

## MEMORANDUM

DATE: October 5, 2021

TO: Ted Corrigan, CEO and General Manager

FROM: Amy Kahler, Chief Financial Officer

SUBJECT: Proposed 2022 Water Rates

### Background

In 2017, DMWW engaged Raftelis to evaluate our Cost of Service model that is used annually to assign costs to customer classes. Raftelis is a nationally known financial advisor specializing in public-sector work. The firm has helped author the AWWA's rate setting manual, "Principles of Water Rates, Fees, and Charges," more commonly known in the water industry as the "M1 Manual." DMWW's approach to rate setting is to identify costs by customer class and set rates such that all customers "pay their own way."

Raftelis updated DMWW's Cost of Service model to be consistent with widely accepted industry cost principles. Their calculations and methodologies showed DMWW is not recovering the cost to serve some customer classes, including the purchased capacity customer class. Because DMWW recovers 100% of costs from all customers in total, where one customer class is under-recovering costs, another customer class is over-recovering. This is called cross-subsidization and is not permitted per the Wholesale Water Service Master Agreement ("Master Agreement") and agreements with other entities served by DMWW. Rate increases implemented in 2020 and 2021 were established to begin realigning revenue recovery with costs incurred.

Historically, DMWW has raised rates on April 1<sup>st</sup> of each year. Staff is proposing a July 1<sup>st</sup> implementation to give more notice to wholesale customers for recommended 2022 rate changes.

## Summary of 2021 Cost of Service Results

DMWW has completed the 2022 Cost of Service Study (COS) using 2022 budgeted expenses. Summary Figure 13 from the COS is shown below. These results serve as a basis for the rate recommendations within this memo.

*2022 Cost of Service - Figure 13*

<u>Customer</u>	<u>Cost of Service</u>	<u>2022 Projected</u>	
		<u>Revenue</u>	<u>COS Recovery</u>
<b>Retail</b>			
Des Moines Inside City	\$ 35,576,327	\$ 35,242,463	99%
Des Moines Outside City	1,738,376	904,982	52%
<b>Total: Retail</b>	<b>\$ 37,314,703</b>	<b>\$ 36,147,445</b>	<b>97%</b>
<b>Full Service</b>			
Polk County	\$ 6,509,474	\$ 6,759,117	104%
Runnells	169,020	183,951	109%
Cumming	106,828	113,613	106%
Alleman	102,506	111,867	109%
Pleasant Hill Inside City	2,723,480	2,845,853	104%
Pleasant Hill Outside City	6,053	5,372	89%
PCRWD	166,599	137,779	83%
Berwick	239,165	151,737	63%
Windsor Heights	882,835	1,006,179	114%
Less: Future FS Capital Costs	(2,078,771)		
<b>Total: Full Service</b>	<b>\$ 8,827,188</b>	<b>\$ 11,315,467</b>	<b>128%</b>
<b>Wholesale - PC</b>			
Altoona	\$ 72,946	\$ 37,444	51%
Ankeny	5,167,092	5,541,846	107%
Bondurant	479,181	501,423	105%
Clive	2,225,996	1,965,996	88%
Norwalk	973,649	893,723	92%
Waukee	1,923,348	1,690,639	88%
Urbandale	5,515,762	4,729,966	86%
Warren Rural Water	1,651,652	1,714,149	104%
West Des Moines	3,487,129	2,727,192	78%
Xenia	1,788,788	1,931,349	108%
Polk City	404,134	319,268	79%
<b>Total: Wholesale - PC</b>	<b>\$ 23,689,677</b>	<b>\$ 22,052,997</b>	<b>93%</b>
<b>Wholesale with Storage</b>			
West Des Moines - Storage	\$ 111,052	\$ 60,920	55%
Johnston	2,982,480	3,332,530	112%
Water Development Co	51,657	67,398	130%
<b>Total: Wholesale with Storage</b>	<b>\$ 3,145,188</b>	<b>\$ 3,460,848</b>	<b>110%</b>
<b>Total: Utility</b>	<b>\$ 72,976,756</b>	<b>\$ 72,976,757</b>	<b>100%</b>

## Wholesale Rates

### Wholesale - Purchased Capacity

Projected Revenue in Figure 13 for the Wholesale Purchased Capacity customers implements Raftelis' recommendations of a monthly fixed charge based on Maximum Day Demand (MDD) thousand gallons, combined with a volume rate. This rate approach results in an *effective 12% revenue increase for the class overall year-over-year compared to 2021*. This brings purchased capacity customers to a 93% cost recovery position, which is an improvement over 87% and 80% in 2021 and 2020, respectively.

