

## MEMORANDUM

DATE: October 1, 2019

TO: Ted Corrigan, CEO and General Manager

FROM: Peggy Freese, CFO

SUBJECT: Proposed 2020 Water Rates

At the September Finance and Audit Committee meeting, we had a preliminary discussion about 2020 water rates to solicit Committee input before making a final recommendation. As a follow up to the Committee discussion, staff was asked for additional information which was provided as an information item at the September Board meeting. Following discussion at the Board meeting, staff's recommendations are highlighted in this memo.

### **Background**

As you are aware, Tom Beckley of Raftelis Financial Consultants has recommended we do not do across the board rate increases such as we have done in the last few years. The cost to serve different classes of customers does not grow by the same amount each year. Increasing rates by the same amount for all customers leads to uneven cost recovery across the customer classes which results in some customer classes subsidizing other customer classes. Implementing different percentage increases for our customer classes will move us toward aligning revenue with costs for each customer class.

In his two presentations to F&A, Tom has recommended developing a revised rate structure for wholesale customers. Initially, we delayed proceeding with a development of a revised wholesale rate structure due to ongoing Regionalization discussions. At the August F&A meeting, the Committee recommended staff continue working with Raftelis on a wholesale rate structure that could be implemented by DMWW if regionalization does not occur or used as a starting point by the regional authority. That work will be ongoing this fall. In the interim, we need to proceed with rate decisions for 2020.

## 2020 Water Rates

We recommend the following rate increases effective April 1, 2020:

Des Moines Inside City	5%
Full Service	5%
Wholesale Purchased Capacity	10%
Wholesale With Storage	3%

Shown below is the cost recovery comparison Tom Beckley showed in his presentation. These figures came from the initial model Raftelis developed using DMWW's last Cost of Service study and forecasting the numbers forward.

### Test Year 2019 Cost of Service

<u>Customer</u>	<u>Cost of Service</u>	<u>Revenue Collected</u>	<u>COS Recovery</u>
Des Moines	\$ 30,464,486	\$ 32,337,016	106.1%
Full Service	10,690,825	10,622,420	99.4%
Wholesale/PC	19,473,971	17,054,846	87.6%
Wholesale/Storage	2,956,257	3,571,257	120.8%
Total	\$ 63,585,539	\$ 63,585,539	100.0%

We updated the model with preliminary 2020 budget numbers. The results are shown below. The results are very similar to the test year with recovery from the Purchased Capacity class decreasing slightly and recovery from the With Storage class increasing some. Keep in mind, the Raftelis numbers were based on the last COS forecasted forward. In the interim, we continued to do across the board increases, which worsened the skewed cost recovery. Thus the 2020 numbers do not show improvement.

<u>Customer</u>	<u>Cost of Service</u>	<u>Rate Increase</u>	<u>Revenue Collected</u>	<u>COS Recovery</u>
Des Moines	\$29,829,147	5%	\$31,963,148	107.15%
Full Service	10,290,735	5%	10,424,488	101.30%
Wholesale/PC	19,364,895	10%	16,469,101	85.05%
Wholesale/Storage	2,670,821	3%	3,298,862	123.51%
	\$62,155,598		\$62,155,599	100.00%

The model Raftelis developed for DMWW is different than our previous Cost of Service model. While we agree with the changes they have suggested, we believe we should take a measured approach to correcting the cost recovery misalignments. Additionally, the cost recover percentage shown for Purchased Capacity customers is for the group as a whole. There are significant variances in cost recovery across that group of customers because they have differing consumption patterns. This is why Raftelis has recommended changing the wholesale rate structure. They believe we can design a wholesale rate structure that recovers costs more equitably within the purchased capacity class. Staff agrees with Raftelis and we believe a

redesigned rate structure is a better way to resolve the cost recovery misalignment than trying to do it through our current wholesale rate structure.

**Capital Improvement Fee**

We also recommend implementing a capital improvement fee for Des Moines Inside City customers. Our distribution system in the City of Des Moines has many needs. In March 2017, staff completed a Water Main Replacement Analysis with assistance from HDR. The plan was intended to improve the way DMWW makes water main replacement decisions regarding investment levels in order to realize the greatest return on investment for ratepayers. This report indicated that cast iron water main that is 6-inches and smaller that was installed between 1948 and 1966 is the lowest performing pipe in our system. There are approximately 78 miles of active water main of this type remaining. The average useful life of this pipe is 70 years while the average useful life of the entire distribution system has been estimated at 166 years. Replacing this pipe will bring it in line with the useful life of the rest of the system. We are challenged in making progress replacing these poor performing mains as water main work within City of Des Moines projects is resulting in competition for funding within our water main replacement program.

Initial discussions at the September Finance and Audit Committee meeting centered on a uniform capital improvement fee of \$0.25 per 1,000 gallons. Committee members voiced concerns that a uniform fee would have too great of an impact on large users. Staff looked at options that would lessen the impact to large users. We recommend implementing a decreasing block capital improvement fee where the decline in blocks mirrors that of the water volume rate. The structure would be:

**Des Moines Inside City  
Proposed Capital Improvement Fee**

	<b>Consumption</b>	<b>Rate</b>
Step 1	0-150,000	\$0.25 per 1,000 gallons
Step 2	151,000-450,000	\$0.17 per 1,000 gallons
Step 3	Over 450,000	\$0.13 per 1,000 gallons

The capital improvement fee would generate approximately \$1,050,000 of capital improvement funds in the first year (nine months) and \$1,350,000 of capital funds in subsequent years.

