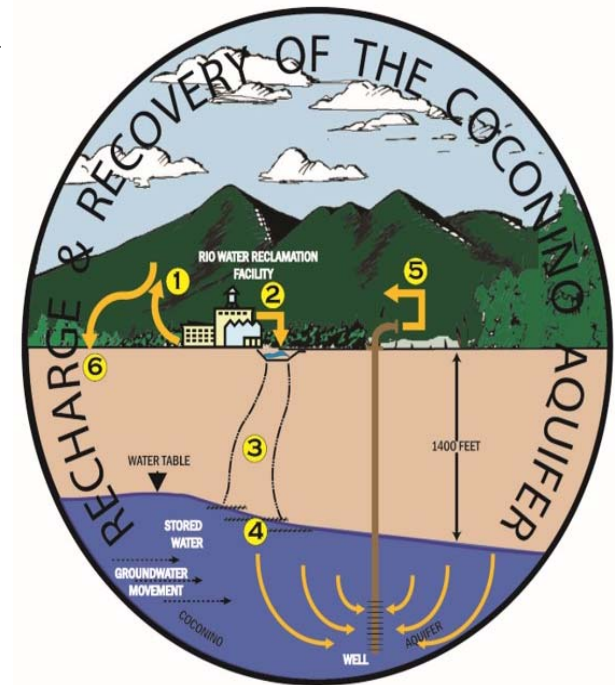


Priorities/Initiatives

- Implement Groundwater Recharge Field Study
- Implement Water Conservation Strategic Plan
- Start Water Resources Master Plan
 - Propose Policy on Economic Value of Water



*Celebration of 30 Years of
Water Conservation*







Accomplishments

- \$4.9 M of aging infrastructure: water lines (11,320 feet) and sewer lines (2,880 feet)
- Water Services Admin Bldg. purchase and remodel
- Design and replacement of \$2.65M at Rio WRP
(aligns with Climate Action and Adaptation Plan)



Replacing undersized west-side sewer line



Challenges



- Approaching solids handling and hydraulic loading capacity at Wildcat Hill WRP
- Large capital investment needed in the near future
- Complete Red Gap Ranch Feasibility Study



Priorities/Initiatives



- Aging water-sewer treatment plant infrastructure



Lake Mary
WTP Control
Room



Wildcat Hill
WRP
Electrical



Wildcat Hill
WRP
Mechanical

- Replacement of aging water and sewer line infrastructure



Regulatory Compliance





Accomplishments



- City Council adopted Enforcement Response Plan for Pre-Treatment and Stormwater programs
- Implemented electronic inspection forms moving away from paper
- Successful audit of compliance laboratory by ADEQ

Jolene Hayes
Interim Pretreatment Supervisor





Challenges



- Developing best management practices for local breweries and other facilities that may impact our wastewater plants
- Continued implementation of technology
 - water quality database





Priorities/Initiatives



- Pretreatment
 - Local Limit Study for FY 2020 and related City Code updates
- Lab
 - Adjusting skill blocks in the Multi-Skilled Worker program to meet the needs of the Regulatory Compliance section

