Council Study Session

January 6, 2020

Agenda Item	Water Master Plan Update Presentation	
From	Scott Fleury PE	Deputy Public Works Director
Contact	Scott.fleury@ashland.or.us; (541) 552-2412	
Item Type	Requested by Council ☐ Update ☐ Request for Direction ☐ Presentation ☒	

SUMMARY

Before the Council is a presentation on the final draft of the Water Master Plan (WMP) update recommended for adoption by the Ashland Water Advisory Committee (AWAC). The WMP update provides a useful planning tool associated with the City's water system and is primarily focused on 2020-2030 time frame, but also looks out to 2040 and beyond.

POLICIES, PLANS & GOALS SUPPORTED

City Council Goals:

- Essential Service-Drinking Water System
- Emergency Preparedness
- Address Climate Change
- Continue to leverage resources to develop and/or enhance Value Services

CEAP Goals:

- Natural Systems: Air, water, and ecosystem health, including opportunities to reduce emissions and prepare for climate change through improved resource conservation and ecosystem management.
- Strategy NS-2: Manage and conserve community water resources

Department Goals:

- Maintain existing infrastructure to meet regulatory requirements and minimize life-cycle costs
- Deliver timely life cycle capital improvement projects
- Maintain and improve infrastructure that enhances the economic vitality of the community
- Evaluate all city infrastructure regarding planning management and financial resources

BACKGROUND AND ADDITIONAL INFORMATION

Public Works has previously recommended to Council that major infrastructure master plans be updated on a regular schedule depending on need, typically between seven to ten years. The previous comprehensive WMP was adopted by the City Council in 2012. At the May 3, 2016 Business Meeting, Council approved a professional services contract with RH2 Engineering to develop a WMP update (staff report). AWAC was also reestablished with their same mission to provide critical local input to the planning and policies that will guide the City's water utility by defining goals, objectives, recommend improvements and a commensurate rate structure to support all maintenance and improvement activities.

AWAC committee members included: Pat Acklin, Darrell Boldt, Alex Amarotico, John Williams, Amy Patton, Leslie Adams, Donna Rhee, Kate Jackson, Don Morris, Rich Miller, and Joe Graf. All AWAC

CITY OF ASHLAND

packets and minutes can be found here: AWAC Committee Page. Staff would like to give a sincere thanks to all AWAC members involved for their commitment to the project throughout its duration.

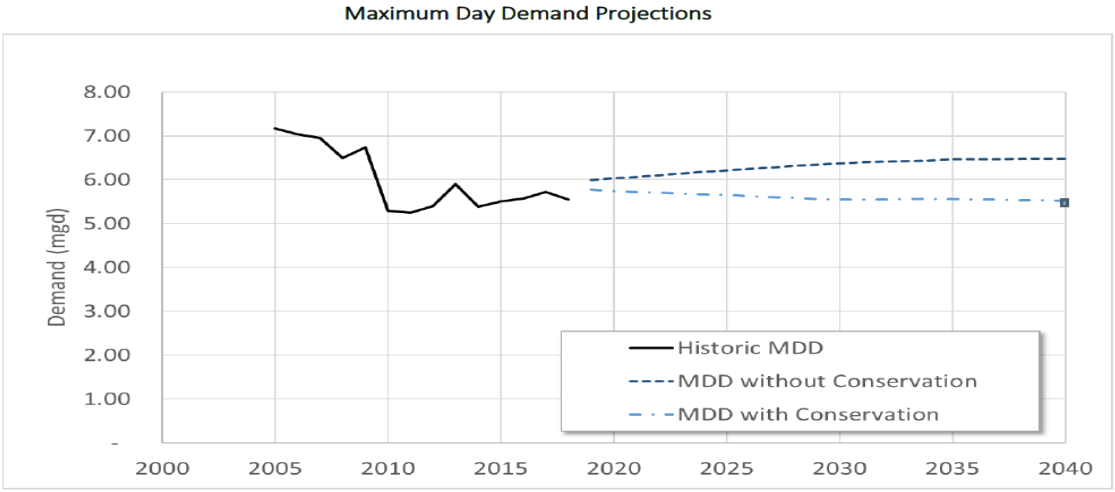
The project was originally slated to be completed in 2017, but was placed on hold due to decisions regarding the future water treatment plant project. These decisions were being further evaluated by the City Council. On September 18, 2018, the Council moved forward with preliminary engineering of the new 7.5 MGD water treatment plant, allowing RH2 to adjust and continue with finalizing the WMP update.