Below is a table of the largest customers in Des Moines which shows their estimated water charges and capital improvement fees under the proposed 2020 rate structure.

**Des Moines Inside City**

**Proposed 2020 Rates**

	Annual Consump (MG)	Volume Rate		Cap Imp Fee
		Decline Blk	Decline Blk	Decline Blk
Customer #1	200	\$ 520,000	\$	26,000
Customer #2	141	370,000		19,000
Customer #3	82	220,000		11,000
Customer #4	68	180,000		9,200
Customer #5	64	170,000		8,700
Customer #6	56	150,000		7,600
Customer #7	45	120,000		6,200
Customer #8	40	110,000		5,600
Customer #9	39	107,000		5,400
Customers #10-16	25 (avg)	70,000		3,600
Customers #17-42	12 (avg)	38,000		1,900

For residential customers, the capital improvement fee would cost an average four-person household an additional \$1.88 per month. For an average two-person household, the cost would be an additional \$0.94 per month. Below are example calculations that show the impact of the proposed rates on an average four-person household and an average two-person household.

**Des Moines Water Works**

**Des Moines Inside City**

**Proposed 2020 Rates**

Average 4-Person Household	Current	Increase Rate per 1000 Gallons 5%			Rate Increase + Cap Improv Fee		
		Rate	\$ Inc	% Inc	Rate	\$ Inc	% Inc
		Rate per 1,000 gallons	\$ 4.71	\$ 4.95	\$ 0.24	5.1%	\$ 5.20
Charge for 7,500 gallons	35.33	37.13	1.80	5.1%	39.00	3.67	10.4%
Availability charge	6.00	6.00	-	0.0%	6.00	-	0.0%
Water charges excl. Sales tax	\$ 41.33	\$ 43.13	\$ 1.80	4.4%	\$ 45.00	\$ 3.67	8.9%
Average 2-Person Household	Current	Increase Rate per 1000 Gallons 5%			Rate Increase + Cap Improv Fee		
		Rate	\$ Inc	% Inc	Rate	\$ Inc	% Inc
		Rate per 1,000 gallons	\$ 4.71	\$ 4.95	\$ 0.24	5.1%	\$ 5.20
Charge for 3,750 gallons	17.66	18.56	0.90	5.1%	19.50	1.84	10.4%
Availability charge	6.00	6.00	-	0.0%	6.00	-	0.0%
Water charges excl. Sales tax	\$ 23.66	\$ 24.56	\$ 0.90	3.8%	\$ 25.50	\$ 1.84	7.8%

We implemented a capital improvement fee in the Polk County service area in 2015. It is structured as a uniform rate at \$1.50 per 1,000 gallons. We feel it would be appropriate to change this fee to decreasing block structure to be consistent with Des Moines. This change

would result in an annual reduction in revenue of approximately \$140,000. The structure would be:

**Polk County  
Proposed Capital Improvement Fee**

	<b>Consumption</b>	<b>Rate</b>
Step 1	0-150,000	\$1.50 per 1,000 gallons
Step 2	151,000-450,000	\$0.92 per 1,000 gallons
Step 3	Over 450,000	\$0.71 per 1,000 gallons

The Polk County service area has a few large customers with the largest being Firestone who uses approximately 90 million gallons annually. Their annual capital improvement fee is currently approximately \$136,000 and would be reduced to \$67,000.

Attached is a chart showing the 2019 rates, the proposed 2020 rates and the amount of increase for each rate.

**DES MOINES WATER WORKS  
PROPOSED 2020 RATE INCREASES  
(All Rates Are Per 1,000 Gallons)**

	# of Accts	2019 Rate	2020 Rate	Inc %	Inc Amt	2020 Cap Imp Fee
Des Moines Inside	67,650					
Residential (Step 1)		\$4.71	\$ 4.94	5%	\$0.23	\$ 0.25
Commercial (Step 2)		3.16	3.32	5%	0.16	0.17
Industrial (Step 3)		2.43	2.55	5%	0.12	0.13
Wholesale	48					
Purchased Capacity		\$2.12	\$ 2.33	10%	\$0.21	
With Storage		4.31	4.44	3%	0.13	
Des Moines Outside	1,250					
Residential (Step 1)		\$5.12	\$ 5.37	5%	\$0.25	
Commercial (Step 2)		3.85	4.04	5%	0.19	
Industrial (Step 3)		2.75	2.89	5%	0.14	
Off Peak		2.38	2.50	5%	0.12	
Polk County	7,250					
Residential (Step 1)		\$9.27	\$ 9.74	5%	\$0.47	\$ 1.50
Commercial (Step 2)		5.68	5.96	5%	0.28	0.92
Industrial (Step 3)		4.43	4.65	5%	0.22	0.71
Pleasant Hill	3,250					
Residential (Step 1)		\$8.63	\$ 9.06	5%	\$0.43	
Commercial (Step 2)		7.28	7.65	5%	0.37	
Outside City		12.95	13.59	5%	0.64	
Windsor Heights	2,100	\$4.80	\$ 5.04	5%	\$0.24	\$ 2.00
PCRWD #1	465	\$4.28	\$ 4.49	5%	\$0.21	
Berwick	225	\$4.00	\$ 4.00		\$ -	
Runnells	185					
Water		\$8.19	\$ 8.60	5%	\$0.41	
Waste Water		8.88	9.33	5%	0.45	
Alleman	170	\$9.55	\$10.03	5%	\$0.48	
Cumming	145	\$8.05	\$ 8.45	5%	\$0.40	