City of Flagstaff
Local Limits Study

Prepared for: The City of Flagstaff
Prepared by: GHD Inc.
January 2015

GHD City of Flagstaff Local Limits Study 14 | Page 2015



Wastewater Treatment



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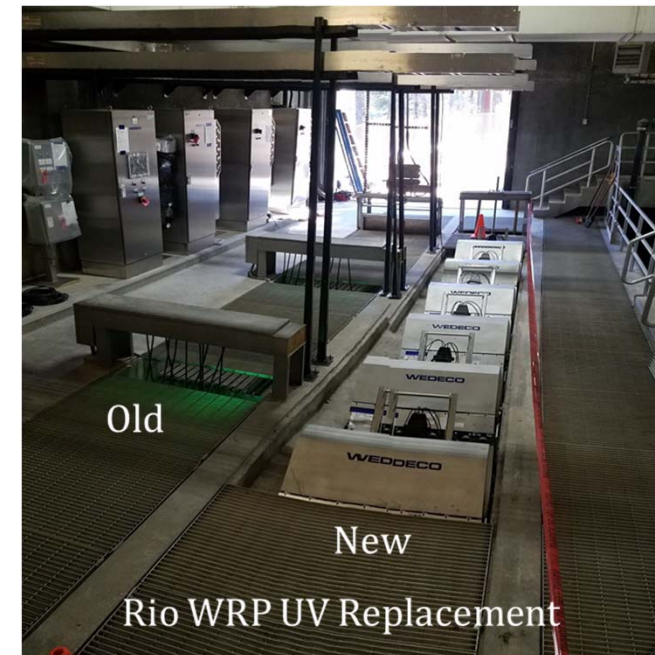




Accomplishments



- Upgraded solids disk thickeners 2017 and 2018 – Wildcat Hill WRP
- Energy conservation wastewater projects
 - Aeration blowers \$1.25M
 - UV disinfection \$1.40M
 - Reduced usage by 781,048 kWh
 - Saves approximately \$86,000 annually
 - APS energy incentives \$164,414
 - Aligns with Climate Action and Adaptation Plan





Challenges

- Continued increase in wastewater strength creates problems making Class A+ reclaimed water
- Challenges of maintaining Wildcat's IFAS basins
- Aging infrastructure and approaching limits on treatment capacity



Diver to conduct blind inspection



IFAS wastewater treatment basins



Priorities/Initiatives



- Update solids treatment and handling
 - Replace temporary GeoTubes with a permanent solids handling
- Replacement of aging treatment plant infrastructure





Wastewater Collection



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A central blue overlay containing the title 'Wastewater Collection' in large white font. Below the title are two logos: the official seal of the City of Flagstaff, Arizona, established in 1882, and the 'TEAM FLAGSTAFF' logo with the slogan 'WE MAKE THE CITY BETTER'.



Accomplishments



- New video inspection vehicle
 - Analog system to digital system
- Cleaned / inspected 99.6 miles of sewer pipe in the last 11 months
- Upgrade communications within service trucks to improved mapping and work efficiency





Challenges



- Aging Infrastructure Replacement
 - Decreased flows and velocity in sewer system causes increased maintenance



Sewer TV inspection shows gasket installed wrong



Priorities/Initiatives



- Safety of crews and public
- Continued root control program
- Continued manhole rehabilitation



Old brick lined Manhole with
root mat at bottom



Reclaimed Water





Accomplishments



- Completed Advanced Treatment Feasibility Study
- Recognized by Arizona WaterReuse as having the best program in 2018
- Completed Bushmaster Park lift station





Challenges



- Increase storage capacity
 - 2nd tank
- Policy conversations
 - How to best manage unused reclaimed water? (~65%)
 - How clean is clean?



Buffalo Park Reclaimed Water Tank



Priorities/Initiatives



- Start the Water Resources Master Plan (*include reclaimed water and its future*)
- Communicate results of on-line survey
- Automate control and monitoring of distribution system



Bushmaster Park
Lift Station





Accomplishments



- Fanning Wash Channel Reconstruction Project
- Installed three new rain/flow gages
- Received \$310K FEMA/City grant
- Stormwater Enforcement Response Plan



Rain and Flow Gage



Challenges



- Improve stormwater infrastructure maintenance activities
- Improved mapping and updating GIS database



Channel Debris



Street Ponding



Priorities/Initiatives



- Capital improvement project construction
- Floodplain Management Plan
- Stormwater manual revisions



Phoenix Avenue Bridge

Water Services

What Else Do You
Need to Know?





Council Objectives Prioritization



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Council Objectives Prioritization

For Each Council Goal:

- Prioritization Exercise
- Council Discussion





High Performing Governments



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Public Participation



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