The major components of the WMP update include:

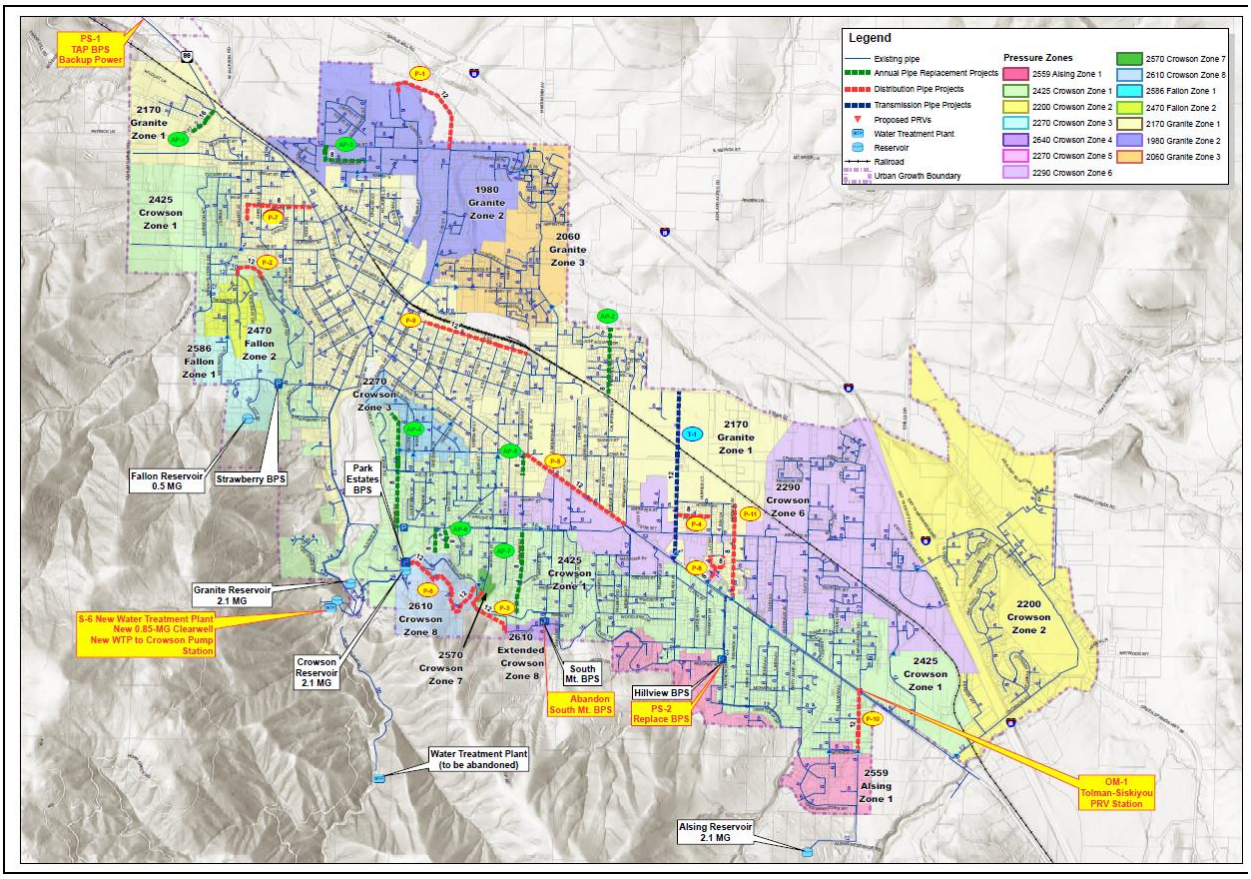
1. Executive Summary
2. Introduction
3. System Description
4. Land Use
5. Demands
6. System Analysis
7. Capital Improvement Plan
8. Financial Analysis

Differences between the 2012 WMP and the current update include a change in the future water demand forecasting, a review and update to the levels of service for storage requirements and the addition of more pipeline capacity increases primarily due to new fire flow requirements.

In 2012, the per capita consumption was estimated to be 144 gallons per capita per day (gpcd), in the 2019 update that consumption forecast has been reduced to 125 gpcd. This reduction is based on water use reduction and conservation practices by Ashland residents and business. System wide conservation of five percent was a focus of the 2012 WMP with the long term goal of achieving 15 percent.



The WMP update also lays out a roadmap for pipeline upsizing that focus on reducing pumping requirements associated with development of the new water treatment plant by expanding and balancing distribution zones within the City. These pipeline replacements have the potential to reduce pumping requirements of the new plant in the future by up to 60 percent.



