

**MADISON FINANCIAL
IMPROVEMENT PLAN**

**MADISON WATER UTILITY
MADISON, WISCONSIN
DECEMBER 2018**

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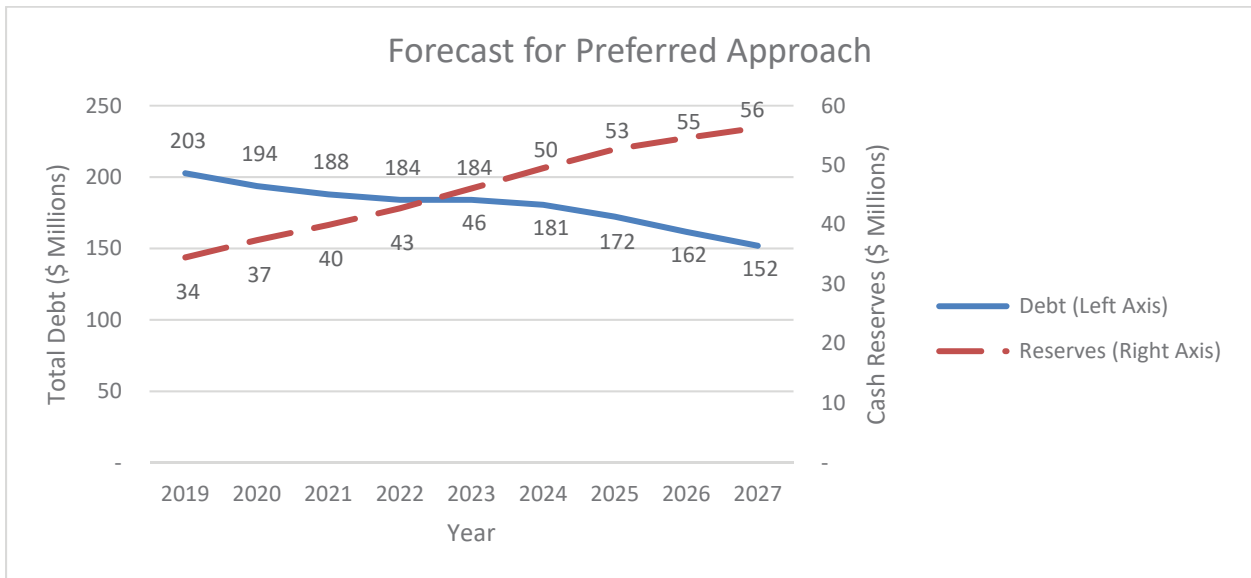
FINANCIAL IMPROVEMENT PLAN

Executive Summary

Madison Water Utility’s (MWU) position is similar to many other water utilities throughout the Midwest. With aging infrastructure and declining demand, MWU must continue providing outstanding service while keeping water affordable. This financial plan presents actions MWU will take to achieve the twin goals of excellent service and affordability.

MWU commits to steady replacement of its infrastructure. To ensure that MWU will have the financial stability to pay for these replacements while maintaining operations, MWU has set cash-reserve, capital-structure, debt-coverage, and return-on-rate-base goals. Achieving these goals will take hard work but will ultimately keep long-run water rates affordable.

MWU considered several financial initiatives to meet financial goals. MWU will pursue a series of conventional rate increases and ask the PSC to authorize accelerated recovery of water main investment. This approach is forecast to significantly improve MWU’s financial health, reducing debt while building cash reserves.



This plan includes several operational changes and reviews. These include hiring a chief financial officer, conducting a Government Finance Officers Association business process review, consolidating MWU’s accounting system with the City of Madison’s system, performing an operations audit, and making a dashboard of key metrics available to decision makers.

MWU is poised to strengthen its financial and operational health with these measures to maintain its high standard of service while keeping rates affordable.

Purpose

This plan is part of the Madison Water Utility's (MWU) ongoing work to invest in its water infrastructure while strengthening its finances. MWU has proactively invested in water infrastructure replacement. In 2018, MWU obtained Wisconsin Public Service Commission (PSC) approval to increase water rates by 30.6 percent. At the direction of the Madison Common Council, MWU is working to improve annual cash forecasts and long-range financial models. These improvements will balance infrastructure needs with financial resources to optimize investment and ensure a steady, predictable path for future rates.

This plan also addresses point 12 of the PSC's November 1, 2018, water rate order for MWU. The PSC ordered MWU to submit a financial improvement plan, including

- a. Planned actions to reduce MWU's debt relative to its investment in water infrastructure
- b. Operating and financial goals
- c. A timeline for achieving goals
- d. Potential obstacles to achieving these goals
- e. Expected impacts on water users
- f. Evaluation of a water rate surcharge as a financial tool.

This plan addresses the required items.

Problem Statement

Water utilities in the United States must meet the mounting need to invest in infrastructure while providing reliable water service. At the same time, financial resources for infrastructure investment is generated from variable and falling customer water use.

Infrastructure Investment Need

In its 2012 report *Buried No Longer: Confronting America's Water Infrastructure Challenge*, the American Water Works Association forecast that water utilities in the midwestern United States need to spend \$146 billion on water main replacements from 2011 through 2035.¹

In 2017, out of MWU's 895 miles of water main, 28 miles were installed before 1920. Another 187 miles of MWU's main were installed from 1941 to 1960. Many water utilities have experienced high rates of failure for this vintage of mains.

MWU has proactively addressed the need for investment in water infrastructure. However, investment must fit within available resources, regulatory constraints, and customers' ability to pay.