The current 2021 purchased capacity rates are \$2.68/kgals, plus a nominal monthly availability fee that varies based on meter size (generally \$75 per month for most wholesale customers). This rate approach fails to recognize that DMWW incurs costs to maintain capital assets, even if customers don't purchase water. Raftelis has recommended that DMWW revise our wholesale rates such that purchased capacity customers pay the fixed capital costs assigned to them based on the demands they place on the system, generally defined by maximum day demand units of service. In addition to more appropriately providing revenue to offset fixed capital costs, this approach also addresses intra-class inequity within the Purchased Capacity customer class.

The table below shows the current 2021 rates, and the recommended 2022 rates for the purchased capacity customers:

	<b>Current April 1, 2021 Rate</b>	<b>Proposed July 1, 2022 Rate</b>
Volume Rate	\$2.68 per thousand gallons	\$2.30 per thousand gallons
Fixed Availability Charge	Varies based on meter size; generally \$75/month	\$195 per Max Day thousand gallons

#### ***Proposed Fixed Availability Charge Example Calculation:***

Each community's 2022 Maximum Day Demand (MDD) is projected based on a 5-year history of its peak-to-average-day ratio. If we assume a purchased capacity customer's 2022 projected Max Day demand is 6,000 kgals, the availability fee calculation is:

$$6,000 * \$195 = \$1,170,000 \text{ annual fee, or } \$97,500 \text{ monthly.}$$

In 2022, because rates would be implemented effective July 1<sup>st</sup>, there would be six months of the monthly \$97,500 availability for this example community, plus consumption charges based on the volume rate of \$2.30 per thousand gallons.

**Under this recommended approach, it is important to note that the wholesale rate is the same for all purchased capacity customers;** however, Max Day units changes by customer.

While the customer class revenue increases 12% overall, purchased capacity customers experience varying effective annual rate increases based upon their projected maximum day and peak usage patterns. A summary of the projected annual effective increases by purchased capacity customer are illustrated below:

***Recommendation –Fixed Charge based on Max Day + Volume Rate Effective July 1, 2022; Effective Annual Revenue Increase by Customer Year-Over-Year 2021 vs. 2022***

	<b>2022 Budget Cost of Service</b>	<b>Projected 2022 Revenue</b>	<b>COS Recovery</b>	<b>Effective Annual Revenue Increase Over 2021</b>
Altoona	\$72,946	\$37,444	51%	51%
Ankeny	5,167,092	5,541,846	107%	7%
Bondurant	479,181	501,423	105%	8%
Clive	2,225,996	1,965,996	88%	14%
Norwalk	973,649	893,723	92%	12%
Waukee	1,923,348	1,690,639	88%	14%
Urbandale	5,515,762	4,729,966	86%	15%
Warren Water	1,651,652	1,714,149	104%	8%
West Des Moines	3,487,129	2,727,192	78%	19%
Xenia	1,788,788	1,931,349	108%	7%
Polk City	404,134	319,268	79%	19%
<b>Total: Wholesale PC</b>	<b>\$23,689,677</b>	<b>\$22,052,997</b>	<b>93%</b>	<b>12%</b>

DMWW legal counsel’s opinion is that the recommended rate changes are within the boundaries of the Master Agreement, although it should be noted that through its counsel, West Des Moines Water Works has formally shared a contrary view of the Master Agreement language.

Staff and the Board have previously stated support for adopting this rate methodology; however, the implementation of this change has not been adopted in previous years to allow regionalization discussions to finalize. Regionalization discussions have progressed but are not finalized at this time. Staff has heard recently from at least one wholesale customer opposed to the change that implementing this rate approach would derail regionalization progress.