Water Conservation

In conjunction with the WMP development, the City contracted with Maddaus Water Management to provide the City of Ashland with a customized water efficiency program model called the Decision Support System (DSS). The model takes into account current and projected population, historic water consumption by customer class (e.g. single family, commercial, etc.), water production from all sources (e.g. Reeder, TID, TAP), water rates, historic conservation programs and savings, plumbing codes and standards, electric costs and historic weather.

The model has been utilized by water conservation staff to evaluate and quantify the City's remaining long-term water conservation potential; and determine which set of water efficiency measures and implementation strategies represent the best approach to achieve future water savings. Individual measures are reviewed through cost benefit analysis, cost savings per unit volume and difference between utility and community savings perspectives. The DSS Model provided detailed information for 32 individual conservation measures and produced three program options for evaluation, each with varying levels of program costs and water savings. AWAC reviewed all three programs and made a final recommendation to move forward with the most cost-effective program that will assist the City in achieving its goal of a 15 percent reduction in city wide water use by the year 2030.

The DSS Model determined a poor cost benefit ratio for dishwasher rebates and a good cost benefit ratio for expanded outdoor programs, as such, the dishwasher rebate has now been discontinued and staff is in the process of developing a more robust outdoor rebate program called the Waterwise Landscapes Program. This program will offer more landscape and irrigation savings opportunities for customers and will include

programs such as lawn replacement, efficient irrigation retrofits, pressure reduction and smart irrigation controllers.

Additionally, the DSS Model can be used to develop a conservation plan as a subset of the WMP, to guide the City in carrying out future water conservation programs. Information gathered by the model was used to provide the state with a five-year progress report updating the City's Water Management and Conservation Plan (WMCP). The Oregon Water Resources Department (OWRD) approved the updated plan in February 2019.

2012 WMP Completed Projects

Numerous projects have been completed as recommended in the 2012 WMP including; security and telemetry upgrades; dam safety inspection; East and West Forks sediment removal; Terrace Street pump station improvements; TAP pipeline and pump station; Park Estates pump station improvements; Reeder Reservoir bathymetry; cost of service study; and pipeline replacements. Several other recommend projects are in various stages of engineering in the current biennium.

FISCAL IMPACTS

The WMP Update also included the development of an operations and maintenance (O&M) plan for the City's water distribution system. The total contract awarded was $315,976; $258,235 for the WMP and $57,741 for the O&M Plan.

To date the City has spent $310,518 on the WMP update. The comprehensive O&M plan has been finalized and is currently being utilized by the City's water distribution supervisor. The O&M plan is a requirement of the Oregon Health Authority (OHA), drinking water division and was recently reviewed by OHA as part of a five-year sanitary survey requirement. The City was recognized by OHA for "outstanding performance" with respect to management of the water system.

The WMP Update is in final draft stage and the remaining dollars of the contract will be accounted for with RH2's presence at the final public meetings and formalizing the final documents.

The WMP update also accounts for calculated rate increases associated with all the maintenance and capital improvement projects for the water system. Currently, the projected rate increases are between 4 and 4.5 percent over the next ten years. Prior to each biennium budget approval Public Works will update the rate analysis based on actual revenues and expenditures in order to make sure the projects are as accurate as possible.

Financial Recommendations per the master plan update:

1. Minimize the need for borrowing or sale of bonds to fund water infrastructure by strategically timing commencement of projects and by raising SDCs and rates sufficiently in advance of the need to start commencement of projects.
2. Adjust the water SDCs as soon as possible to account for the revised CIP contained in this 2019 WMP Update.
3. Plan for 4.0 percent rate increases for the next three years, and 4.0 percent to 4.5 percent per year rate increases thereafter, depending on actual revenues realized and cost of service needs, to be evaluated each budget cycle.
4. Review available cash in the water fund annually for planned capital expenditures and adjust rates as necessary.
5. Continue to maintain reserves of at least two months of revenues and one year of debt service for unforeseen costs, revenue shortfalls due to drought, emergency repairs, and so forth.

DISCUSSION QUESTIONS

Does the City Council have any general questions regarding the content within the WMP update?

SUGGESTED NEXT STEPS

Staff expects to bring forth the final document to a Council Business meeting and request that the City Council accept the master plan update as the current water system planning document to be used with respect to future project planning and budgeting.

REFERENCES & ATTACHMENTS

Water Master Plan Update (link)