Variable and Falling Sales

In 2014, the Water Research Foundation and the US Environmental Protection Agency published *Defining a Resilient Business Model for Water Utilities* from the Environmental Finance Center (EFC) at the University of North Carolina and Raftelis Financial Consultants. The report identified falling and variable revenue from rates as a risk to water-utility business models. The cost to provide water service is largely fixed, e.g. debt service. Revenue is largely variable. As the volume of water sold falls, water revenue grows more slowly than water rates. This saves money for water users, but it reduces financial resources available for infrastructure investment.²

In *Measuring and Mitigating Water Revenue Variability: Understanding How Pricing Can Advance Conservation without Undermining Utilities' Revenue Goals*, the University of North Carolina EFC and Ceres, Inc. identify the difficulty of predicting revenue from water rates as a key challenge for utility finances.³

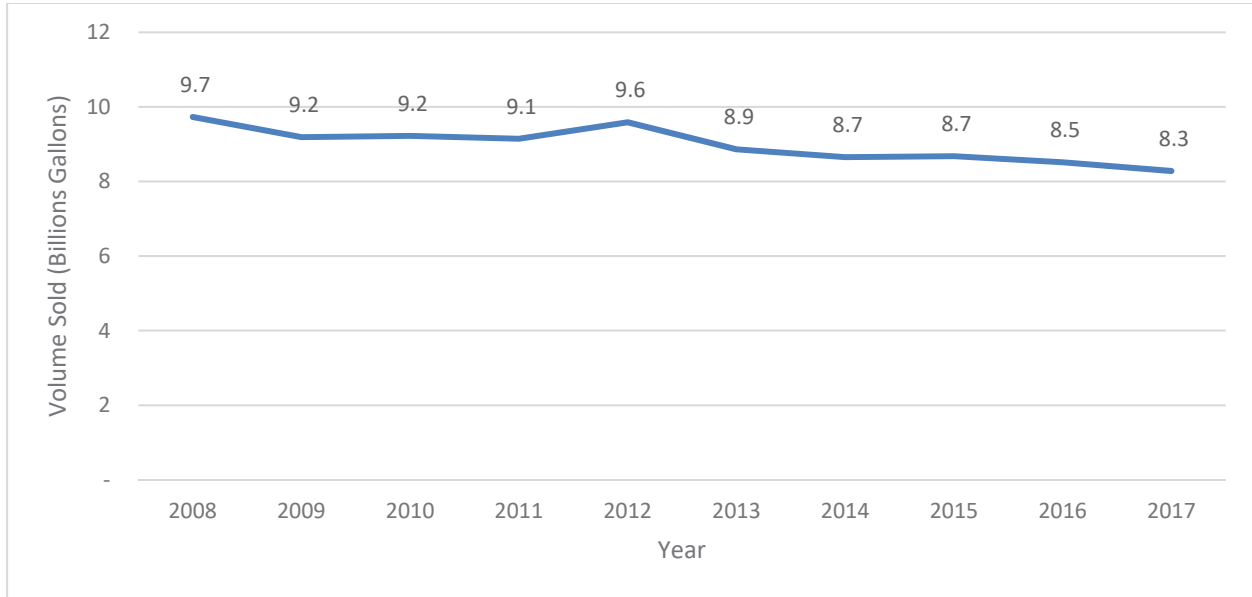
Figure One shows MWU's annual water sales from its annual reports to the PSC.

¹ <http://www.climateneeds.umd.edu/reports/American-Water-Works.pdf>. Accessed on December 13, 2018.

² <http://www.waterrf.org/PublicReportLibrary/4366.pdf>. Accessed on December 13, 2018.

³ 2014. <https://www.researchgate.net/publication/277477363>. Accessed on December 14, 2018.

Figure One: Volume of Water Sold



From 2008 to 2017, customer demand fell by fifteen percent. In 2016, Kraft Heinz announced that it would close the Oscar Mayer production facility on Madison’s east side. MWU’s former largest customer has now ceased operation and water purchases. Oscar Mayer’s closing is only a part of the water-use reduction that MWU experienced.⁴

Baseline Financial Forecast

The baseline financial forecast assumes that water sales fall 0.5 percent annually in the future. Figure Two shows MWU’s forecast cash flow and cash reserve. Figure Two includes the water rate increase approved in 2018 but does not include further rate increases. This forecast provides a baseline for assessing alternatives, but the baseline forecast is neither feasible nor recommended.

⁴ Novak, Bill. January 5, 2017. “Oscar Mayer Closing Dropped Annual Water Usage in Madison, Officials Say”. *Wisconsin State Journal*. https://madison.com/wsj/news/local/oscar-mayer-closing-dropped-annual-water-usage-in-madison-officials/article_3be94011-c8e9-59fe-a0cb-00614b23523d.html. Accessed December 13, 2018.

Figure Two: Baseline Forecast of Debt and Cash Reserves

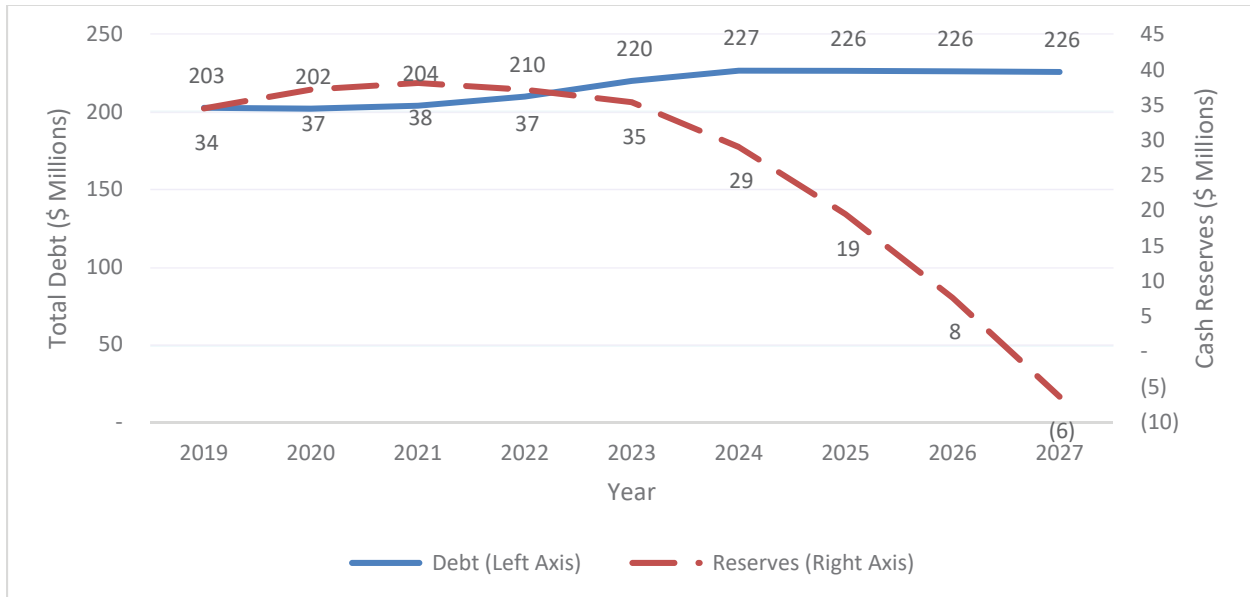


Figure Two shows an unsustainable reduction in cash reserves at the currently authorized water rates. Debt rises about ten percent from the current level.

