

# Council Study Session

April 2, 2018

**Title:** Water Treatment Plant Status Update  
**Item Type:** Informational  
**Requested by Council?** Yes  
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## **Summary:**

Before the Council is an update on the results of the comprehensive cost comparison for the water treatment plant (WTP). Council will recall staff's update at the [November 6, 2017](#) study session in which staff proposed suspending the current direction of building a new 2.5 million gallon per day (mgd) WTP and concurrently running the existing plant, to allow staff to financially assess and compare the costs to **either** build a new 7.5 mgd water treatment plant or continue to upgrade and utilize the existing water treatment plant (WTP). The costs to operate two separate WTPs are not in the best interest of the City.

## **Discussion Questions:**

The issue has not changed from last November: ensure the City has the ability to provide clean water reliably to our community, today and for the next 20-50<sup>+</sup> years, and further ensure that the City is capable of meeting not only today's water quality standards, but to also anticipate meeting future regulation changes. The City has an outstanding water quality staff that operates the existing WTP and distribution system exceptionally and with pride for our community. The existing plant is in a less than optimal site, but has performed well in all but the most extreme circumstances.

Staff has moved forward on obtaining a competitive cost comparison from RH2 Engineering and their partner, Black and Veatch, at a fee not to exceed \$34,900. That analysis is to evaluate:

1. Costs for a new 7.5 mgd WTP with a comparable treatment process to the existing plant.
2. Costs of facility and operational improvements to the existing treatment plant along with a risk assessment for seismic, flooding and operational expandability at the current site.

As such, based on the results of the cost comparison;

- Is council willing to overlook significant seismic, potential flooding and other risks at the existing plant site and continue to operate the WTP in its current location?
- Is council ready to fully invest in its future and build a 7.5 mgd WTP at the lower granite pit location?

## **Resource Requirements:**

The current adopted biennium budget (BN 2018-19) appropriates a total of \$22,674,000 dollars for the engineering and construction of two projects: a new 2.5 mgd supplemental water

treatment plant (Project # 2015-31) and proposed 2.6 million gallon (mg) Crowson II water storage reservoir. To date expenditures for the water treatment plant and reservoir siting study total \$525,140. The preliminary engineering associated with these expenditures remain effective and will inform staff through the remainder of the water treatment plant design and construction as well as completion of the water master plan work.

**Suggested Next Steps:**

Staff recommends moving forward with a single project to build a new 7.5 mgd plant with potential for future capacity and stay within the same BN 2018-19 budget appropriation. Unless there are objections voiced tonight, staff will proceed with developing a formal request for qualifications to complete design of a 7.5 mgd water plant.

Staff will bring a formal decision for design consultant selection, final design approvals, construction award and any required additional funding options to Council at relevant points, as well as periodic updates through the Capital Improvements Plan reviews, budget reviews or water program updates as desired.

**Policies, Plans and Goals Supported:**

The original projects represent priorities within the Council approved 2012 Comprehensive Water Master Plan Update. Staff is currently in the process of completing a new Water Master Plan Update that evaluates the 2020-2030 time period with RH2 Engineers.

**Council Goals:**

- 4. *Evaluate real property and facility assets to strategically support city mission and goals.*
- 22. *Prepare for the impact of climate change on the community.*

**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: Cost Comparison and Evaluation Report:**

*“... it was determined that it is not possible to develop comparable alternatives due to the inability to rehabilitate the existing plant that mitigates three major risks...”*

In short, the engineering team of RH2 and Black & Veatch determined the existing plant could not fully overcome the risks associated with seismic stability, flooding and ensuring capacity for potential future regulatory requirements without rebuilding the WTP. Yes, the existing plant could be modified and updated one element at a time, but in the end, short of a full rebuild, the overall risks remain – and the City would still be operating in a less than desirable location which is also prone to wildfire and localized landslides.

Staff reviewed the details of the assessment and is confident in the approach taken. Although as suspected, the short term costs to provide upgrades to the existing plant are less than the cost to build a new plant, the risk, not only to plant personnel, but the City as a whole is not acceptable.

