

Council Communication

August 16, 2016, Business Meeting

Approval of the 2016 Water Supply Strategy

FROM:

Michael R. Faught, Public Works Director, Public Works Department, faughtm@ashland.or.us

SUMMARY

Council will consider a staff recommendation to use Talent Ashland Phoenix (TAP) water from the Medford Water Commission as Ashland's first option to augment the City's water supply during drought conditions, rather than Talent Irrigation District (TID) water, as has been the recent practice. TID water would still be available to the City if needed.

BACKGROUND AND POLICY IMPLICATIONS:

Although Medford Water Commission (MWC) water was available to the City last year via the newly constructed TAP line, on June 16, 2015, Council directed staff to use TID first to augment Ashland's water supply and TAP as the second source, as needed. After three consecutive years of drought, staff now recommends using MWC/TAP water as the first option for supplemental water during drought.

Reasons for this recommendation are as follows: treatment plant staff reports an increase in taste and odor issues; fluctuation in temperature (which requires frequent water treatment adjustments); and increased overtime for the small four-person water treatment plant team plus the two members of the water distribution team. Unlike TID water, MWC water delivered by the TAP line is already treated and ready for consumption. However, it will cost \$16,800 more to use TAP than TID water. The cost difference is based on 60 days of additional use of TAP water, over and above the 30-day TAP water test that will occur annually (see chart below). The City runs the TAP system for 30 days each summer, even in a non-drought year, to test the system for leaks and other problems.



Water Source	Millions Gallons per Day	Days	Cost per Thousand Gallons	Cost (rounded)
Cost of TAP Water for 2 Months				
Cost of Water	2.13	60	\$0.76	\$97,200
Meter Charge				\$600
Total Cost of TAP Water				\$97,800
TID Water for 2 Months				
Cost to Pump from the Canal	2.13	60	\$0.09	\$12,200
Cost to Treat	2.13	60	\$0.26	\$33,300
Cost of Temporary Water Rights for Drought Years [1]				\$20,100
Lost Revenue from Backside TID users (drought years) [2]				\$15,400
Total TID Water Cost for 2 Months				\$81,000

[1] The City has a temporary contract of 600 acre-feet exclusively for municipal use. It may also use a portion or all of its 769 acre-feet contract with TID which is typically curtailed to 654 acre-feet in a drought.

2.13 MGD for 60 days equates to 127,800,000 gallons, or 392 acre-feet.

Cost for 600 acre-feet	\$30,700
Cost per acre-foot	\$51.17

[2] 84 acres at \$183.11 per acre.

Annual TAP System Testing

While staff has a high confidence in the Medford Water Commission water as a long term water supply, staff is not planning on conducting its annual TAP water system test in August or potentially at all this year in order to give the Medford Water Commission a chance to settle the water quality challenges it is dealing with right now. This should not be a problem as Reeder Reservoir is still 96% full and staff does not anticipate a need to supplement the City's water supply this year.

COUNCIL GOALS SUPPORTED:

N/A

FISCAL IMPLICATIONS:

Using TAP water before TID water during drought conditions increases the City's cost for supplemental water supply by an estimated \$16,800. This estimate assumes using 2.13 million gallons per day of TAP water for 60 days. The City does not budget for drought; however, this sum can be and has in the last three drought years been absorbed in the Water Fund.

STAFF RECOMMENDATION AND REQUESTED ACTION:

Staff recommends using TAP water before TID water to supplement Ashland's water supply, if needed.

SUGGESTED MOTION:



I move to approve the use TAP water as the first option to supplement Ashland's water supply, if needed.