Financial Metrics

Defining a Resilient Business Model for Water Utilities recommends establishing and monitoring financial performance goals. Measurable financial goals inform decision making, drive performance, and quantify policy effectiveness. MWU has selected the following key financial metrics.

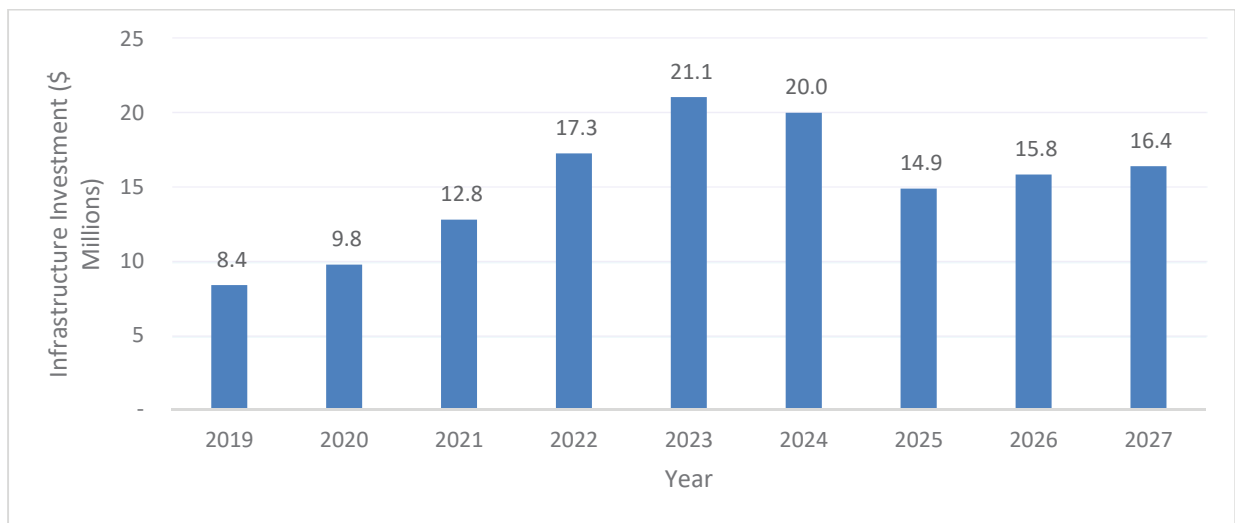
Infrastructure Investment

The AWWA and American Society of Civil Engineers identify the need for significant investment to maintain adequate water infrastructure.⁵ MWU experienced several significant water main breaks in recent years⁶. MWU has undertaken an ambitious program of distribution system investment to reduce main failures and improve service reliability.

Goal

Figure Three shows MWU’s capital expenditure goal.

Figure Three: Infrastructure Investment Goal



MWU’s timeline for the infrastructure investment goal is ongoing. Infrastructure will continue to age as MWU meets its investment goal in each year. New infrastructure needs will continue to appear on the horizon.

⁵ ASCE. 2017. “Drinking Water Infrastructure Report Card”. <https://www.infrastructurereportcard.org/wp-content/uploads/2017/01/Drinking-Water-Final.pdf>. Accessed December 14, 2018.

⁶ Aadland, Chris. February 5, 2018. “Madison Water Utility Works Overnight to Fix ‘Large’ West Side Water Main Break”. *Wisconsin State Journal*. https://madison.com/wsj/news/local/madison-water-utility-works-overnight-to-fix-large-west-side/article_cad44e8b-3e7b-51b4-8d15-ddb6c1e0cb4e.html. Accessed December 14, 2018.

Cash Reserve

AWWA has two documents that provide key insight into developing cash-reserve targets and policy: its report on cash-reserve policies⁷ and its manual on best financial practices for water utilities.⁸ A cash-reserve policy is critical for a utility’s financial wellbeing. Cash reserves allow utilities to deal with emergency repairs, shortfalls in revenue, and other challenges.

The University of North Carolina’s EFC⁹ recommends best financial practices to keep debt costs low. Credit-rating agencies award better ratings to utilities that have cash reserves to readily weather financial shocks. A written cash-reserve policy is an essential tool for building a cash reserve and demonstrating financial resilience.

Goal

MWU developed its cash-reserve policy and goal based on authoritative industry guidance and exemplars in the field. The following table shows MWU’s cash-reserve goal.

Reserve Component	Component Goal
Operation and Maintenance	Three months of operation and maintenance expenses
Depreciation	\$750,000
Principal & Interest Reserve Fund	Current-year bond principal payment + interest payment due on January 2 of following year
Special Redemption	The lowest of 125 percent of average future debt service, maximum annual future debt service, or ten percent of the value of outstanding bonds

Figure Four shows MWU’s cash-reserve goal. It is the sum of the four goal components.

⁷ 2018. “Cash Reserves Policy Guidelines”.

