



CITY OF FLAGSTAFF
WATER COMMISSION
August 15, 2019

SUMMARIZED MINUTES

MEMBERS PRESENT

John Malin
Ward Davis
Elizabeth Christy
Malcolm Alter
Ben Ruddell
Marie Jones, P&Z Rep

MEMBERS ABSENT

STAFF PRESENT

Erin Young
Marion Lee
Mark Richardson
Tamara Lawless
Jim Huchel
Brian Huntzinger
Ed Schenk

OTHERS PRESENT

George Kladnik
Brian Wallace

I. CALL TO ORDER

Chair, John Malin called the meeting to order at 4:00 p.m.

II. APPROVAL OF MINUTES – July 18, 2019

Malcolm Alter requested to amend the minutes to reflect that Trevor Henry, Engineering has not come back with answers to some questions that was emailed out. Request for the questions to be added to the minutes. Moved by Ward Davis and seconded by Malcolm Alter to approve the meeting minutes of July 18, 2019 as amended. Motion carried unanimously.

III. PUBLIC PARTICIPATION

George Kladnik, Flagstaff Water Group addressed some concerns with the development of Red Gap Ranch. He asked why the City went with Red Gap Ranch for additional water supply, that there were other areas closer that could have been considered to save costs. Also, fresh water or high quality water is available by using the new Indirect Potable Reuse or Potable Direct Reuse methods which can be staged in. These could be looked at by City to save time and money.

IV. NEW BUSINESS

A. Critical Fuel Delivery – Jim Huchel & Brian Huntzinger

Three back-up generators have been purchased for water production and additional generator purchases are planned for this fiscal year. Water Reclamation personnel have started planning for back-up power supply generators at the Rio Water Reclamation Facility (WRF), in addition to the back-up power supply generators already in place at the Wildcat Hill WRF. Developing a fuel delivery plan for these generators during a catastrophic power loss scenario was raised by Commissioner Ruddell at the June meeting. This plan has not been finalized for Water Production, Water Reclamation or the City of Flagstaff entirely. Arizona Public Service (APS) has recommended the City of Flagstaff prepare for a 48-hr minimum downtime in power supply should a catastrophic power outage to the area occur.

Staff met with Public Works personnel to establish citywide fuel consumption estimates that include additional generators and equipment outside of Water Services, such as Fire Department locations etc. Fuel consumption inventories for back-up power supplies for the entire City of Flagstaff are in process. Thus far, staff have inventoried and estimated current and future generator capacities/storage and demands in terms of gallons of diesel per hour, day, week etc. for Water Production and Water Reclamation locations. One day of fuel storage for back-up power supply is already onsite or planned at the Lake Mary Water Treatment Plant, Wildcat Hill WRF and future generators at the Rio WRF. One option staff is proposing is to add an additional diesel storage tank to the existing two 10,000 gallon diesel fuel tanks at the Public Works fuel delivery station specifically for by Water Services back-up generators during a power loss scenario to Flagstaff. A second option could be to locate an additional storage tank at a Water Services treatment facility. In either case, the addition of one 10,000 gallon fuel tank would provide Water Services with the amount of fuel onsite or at the Public Works fuel delivery station to last the 48hr-minimum downtime that is recommended by APS. Fuel delivery contract negotiations will continue with citywide demands in mind.

- Fund the purchase and installation of a 10,000 gallon diesel fuel tank or its equivalent and either; co-locate at the Public Works fuel delivery station; or locate elsewhere at a Water Services treatment facility if the fuel supply cannot be guaranteed in the event of an emergency.
- Continue fuel delivery contract conversations and negotiations for the City of Flagstaff in its entirety for fuel demand during a catastrophic power loss scenario to the area.

Ward questioned how Arizona Public Services (APS) handles single point failure. Brian Wallace, with APS said there has never been a single point failure and there are multiple entry points of power supply coming into town.