ATTACHMENTS:

June 21, 2016, Water Supply Update CC



Council Communication

June 21, 2016, Business Meeting

2016 Water Supply Update

FROM:

Michael R. Faught, Public Works Director, Public Works Department, faughtm@ashland.or.us
 Julie Smitherman, Water Conservation Specialist, Public Works Department
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SUMMARY

This is an annual update to the Council regarding the city’s summer water supply. The April 29, 2016 snow pack is 54 inches at the Big Red Mountain site (see chart below). While this isn’t a normal snow year it is above the 2009 snow levels (40” at Big Red Mountain) that required staff to add Talent Irrigation District (TID) water to supplement the summer water supply. Based on April 29, 2016, snow levels, staff plans to follow the normal Reeder Reservoir drawdown curve and only augment water from the Talent Ashland Phoenix Intertie (TAP) or TID if needed. In addition, Water Conservation staff will continue to promote their water conservation programs and assist customers with ways to reduce water use.

Staff is recommending that TAP water be used to augment Ashland’s water supply first, then TID water, if needed.

BACKGROUND AND POLICY IMPLICATIONS:

The April 29, 2016, snow pack results (see chart below) indicate that we potentially should have sufficient water supply to get through the summer months without adding either TID or TAP water. Having said that, staff will closely monitor the water and augment water from either TAP or TID as needed. Staff will follow the Reeder Reservoir standard drawdown curve to determine if and when there is a need to supplement the water supply in 2016.

April 29 Ashland Creek Watershed Snowpack Data

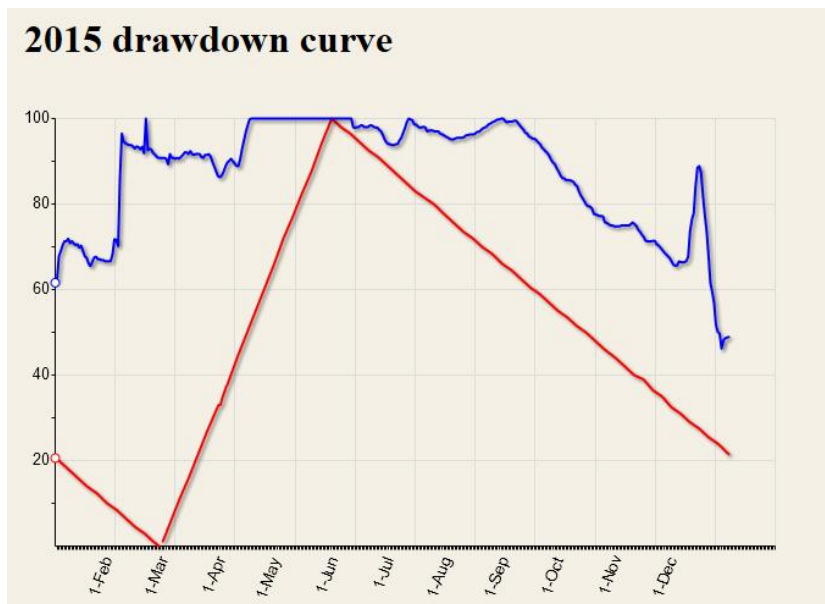
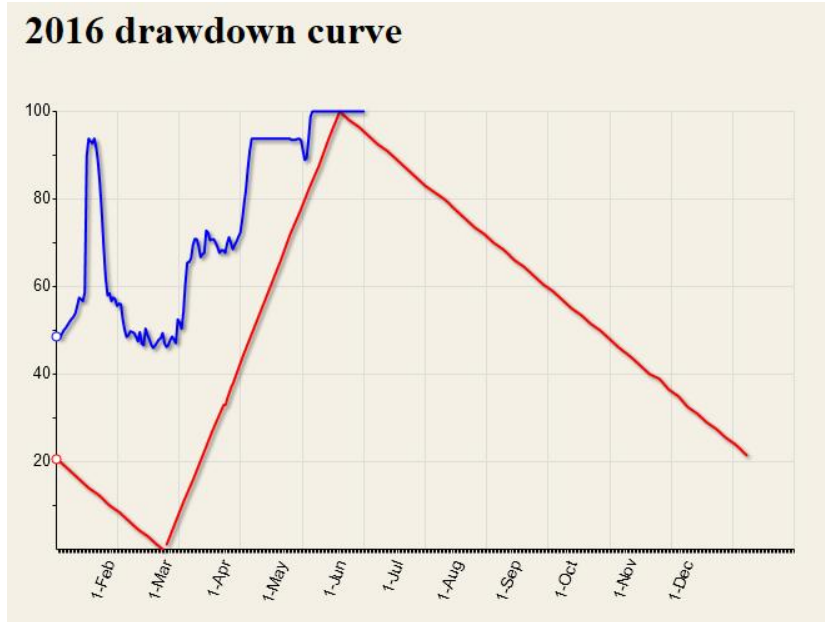
Snow Course/Aerial Marker Sites	Elevation	2015 Snow Depth (inches)	2016 Snow Depth (inches)	2015 Snow Water Equivalent (in.) (SWE)	2016 Snow Water Equivalent (in.) (SWE)
* Big Red Mountain SNOTEL Site	6,050 ft	7	54	3.9	24.4
Caliban	6,500 ft	9	60	4.2	27.7
Mt. Ashland Switchback	6,430 ft	4	50	1.3	29.9
Ski Bowl Road	6,070 ft	0	24	0	11.7