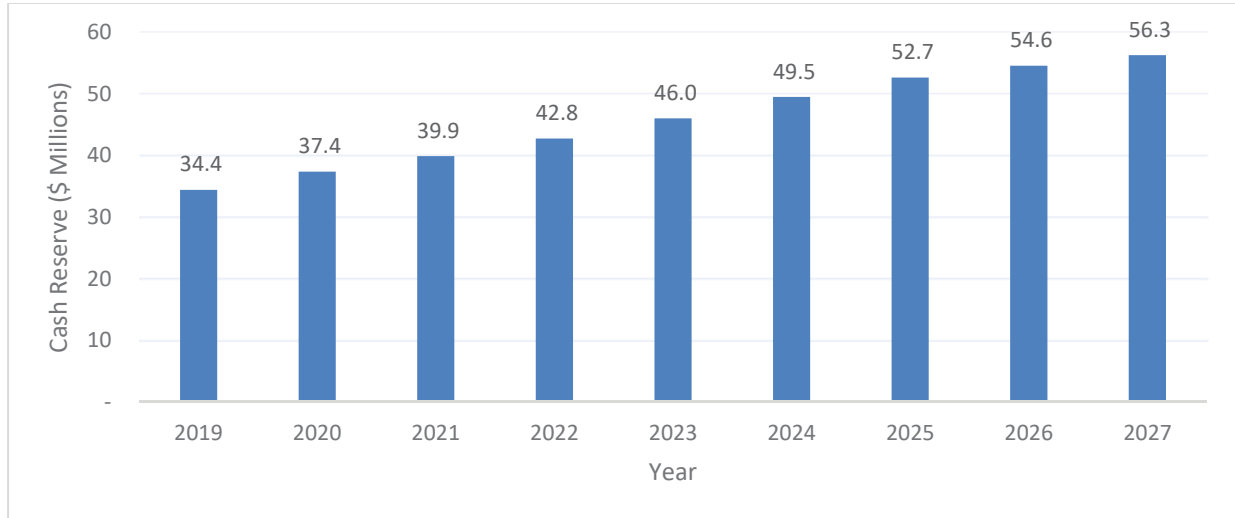
<https://www.awwa.org/Portals/0/files/resources/water%20utility%20management/AWWACashReservePolicy.pdf>. Accessed December 14, 2018.

⁸ 2017. *Manual of Water Supply Practices, M1: Principles of Water Rates, Fees, and Charges*. 7th edition.

⁹ Tiger, Mary. 2013. “More than Meets the Metric: Credit Rating Considerations for Water Utilities”.

<http://efc.web.unc.edu/2013/11/26/more-than-meets-the-metric-credit-rating-considerations-for-water-utilities/>. Accessed December 13, 2018.

Figure Four: Cash Reserve Goal



MWU forecasts that it will achieve its cash reserve target in 2019. MWU does not expect to exceed the goal by much, so revenue or expense variability could produce a shortfall. Maintaining the target trajectory for future cash reserves will require ongoing effort.

Capital Structure

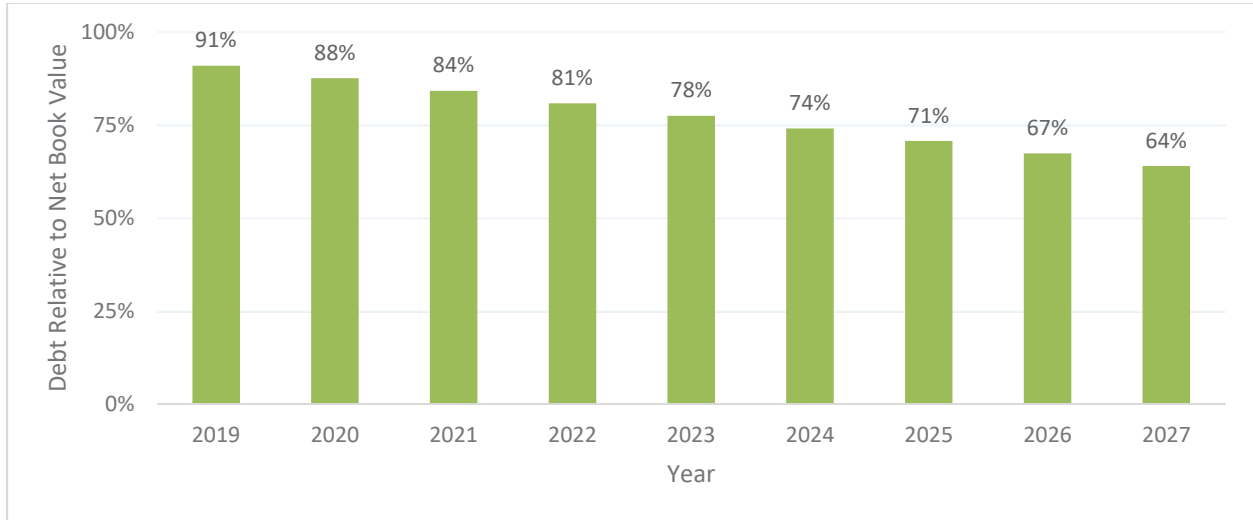
MWU has set a goal of using more cash and less debt to finance infrastructure investment. Cash financing costs more in the short term, but it avoids ongoing interest costs. Over a water infrastructure project’s life cycle, cash financing lowers cost. In point 12.a of its water rate order, the PSC ordered MWU to include actions to reduce debt to half of its investment in water infrastructure. Any reduction in MWU’s debt from the baseline forecast would reduce costs over time and benefit water users.

Many Wisconsin utilities can and do support debt above half of their infrastructure investment. Actions to reduce MWU’s debt comply with the PSC’s order, even if MWU sets a different goal. The *Defining a Resilient Business Model* report recommends that utilities customize goals to their unique situations.

Goal

MWU has a goal for debt to be 64 percent of plant net book value by 2027. Achieving this goal requires MWU to reduce debt by an estimated \$50 million from 2019 through 2027. Figure Five shows a straight-line path from the current level to the 64 percent goal.

Figure Five: Debt Goal Relative to Plant Net Book Value



MWU can progress to this goal by cash funding more future construction projects. This reduces the amount of future borrowing while MWU pays down existing debt. MWU must navigate a tradeoff between its debt goal and its infrastructure investment goal. Debt financing can accelerate infrastructure investment but delays its achievement of the debt-reduction goal.