B. Newman & Museum Fire updates – Brian Huntzinger

The Newman and Museum Fires over the past two weeks have had a significant impact on the Water Production and Stormwater Programs, respectively. Staff wanted to provide a brief update on what Water Services is undertaking to mitigate the impacts of these fires. As a reminder, the Newman Fire started as a lightning strike in the Upper Lake Mary (ULM) watershed and the USFS allowed it to burn as a low intensity fire consuming approximately 5,000 acres. The Museum Fire started a week later in the Dry Lake Hills, its cause is currently undetermined. This fire has burned approximately 2,000 acres in the Spruce Avenue Wash that flows through the Paradise and Sunnyside neighborhoods.

Newman Fire: According to the USFS, the ULM watershed has not had a significant forest fire in the past 80 years that the City has been using it as a surface water supply. The industry has learned from forest fires along the Front Range in Colorado that impacts from ash and debris flowing into lakes can cause significant water quality degradation. Turbidity from ash & debris would be the primary impact to the lake's water quality ranging from making it potentially difficult to treat to as far as rendering it useless as a water supply for a long time. Staff will be taking numerous measure and monitor its potential impact. These include installing 3 new turbidity meters (aka turbidimeters) at critical locations to monitor its potential increase. Two will be located at critical inflows into the lake itself that experienced major burning (Newman Cyn and Hoxworth Cyn), while another will be installed at the City's Raw Water Pump Station. This will give staff time (12/24+ hours') notice if the lake water increases in turbidity and we need to either modify our treatment process or turn the plant off. At the Lake Mary WTP itself, our SCADA team has already re-programmed the plant's turbidimeters to alarm if turbidity doubles in concentration, but still well below the plant's ability to treat the water safely. This step alone provides an immediate safety buffer for water production staff to react, if needed.

The post-flooding associated with this fire could have a significant localized impact on the Paradise and Sunnyside neighborhoods with flooding upwards of 3 feet deep depending upon the monsoon rain event. The Stormwater program has been working along with Coconino County to assess the potential for flooding, designing and implementing significant mitigation efforts within the affected neighborhoods. These mitigation efforts have included the installation of jersey barriers, sand bags, new rain gauges, cross-vein weirs to protect a waterline and bollards, etc.

Erin Young added that some staff put in extra hours working with the Museum Fire. Staff was also not sure the severity level of the Newman Fire, but gave an opportunity to review the readiness and prepare for the potential reduction in water supply which would have resulted in water availability strategies.

V. OLD BUSINESS

A. Water Conservation Strategic Plan Update – Tamara Lawless

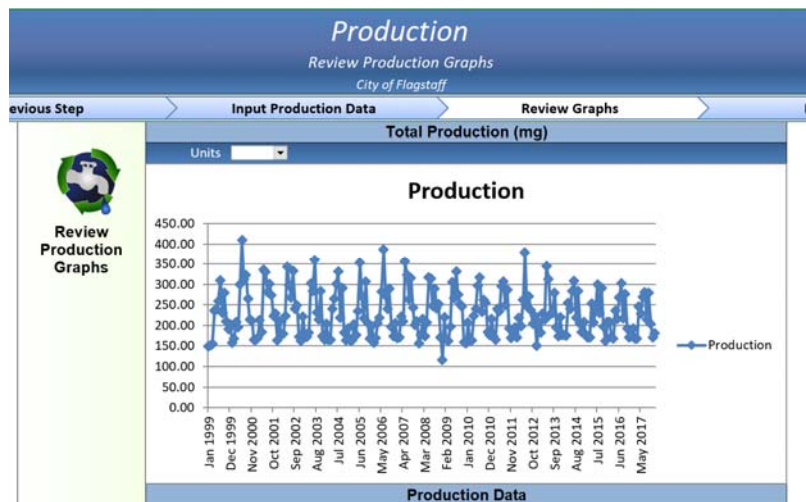
The Water Conservation Strategic Plan received public input on the “Conservation Measures” portion of the Plan in February and since then Staff and Maddaus Water Management Inc. have been building each Measure individual in the Plan model. This has been achieved through a combination of current data for Measures that are already part of the Program and research projects for Measures that the Program is not currently engaged in. Staff provided the Commissioners a window into the model set-up and provided an updated timeline for progress on the rest of the Plan.