In addition, deferring construction of a new plant only imposes greater overall cost to the City. The existing plant has a finite life and the City's needs continue beyond that life span.

**Background: Additional Information:**

The 2012 Water Master Plan (Carollo) developed the recommendation for a supplemental 2.5 mgd WTP and 2.6 million gallon (mg) Crowson II storage reservoir as part of the final capital improvement plan. The 2.5 mgd plant was initially identified and sized to assist the City in meeting peak projected water usage in the summer seasons. It was meant to operate year round with the existing plant operating "as required" to meet system capacity requirements past 2.5 mgd. It was expected the 2.5 mgd plant would be expanded to a full 10 mgd sometime in the future, and the existing WTP phased out of operation. Based upon the prior water master plan, the Crowson II reservoir was initially assumed to be sized for 2.6 mg of potable water storage. Further analysis by RH2 has shown that the "Crowson II" storage reservoir may be unnecessary as the new Park Estates Pump Station is designed to maximize utilization of water in the existing Crowson Reservoir at full capacity. The need for future reservoir capacity and operational improvements will be assessed with the current Water Master Plan evaluation.

The City obtained low interest financing from the Infrastructure Finance Authority (IFA) for Engineering and construction of the water treatment plant. The loan was in the amount of \$14,811,865 with a 1.79% interest rate and \$1,030,000 in principal forgiveness. The Council authorized the IFA loan at the [June 7, 2016](#), Business Meeting. Staff has not yet secured financing for the storage reservoir and will revise project costs and evaluate the need once Council makes a final recommendation on the WTP. The Council approved a financing resolution at the [December 6, 2016](#), Business Meeting that allows for the reimbursement of funds towards the reservoir project to be "reimbursed" once financing is obtained. This financing resolution allowed the original project to proceed through preliminary engineering.

Through a formal selection process the City awarded Keller Associates stage 1, preliminary Engineering of the new treatment plant and reservoir ([March 21, 2017](#), Business Meeting). This project had three phases; 1) determine the treatment process for the new WTP, 2) conceptual site selection, 3) the evaluation of repurposing the TID line, and 4) through addendum, support the evaluation of membrane filtration pilot analysis. Keller has completed their preliminary engineering work.

Subsequently, and as identified in the original request for qualifications, RH2 Engineering was hired to perform peer review on the preliminary engineering work of Keller Associates. RH2 Engineering also competed and was selected through a separate request for proposals process to complete the City's comprehensive Water Master Plan Update. RH2 Engineering finished peer review of the first phase of Keller Associates' work and is in the process of completing the Water Master Plan. The Water Master Plan is on schedule for completion this summer (2018).

**AWAC:**

The Ashland Water Advisory Committee (AWAC) continues to be appraised of the status of both projects. On September 26, 2017, AWAC unanimously supported staff's request to suspend the current decision to construct a supplemental 2.5 mgd WTP and a 2.6 mg reservoir with the intent to run both the new supplemental plant while also maintaining the existing plant. The City

has a reliable alternative water source with the connection of the Talent Ashland Phoenix (TAP) water line and should not be running two separate water plants. AWAC supported staff's recommendation to develop a comprehensive cost comparison for **either** a single new 7.5 mgd WTP or improvements to the existing WTP for a 20-year life to include upgrades to the treatment process, and necessary facility improvements to sustain potential earthquake and flooding damage. On March 27, 2018, AWAC will be advised of staff's current recommendation to build a new 7.5 mgd plant.

**Next Steps:**

Staff will develop an RFQ for the final design of the 7.5 mgd WTP and bring the recommended award to Council once proposals are received and a recommended consultant selected. The design contract would come to council for approval (June or July 2018), as well as periodic updates on the design progress and final cost estimates. If necessary, staff will also seek approval for an increase in the IFA loan to accommodate any cost difference and those agreements will also come to Council for approval. Staff anticipates a 9-12 month design likely starting in July 2018 depending upon the selected treatment process and would build upon the work completed by Keller Associates. It is expected that construction could begin in the fall of 2019 (pushing this into next biennium), and will likely take three years to complete.

**Attachments:**

Water Treatment Plant Evaluation Report