Reducing debt and cash financing construction depend on timely approval of water rate increases. New regulatory policies to accelerate recovery of plant investment would allow MWU to reduce debt more quickly. Timely rate approvals and accelerated recovery of plant investment would allow MWU to achieve its goal more quickly, in accordance with the PSC's 2018 order.

Debt Coverage

Water is the most capital-intensive utility service. Access to credit on affordable terms is critical to financing the capital investment needed to maintain a water system.¹⁰ A utility's ability to borrow in the future depends on its ability to generate revenue in excess of debt obligations. MWU captures this business need in a debt-coverage goal.

Goal

MWU's goal is to have annual net revenue available for debt service of at least 125 percent of each year's debt payment. The 125-percent goal is the minimum required under MWU's bond agreements.

¹⁰ Ibid.

MWU expects to fall short of this goal for 2018. With its rate increase approved on November 1, 2018, MWU expects to exceed the goal in 2019. Maintaining revenue above the goal level will require ongoing effort and routine rate increases.

Debt coverage goal 1.25 times annual debt service

The timeline to achieve the minimum debt coverage ratio is 2019 at the latest.

Return on Rate Base

The PSC primarily regulates water rates through the rate of return metric. The following equation shows how the PSC defines rate of return with respect to revenue, costs, and net utility plant.

$$\text{Rate of Return} = \frac{\text{Revenue} - \text{Operating Expense} - \text{Depreciation} - \text{Taxes}}{\text{Net Investment in Utility Plant}}^{11}$$

The PSC typically establishes a rule-of-thumb benchmark rate of return that is two percentage points above a representative municipal bond rate. The current benchmark rate of return is approximately five percent. This plan assumes the benchmark rate of return will stay near five percent through 2027. In its 2018 water rate order, the PSC authorized MWU to earn an eight percent rate of return. MWU needed the higher rate of return to meet its debt-service obligation. The PSC's decision to remove some of MWU's plant investment increased the rate of return for the same revenue level. In order point 12.a, the PSC ordered MWU to plan to meet its obligation with its rates reduced to the benchmark rate of return.

Goal

MWU set a goal of reducing its rate of return by reducing the amount and cost of debt. The forecast for the preferred scenario keeps the rate of return below the level the PSC authorized in 2018. Quickly reducing the rate of return would conflict with MWU's goals of investing in water infrastructure, reducing total debt, maintaining cash reserves, and maintaining debt coverage ratios. Quickly reducing the rate of return will undermine MWU's efforts to reduce long-term lifecycle cost.

¹¹ American Water Works Association. 2017. *Manual M1: Principles of Water Rates, Fees, and Charges*. 7th edition. Pgs 43-49.

Figure Six: Goal for Reducing Rate of Return

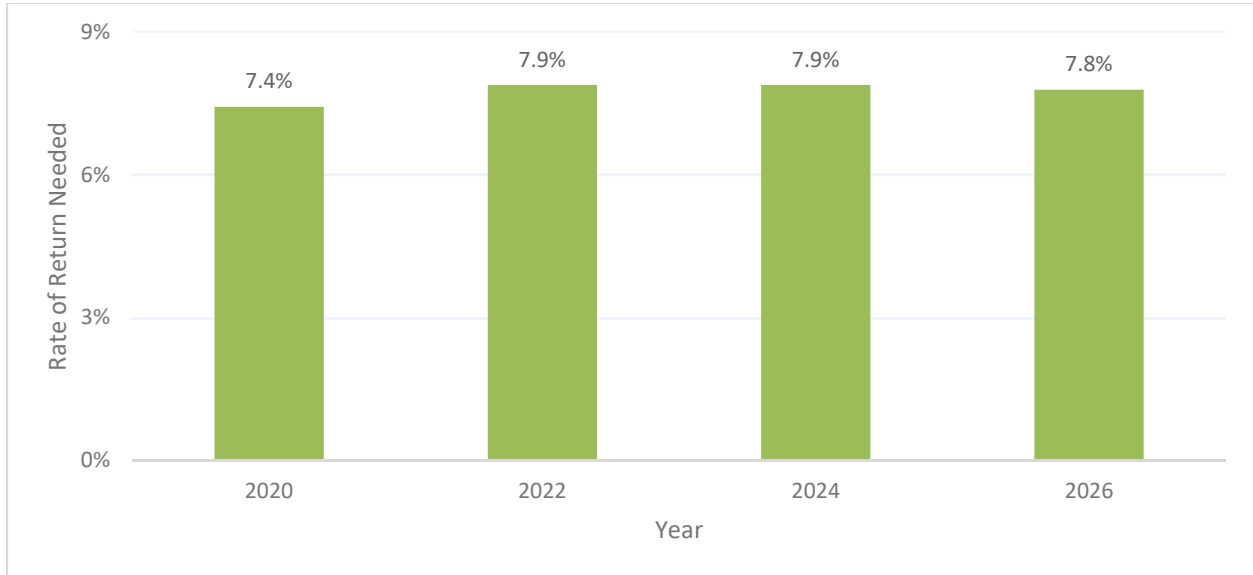


Figure Six shows a rate of return goal above the level the PSC required. Following the recommendation from the *Defining a Resilient Business Model* to adapt financial goals to their specific situation, MWU has determined that faster reductions in the rate of return would conflict with other goals and create financial risk. Building cash reserves and reducing debt will allow MWU to meet its needs with the benchmark rate of return but not by 2027.