***Alternative Rate Option – “Business as Usual”***

If the Board wishes to maintain the current rate structure and continue recovering virtually all costs in a single volume rate, staff offers a “business as usual” scenario for consideration. **In this alternative, rates for all customer classes would increase on April 1, 2022 (rather than July 1), and the purchased capacity volume rate would increase 15% from \$2.68 to \$3.08/kgal.** This represents an overall 12% increase year-over-year from 2021 to 2022. While this approach recovers approximately the same amount of revenue for the customer class as the recommended rate approach outlined above and keeps the class at a 93% cost recovery position, the disadvantage is that it worsens the over-recovery position for four purchased capacity customers who have lower peak-to-average usage patterns, including Ankeny, Bondurant, Xenia Rural Water District, and Warren Water District. The resulting COS recovery positions under this alternative are illustrated below:

**Alternative Rate Option “Business As Usual” – Purchased Capacity: All Costs Recovered Through Volume Rate; 15% Increase April 1, 2022; COS Recovery Positions**

<b>Customer</b>	<b>2022 Budget Cost of Service</b>	<b>4/1/22 Rate Increase</b>	<b>Projected 2022 Revenue</b>	<b>COS Recovery</b>	<b>Annual Revenue Increase</b>
Altoona	\$73,185	15.0%	\$27,709	38%	12%
Ankeny	5,181,221	15.0%	5,754,434	111%	12%
Bondurant	480,504	15.0%	517,252	108%	12%
Clive	2,232,495	15.0%	1,925,838	86%	12%
Norwalk	976,459	15.0%	886,719	91%	12%
Waukee	1,928,972	15.0%	1,653,357	86%	12%
Urbandale	5,532,005	15.0%	4,585,999	83%	12%
Warren Rural Water	1,656,224	15.0%	1,764,195	107%	12%
West Des Moines	3,497,655	15.0%	2,553,937	73%	12%
Xenia	1,793,667	15.0%	2,008,977	112%	12%
Polk City	405,351	15.0%	300,190	74%	12%
<b>Total: Wholesale - PC</b>	<b>\$23,757,739</b>		<b>\$21,978,607</b>	<b>93%</b>	<b>12%</b>

**Wholesale - With Storage**

Unlike the Purchased Capacity customer class, the With Storage customer class is in a position of over-recovery and has been for several years. Considering this, staff recommends a 0% rate increase for this customer class to bring revenues more closely aligned with projected expenses.

The table below shows the current 2021 rates, and the recommended 2022 rates for the With Storage customer class under Raftelis’ recommended approach. While the approach has changed consistent with the recommendation for the purchased capacity class, these proposed rates represent a 0% rate increase overall for the class.

	<b>Current April 1, 2021 Rate</b>	<b>Proposed July 1, 2022 Rate</b>
Volume Rate	\$4.57 per thousand gallons	\$3.11 per thousand gallons
Fixed Availability Charge	Varies based on meter size; generally \$75/month	\$235 per Max Day thousand gallons

While the class increases 0% overall, customers within the class experience varying effective rate increases based upon their projected maximum day and peak usage. A summary of the projected effective increases by With Storage customer are illustrated below. Although West Des Moines shows an increase of 44%, it should be noted that in dollars, this represents an \$18k increase for the year compared to 2021 rates.

**Recommendation –With Storage: Fixed Charge based on Max Day + Volume Rate Effective July 1, 2022; Effective Projected Increase by Customer Year-Over-Year 2021 vs. 2022**

<b>Customer</b>	<b>2022 Budget Cost of Service</b>	<b>2022 Revenue</b>	<b>COS Recovery</b>	<b>Projected Annual Revenue Change \$</b>	<b>Projected Annual Revenue Change %</b>
West Des Moines WStorage	\$111,052	\$60,920	55%	\$18,574	44%
Johnston	2,982,480	3,332,530	112%	(\$12,933)	0%
Water Development Co	51,657	67,398	130%	(\$3,172)	-4%
<b>Total: Wholesale W/Storage</b>	<b>\$3,145,188</b>	<b>\$3,460,848</b>	<b>110%</b>	<b>\$2,469</b>	<b>0%</b>

In a “business as usual” alternative rate option, all costs could be recovered in the With Storage volume rate, which would remain unchanged at \$4.57/kgal in 2022.

## **Retail Water Rates**

### **Volume Water Rates**

The chart on the next page shows staff recommendations for retail rate increases for DM and Full Service customers, most of which are proposed at 3%. Where the COS shows several customer classes quite significantly under-recovering costs, rate increases are proposed at 7-10%. This chart also includes Runnells waste water rates.

The Full Service customer class as an aggregate group recovers greater than 100% of budgeted costs because most of these Full Service areas have relatively few customers and significant capital needs in the face of projected growth. The rates are intentionally set at a level to accumulate the capital balances over time that will be necessary to sustain these growth-driven system improvements. Excess revenues are tracked and maintained for each separate Full Service area in a Capital Improvement Fund and are used for the sole benefit of capital projects in that specific service area.