* Big Red Mountain SNOTEL Site is an automated site that provides daily snowpack data. The three additional sites are measured manually by the Jackson County Water Master at the end of each month.



2016 and 2015 Reservoir Data

The reservoir graphs (below) provide a daily look at Ashland's water supply over the last couple of years. The **red line** represents the theoretical reservoir use rate necessary to adequately meet Ashland's water supply needs. The **blue line** represents the current reservoir level. If at any point the demand on Reeder Reservoir drops below the theoretical drawdown curve as shown in the chart below, staff is prepared to implement the water curtailment strategies.



Talent Irrigation District (TID)



TID water is used to supplement our raw water supply during drought conditions. Howard Prairie and Hyatt Lake feed the TID irrigation system through Ashland. At this point, Howard Prairie is 67% full; Hyatt Lake is 70% full as reported by the US Bureau of Reclamation, Pacific Northwest Region Bear Creek and Little Butte Creek Basins.

As a reminder, if there is a need to use 2 mgd of TID water, no TID water will be sent past the pump station at Park Estates, and downstream TID customers will not receive TID water. If additional TID water is needed, the remaining sections of the TID water canal (between Walker and Park Estates) will also be diverted to the plant. If this occurs, then those TID irrigation customers will not be allowed to use TID water for irrigation purposes.

Talent, Ashland and Phoenix (TAP)

Water from Medford is available when Ashland determines a need to add TAP water.



The TAP pump is scheduled to be completed by July 7, 2016 and available to augment Ashland's water supply. As a reminder, staff will conduct the annual test of the system and pump TAP water from August 15, 2016 through September 15, 2016.

On June 16, 2015, Council directed staff to use TID first to augment Ashland's water supply and TAP as the second sources as needed. After three consecutive years of drought, staff is now asking the Council to reconsider and use TAP water as the first source of water during drought. Some of the reasons for this recommendation are that

treatment plant staff has seen an increase in taste and odor issues, fluctuation in temperature which requires frequent water treatment adjustments, and increased overtime for the small four person water treatment plant team and two members of the water distribution team. Unlike TID water, TAP water is already treated and ready for consumption through the TAP system. Having said that, it will cost \$31,600 more to use TAP than TID water. The cost difference is based on 60 days of additional use of TAP water (did not include the 1 month TAP water test that will occur annually) versus TID water (see chart below).

Water Source	Millions Gallons per Day	Days	Cost per Thousand Gallons	Cost (rounded)
Cost of TAP Water for 4 Months				
Cost of Water	2.13	60	\$0.76	\$97,200
Meter Charge				\$600
Total Cost of TAP Water				\$97,800
TID Water for 4 Months				
Cost to Pump from the Canal	2.13	60	\$0.09	\$12,200
Cost to Treat	2.13	60	\$0.26	\$33,300
Cost of Temporary Water Rights for Drought Years [1]				\$5,300
Lost Revenue from Backside TID users (drought years) [2]				\$15,400
Total TID Water Cost for 4 Months				\$66,200

[1] The City has a temporary contract of 600 acre-feet exclusively for municipal use. It may also use a portion or all of its 769 acre-feet contract with TID which is typically curtailed to 654 acre-feet in a drought. 2.13 MGD for 60 days equates to 127,800,000 gallons, or 392 acre-feet. Spill to the creek is 124 acre feet and front-side users take about 240 acre-feet; therefore about 100 acre-feet would be used over 2 months in a drought.