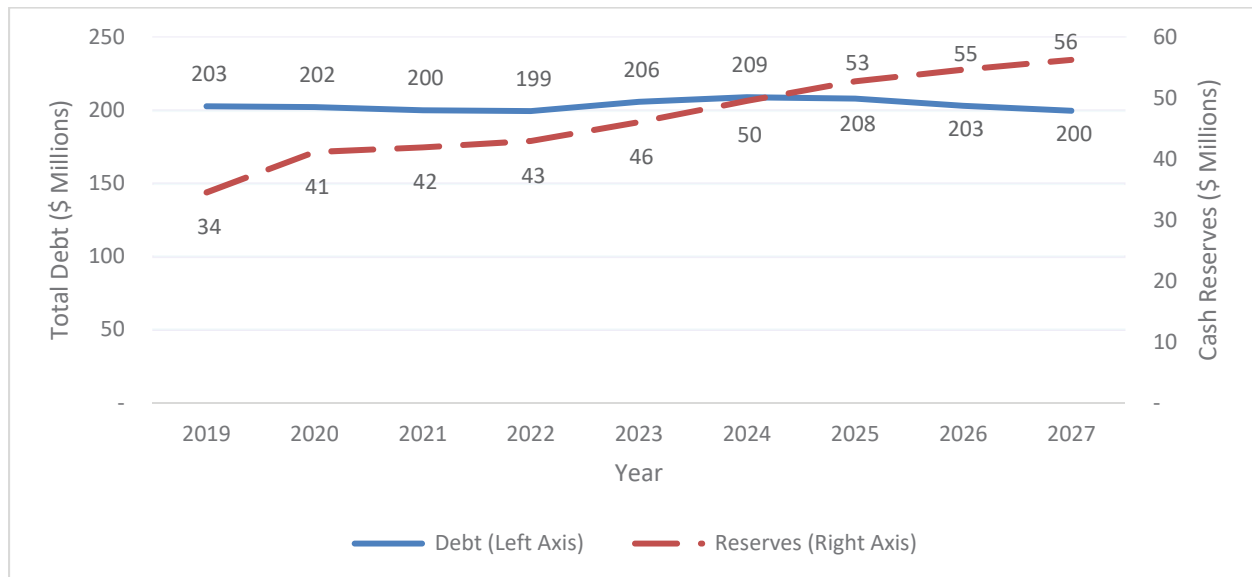
Financial Initiatives

Per the PSC’s direction in order point 12.a of the 2018 water rate order, MWU evaluated the following actions to advance the financial goals above.

2019 and Subsequent Conventional Water Rate Reviews

In order point eleven of its order in docket 3180-WR-114, the PSC orders MWU to apply for a conventional water rate review before November 1, 2020. MWU intends to apply for a conventional rate review in 2019. MWU will determine the timing of future rate reviews by tracking the financial metrics identified above. This plan assumes conventional rate reviews in 2019, 2021, 2023, and 2025.

Figure Seven: Water Rate Increase Forecast



Operational Impacts

A rate increase in late 2019 would fund MWU’s operations and debt service. It would ensure that MWU can continue to meet its debt obligations specified in its covenants. Without a rate increase, MWU would risk violating debt covenants, which would create additional work from employees and could trigger financial penalties. Rate increases will allow MWU to fund maintenance and infrastructure investment to uphold service reliability and meet evolving water quality mandates.

Ratepayer Impacts

The conventional rate review would revise MWU’s water rates to reflect its current and expected costs. The rate revision would directly increase rates for MWU rate payers. The cost to MWU to process the rate review, e.g. MWU and PSC staff time and customer notices, would indirectly affect ratepayers. MWU would need to recover the cost of the rate review from ratepayers.

Obstacles and Risks

MWU has not determined the size of the eligible rate increase. Processing time for a conventional rate review is significant. Request for expense depreciation could increase processing time. Implementing rates by the end of 2019 would position MWU for a simplified rate increase in 2021. Ratepayers voiced significant opposition to MWU's most recent rate increase.

Simplified Rate Increases

MWU plans to apply for annual simplified rate increases under Wisconsin Statutes s. 196.193 in every year that it is eligible. However, because it needs to maintain a high rate of return to reduce debt and increase cash reserves, MWU is unlikely to be eligible for this process until at least 2028.

Operational Impacts

The simplified rate increase would fund MWU operations and debt service. It would help MWU reduce its debt relative to equity.

Ratepayer Impacts

Simplified rate increases would provide a smoother, more predictable path for future rate increases. Ratepayers could better plan for and afford these increases. Simplified rate increases would reduce the cost and staff time MWU needs to commit to conventional rate reviews. Smaller, more regular increases would increase rates in the short term but decrease costs and rates in the long term.

Obstacles and Risks

The rate of return test in Wisconsin Statutes s. 96.193(3) prevents MWU from using the simplified rate increase process in the near future. If MWU hypothetically did not pursue a rate increase in 2019 or following years, its forecast rate of return would not fall far enough to be eligible for a simplified rate increase until 2021 or 2022. A water rate increase in 2019 would further delay MWU's ability to satisfy the rate of return test and use the simplified rate increase process. MWU may not be eligible for a simplified increase during the period of this forecast. Eligibility for the simplified rate increase process depends on future US inflation and interest rates.

The requirement to have conventionally approved rates in effect for a calendar year is another obstacle to the simplified rate increase process. Assuming MWU implemented a conventional rate increase by the end of 2019, it would satisfy the timing requirement in 2021.

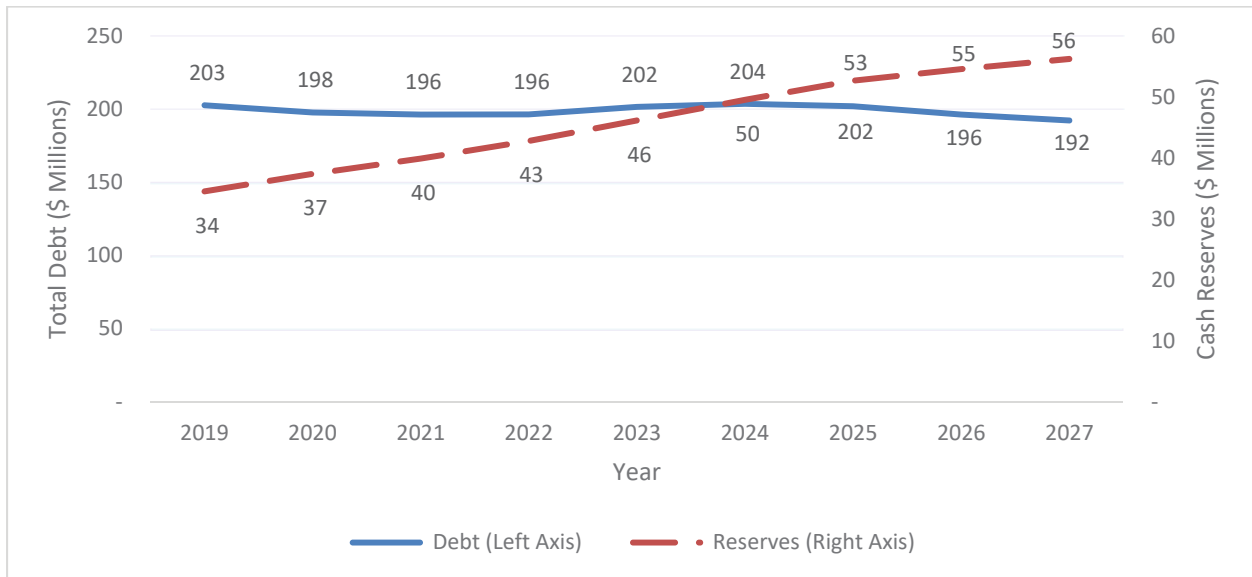
Surcharge for Distribution System Investment