### **Capital Improvement Fees**

Capital improvement fees are included in the chart on the next page. Staff recommends no change in the capital improvement fee for Des Moines Inside City, Unincorporated Polk County, or Windsor Heights customers. For Des Moines Inside City and Polk County, the capital improvement fee is a decreasing block structure where the declining blocks mirror that of the water volume rate. Windsor Heights has a uniform water rate and capital improvement fee.

### **Availability Fees**

Staff recommends no change to availability fees by meter size. A separate summary of availability fees by meter size is also attached.

	2021 Rate Per Thousand Gallons	2022 Rate Per Thousand Gallons	\$ Increase	% Increase	Monthly Increase for Avg. Home With:	
					2 Person 3,750 gal	4 Person 7,500 gal
<b>Des Moines Inside City</b>						
Residential (Step 1)	\$5.19	\$5.35	\$0.16	3%	\$0.60	\$1.20
Commercial (Step 2)	3.49	3.59	0.10	3%		
Industrial (Step 3)	2.68	2.76	0.08	3%		
<b>Capital Improvement Fee</b>						
Step 1	\$0.25	\$0.25	\$0.00	0%	\$0.00	\$0.00
Step 2	0.17	0.17	0.00	0%		
Step 3	0.13	0.13	0.00	0%		
<b>Des Moines Outside City</b>						
Residential (Step 1)	\$5.64	\$6.20	\$0.56	10%	\$2.10	\$4.20
Commercial (Step 2)	4.24	4.66	0.42	10%		
Industrial (Step 3)	3.03	3.33	0.30	10%		
Off Peak	2.63	2.89	0.26	10%		
<b>Polk County</b>						
Residential (Step 1)	\$10.23	\$10.54	\$0.31	3%	\$1.16	\$2.32
Commercial (Step 2)	6.26	6.45	0.19	3%		
Industrial (Step 3)	4.88	5.03	0.15	3%		
<b>Capital Improvement Fee</b>						
Step 1	\$1.50	\$1.50	\$0.00	0%	\$0.00	\$0.00
Step 2	0.92	0.92	0.00	0%		
Step 3	0.71	0.71	0.00	0%		
<b>Pleasant Hill</b>						
Residential (Step 1)	\$9.51	\$9.80	\$0.29	3%	\$1.09	\$2.18
Commercial (Step 2)	8.03	8.27	0.24	3%		
Outside City	16.31	16.80	0.49	3%	\$1.84	\$3.68
<b>Windsor Heights</b>						
Residential (Step 1)	\$5.29	\$5.45	\$0.16	3%	\$0.60	\$1.00
<b>Capital Improvement Fee</b>						
Step 1	2.00	2.00	0.00	0%	\$0.00	\$0.00
<b>PCRWD #1</b>						
Residential (Step 1)	\$4.80	\$5.14	\$0.34	7%	\$1.28	\$2.55
<b>Berwick</b>						
Residential (Step 1)	\$4.00	\$4.28	\$0.28	7%	\$1.05	\$2.10
<b>Runnells</b>						
Water	\$8.60	\$8.86	\$0.26	3%	\$0.97	\$1.95
Waste Water	9.33	9.61	0.28	3%	\$1.00	\$2.10
<b>Cumming</b>						
Residential (Step 1)	\$8.87	\$9.14	\$0.27	3%	\$1.00	\$2.03
<b>Alleman</b>						
Residential (Step 1)	\$10.53	\$10.85	\$0.32	3%	\$1.20	\$2.40

**Monthly Availability by Meter Size – No Change Recommended**

	<b>5/8"</b>	<b>3/4"</b>	<b>1"</b>	<b>1 1/2"</b>	<b>2"</b>	<b>3"</b>	<b>4" &amp; Above</b>
Des Moines Inside City	\$6.00	\$7.00	\$8.00	\$14.00	\$22.00	\$45.00	\$75.00
Des Moines Outside City	\$8.00	\$10.00	\$14.00	\$35.00	\$60.00	\$150.00	\$250.00
Polk County	\$7.00	\$8.00	\$9.00	\$15.00	\$23.00	\$46.00	\$77.00
Pleasant Hill	\$10.00						
Windsor Heights	\$6.00	\$7.00	\$8.00	\$14.00	\$22.00	\$45.00	\$75.00
PCRWD #1	\$4.00						
Berwick	\$3.00						
Runnells	\$6.00						
Cumming	\$9.00						
Alleman	\$6.00	\$8.00	\$11.00	\$35.00	\$60.00	\$150.00	\$250.00