Cost for 600 acre-feet	\$30,700
Cost per acre-foot	\$51.17

[2] 84 acres at \$183.11 per acre.

Conservation Strategies

Although we have seen higher snowpack levels this year than in the past couple years, we still need continue to use water efficiently and invest in long term conservation measures not only to minimize the impact of future drought but to also ensure we have a sufficient supply to sustain our community.

In conjunction with water supply strategies, the water conservation team continues to offer our water customers the following programs:

- A lawn replacement rebate for removal of irrigated lawns that are replaced with low water use landscapes and efficient irrigation systems.
- Free irrigation system evaluations and free indoor water use analyses. In most cases, these detailed evaluations of individual systems will uncover ongoing water waste.
- Rebates are available for installing high efficiency WaterSense labeled toilets and Energy Star labeled dishwashers and washing machines.
- Free low flow showerheads, faucets aerators and spray rinse valves for commercial dishwashing are available for residences and businesses to reduce water consumption indoors.
- Water Wise Landscaping website, www.ashland saves water.org which helps people design landscapes with plants that use less water.

Last year, many residents of our community took advantage of the City's programs and as a result we have estimated long term reduction in water use at approximately 10 million gallons each year. This is in addition to our estimates for last year of 7 million gallons.



Additional Measures:

- We have developed a watering calculator to assist customers in knowing how often to water based on the type of plants and the type of sprinklers being used. It is accessible on our Water Wise Landscaping website at www.ashland.saveswater.org.
- We created an Ashland Water Conservation Facebook page. The City's Water Conservation Assistant, Carolyn Augsburger, has done a wonderful job at designing and updating this Facebook page. We currently have 75 followers and anticipate many more over the course of the summer.
- Instead of sending customers to a dedicated drought page, we have decided to add a Water Supply webpage under Public Works to provide up to date information about our water supply throughout the summer. It will also include the drawdown curve for Reeder Reservoir. The webpage can be found at www.ashland.or.us/watersupply.
- We developed a "Surviving Drought 101" guide and a "Tree Care" guide, which are now readily available to our community.
- To help promote the efficient use of the community's resources, a combined water and energy conservation ad has been created that will play at both movie theaters for the next three months.
- We continue to provide public presentations on the importance of making long term water efficiency changes, as well as educate on the source of our drinking water, and how the overall operation of the water supply system works. Examples are local civic groups, garden clubs, City Commissions, HOAs and events such as Earth Day and the Salmon Festival.
- Although we focus much of our attention on external conservation, there are several efforts being made to manage our water use internally as well. We will be conducting a facilities water audit this summer to better understand how each facility uses water and what measures could potentially be used to reduce. We are also evaluating a few landscapes on city owned property for possible conversion to vegetation that functions well and uses less water.
- We are continually researching new technologies in water efficiency and evaluating future programs and incentives to help our customers.

FISCAL IMPLICATIONS:

The fiscal impact of using TAP water before TID water during drought conditions will increase by an estimated \$31,600. This estimate assumes using 2.13 mgd per day of TAP water for 60 days.

STAFF RECOMMENDATION AND REQUESTED ACTION:

Staff recommends that the City Council approve staff recommended 2016 water supply strategy and using TAP water before TID water to supplement Ashland's water supply if needed.

SUGGESTED MOTION:

Move to approve staff's recommended 2016 water supply strategy and to use TAP water before using TID water to supplement Ashland's water supply, if needed.

ATTACHMENTS:

None