The PSC rate order requires MWU to evaluate a surcharge. MWU developed the distribution system investment charge (DSIC) proposal in Appendix A to complete the evaluation. MWU

does not endorse or advocate for this particular DSIC proposal. The DSIC proposal tries to increase the certainty and timeliness of rate recovery of distribution system investment.

In PSC reference number 299851, Direct-PSC-Waymouth-12r, PSC staff noted that eleven other states allow an infrastructure surcharge. In 1999, the National Association of Regulatory Utility Commissioners (NARUC) adopted a resolution supporting the use of DSICs to facilitate water infrastructure investment.¹² The size of the infrastructure investment need and the number of states using DSICs have grown significantly since NARUC’s resolution in 1999.

Figure Eight: Distribution System Charge Forecast



The forecast in Figure Eight assumes conventional rate reviews in 2019, 2021, 2023, and 2025.

Operational Impacts

A DSIC would provide MWU with a reliable mechanism for funding routine infrastructure projects. This would allow MWU to continue replacing aging water mains.

Ratepayer Impacts

Ratepayers would experience impacts similar to the simplified rate increase scenario. While a DSIC would increase rates more often, it would lessen the cumulative increase in the long run. The DSIC would also reduce the likelihood of service disruptions by funding investment in water distribution infrastructure.

¹² National Association of Regulatory Utility Commissioners. “Resolution Endorsing and Co-Sponsoring the Distribution System Improvement Charge”. <https://pubs.naruc.org/pub.cfm?id=539F530A-2354-D714-5144-70D4D819D5F9>. Accessed December 14, 2018.

Obstacles and Risks

The PSC has not established a DSIC template for water utilities. It is unclear what DSIC template the PSC would approve. Further, if the PSC limits or forbids simplified rate increases or accelerated recovery of distribution system investments for utilities with DSICs, the benefits of these two approaches would be reduced.

Potential Solution

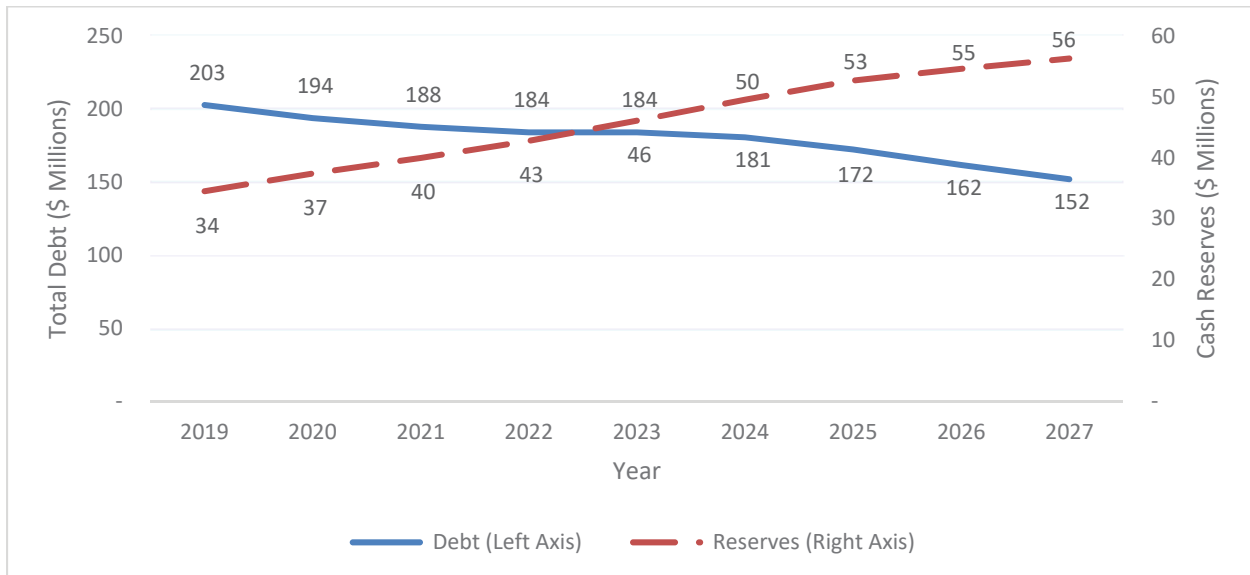
The PSC could open a generic docket to consider a DSIC policy generally and develop a general framework and example tariff. Instead of one utility doing the work to get a policy approved, the burden and risk would be spread across all utilities. A pre-approved general template would speed adoption among eligible water utilities.

Expense Depreciation

In its 2017 water rate application, MWU requested PSC approval of accelerated recovery of distribution system investments. The PSC previously approved this ratemaking approach for Marshfield Utilities in docket 3240-WR-106. The PSC calls the approach *expense depreciation*.

PSC staff stated in the past that MWU is a good candidate for expense depreciation. Accelerated recovery of distribution system investments would facilitate MWU’s policy of proactive investment in its water system. However, MWU withdrew its previous request for expense depreciation because of time constraints and the high costs of delaying its water rate increase.