Strategic Plan Process

- Phase 1: Data Collection
- Phase 2: Conservation Action (Measure) Selection
- **Phase 3: Cost-benefit Analysis & Scenario Building**
- Phase 4: Draft Plan
- Phase 5: Final Plan & Implementation

Model

- Historic data
 - Production
 - Consumption
- Analyses
 - Category breakdown
 - Indoor percent
 - Fixture breakdown
- Actions
 - Toilet rebates
 - WaterSense Code
- Water balance based



The next step is public input on scenarios. The Commission requested for staff to look into the cost benefit ratio for cost and information.

B. Water Resources Master Plan – Draft Process – Erin Young

Erin said staff has been preparing the Scope of Work of the Water Resources Master Plan but it is not ready yet. She presented an outline to discuss and get feedback of the Scope in detail. These will be addressed at the September 2019 Water Commission meeting.

Contents

Section 1. Introduction

- 1.1 Integrated Master Planning and “One Water” framework
- 1.2 Planning Goals
- 1.3 Planning Process

Section 2. Water Systems History

- 2.1 Water sources overview
- 2.2 Water quality overview
- 2.3 Watershed health
- 2.4 Aging infrastructure and capacity
- 2.5 Pricing and affordability
- 2.6 Climate change

Section 3. Water Demand & Use Projections

- 3.1 Population-based projections
- 3.2 Land-use based projections
- 3.3 Water use trends
- 3.4 Water use projections

Section 4. Water Supply Options and Considerations

- 4.1 Resource Management Studies
 - 4.1.1 Upper Lake Mary
 - 4.1.2 Local Groundwater
 - 4.1.3 Reclaimed Water
- 4.2 Resource Efficiency Considerations
 - 4.2.1 Water Loss Control Program
 - 4.2.2 Water Conservation
 - 4.2.3 Stormwater
- 4.3 Supply Considerations
 - 4.3.1 Purple pipe expansion
 - 4.3.2 Managed Recharge of Class A+ Reclaimed Water
 - 4.3.3 Constructed Recharge of Class A+ Reclaimed Water
 - 4.3.4 Upper Lake Mary augmentation with advanced treated water
 - 4.3.5 Direct Potable Reuse
 - 4.3.6 Red Gap Ranch

Section 5. Values Assessment

- 5.1 The One Water approach
- 5.2 Water quality self-regulation – “How clean is clean”
 - 5.2.1 Emerging contaminants in Flagstaff
 - 5.2.2 Community concerns
- 5.3 Cultural considerations
- 5.4 Water for the environment

Section 6. Scenarios Assessment

- 6.1 Planning for multiple futures

Section 7. Water Management Framework

- 7.1 Designation of Adequate Water Supply
- 7.2 Supply protection concerns outside AMA
- 7.3 What isn’t permitted under a DADE and State legislation

7.4 Local policy development – economic value of water in policy

Erin said she has received some comments from Ward on Economics which will be added to Section 4 - Water Supply Options and Considerations. Ward said he did research regarding economic calculations for new water options and sees some problems. At the last Water Commission meeting, it was agreed it would be distributed to members of the Commission. This would give staff an opportunity to include it or modify the scope once it is released. To recognize Red Gap is a long shot because of costs. Ben added that Master Plans are to prioritize to include Red Gap and the worst case scenario is the City of Flagstaff may have to use it so it should be studied. The Commission agreed for Ward to share his calculations finding which Marion will email out. Ben also indicated that the new AWWA Water Supply Resilience Code be addressed in the scope. Also include manage of water use to other aspects of our community's values in an explicit way. (ex: open space or land use efficiency). The land use values are important in master plans, along with communication.

VI. INFORMATIONAL ITEMS TO/FROM THE CHAIR, COMMISSION OR STAFF

2019 WateReuse Arizona Symposium – Erin announced that Brad Hill was recognized by the state board of WateReuse Arizona for his years of contribution to the WateReuse industry in the state and was given the President's Award.

Erin said she has an intern working on the Water Use by Community in different sectors so this topic will be on a future agenda.

VII. ADJOURNMENT

Ben Ruddell moved to adjourned at 5.55 p.m. and seconded by Ward Davis.