Figure Nine: Expense Depreciation Forecast



The forecast in Figure Nine assumes conventional rate reviews in 2019, 2021, 2023, and 2025.

Operational Impacts

If approved, accelerated depreciation would reduce MWU's reliance on debt to fund distribution system investment. MWU anticipates that this would decrease the lifetime cost of the replaced mains.

Ratepayer Impacts

If the PSC approved expense depreciation for all of MWU's routine water main replacements, water rates would increase significantly. Expense depreciation would reduce rates in the medium term by reducing the need to debt-finance infrastructure investment. If expense depreciation is recovered primarily in volume rates, it would disproportionately impact a small number of high-volume water users.

Obstacles and Risks

The likely delay of a water rate proceeding is an obstacle. Marshfield applied for a water rate increase in docket 3240-WR-106 on July 28, 2016. The PSC issued its order on May 26, 2017, approving water rates including accelerated depreciation. The rate review took 302 days to process. Shorewood 5440-WR-111 and Lake Mills 3000-WR-107 applied for rate increases within a week of Marshfield. The PSC issued orders approving their water rates within 129 and 169 days, respectively. Tom Heikkinen of MWU testified in PSC reference number 349584, page Direct-Madison Water Utility-Heikkinen-r-2 that the delays processing rate review caused MWU to withdraw its request for expense depreciation funding.

A related issue is non-delegation. On page seven of its order on Marshfield, the PSC directed that future requests for accelerated depreciation of distribution system investment not be delegated to the administrator of the Division of Water, Telecommunication, and Consumer Affairs. Cases with accelerated depreciation are subject to review by the Commissioners. Non-delegation delays add risk not only to the request for accelerated depreciation but potentially to other aspects of MWU's rate review as well.

There is regulatory risk as well. For Marshfield, the PSC used expense depreciation to approve \$580,000 of annual up-front funding for water main investment. From 2014 through 2017, MWU annually invested an average of \$17 million in its mains, hydrants, reservoirs, customer service lines, and meters. It is unclear whether the PSC would approve accelerated depreciation for water main investment that is potentially twenty times larger than Marshfield's investment.

Potential Solution

The PSC opens a generic docket to evaluate accelerated depreciation and create a pre-approved, delegated general framework to make the policy available to all water utilities.

Reduce Infrastructure Investment

Rather than fund infrastructure investment at its planned rate, MWU could scale back investment. Delaying nonessential projects could save money, but neglecting critical infrastructure would likely be costly in the long run.

Operational Impacts

Initially, reducing the number of projects would save project management time and design costs. However, the risk of main breaks would rise, consuming more time with emergency repairs. Reactive fixes would increase construction costs compared to proactive routine replacements. Aging water mains would leak more water, reducing MWU's efficiency and revenue and increasing cost.

Ratepayer Impacts

In the near future, ratepayers would pay lower rates. Delaying projects not related to critical infrastructure may have small impacts on service to ratepayers. For example, delaying improvements in accounting software would increase staff time required to process bills or reduce the accuracy of financial reporting, but ratepayers would not immediately notice these problems.

However, delaying critical projects would increase costs in the long run compared to baseline infrastructure investment. Ratepayers would receive less reliable service from main breaks and unplanned service disruptions. Residential ratepayers would experience reduced quality of life while commercial and industrial customers could experience adverse business results. Visible failures could damage MWU's reputation.

Obstacles and Risks

The PSC could find MWU remiss in its obligation to provide reliable service to all its ratepayers. Ratepayers themselves would likely be irate with disruptions to services and would call for swift action.

Operational Initiatives

The following initiatives review and alter MWU's business processes. Unlike the initiatives above, they do not have an immediate financial impact. These initiatives would likely generate benefits over time. This addresses the PSC's requirement in order point 12.b for MWU to identify operational adjustments.

Hire Chief Financial Officer

MWU is hiring a chief financial officer (CFO). The CFO started on December 28, 2018.

Operational Impacts

Having a CFO will improve forecasting, cash flow management, debt management, and investment of reserves. A CFO will coordinate the annual financial audit, oversee billing to customers, and oversee regulatory interaction. This person will promote decision making that improves MWU's financial metrics, and the CFO will work to proactively identify and address risks.

Ratepayer Impacts

Ratepayers will pay the CFO's salary and benefits. However, improving the management of debt, reserves, and cash flow offers opportunities to more than offset the labor cost. Events like debt issuance, forecast development, and rate increases are infrequent and high-consequence, so they merit extra attention and expertise.

Obstacles and Risks

MWU will need to fit the new CFO role into existing roles and relationships. The new position does not change legal or regulatory constraints or obviate the need to invest in infrastructure.

GFOA Business Process Review

In 2018, MWU contracted the Government Finance Officers Association (GFOA) Research and Consulting Center to review MWU's business processes and recommend improvements. GFOA's report analyzed business processes for generating financial reports, accounting for capital assets, managing accounts receivable, managing vendors, and other business processes.

Operational Impacts

GFOA's recommendations would reduce redundancies and complexity. The recommendations would reduce accounting and record-keeping obstacles for MWU to comply with PSC requirements.

Ratepayer Impacts

Ratepayers bore no cost of the GFOA process review since the City of Madison general fund paid for the study. Assuming MWU successfully implements the recommendations, ratepayers will benefit from efficiencies produced from simplified record keeping and modern, adequate accounting systems.

Obstacles and Risks

GFOA determined that Wisconsin municipalities have difficulty accommodating the PSC-required chart of accounts within their accounting software. MWU has maintained Microsoft Dynamics accounting software to accommodate PSC requirements. Implementing GFOA's recommendations will require significant coordination between MWU and City of Madison staff.

Consolidate MWU's Accounting System with the City of Madison's

The City of Madison uses Munis enterprise resource planning software from Tyler Technologies. MWU currently uses Munis to interact with city systems. MWU also maintains separate accounting records in Microsoft Dynamics to meet regulatory reporting requirements. Based on the recommendations from GFOA's business process review, MWU plans to transition completely to Munis by January 1, 2019.

Operational Impacts

The transition will facilitate more accurate, timely reporting. Previously, some cash outflows to the City happened only once per year, and soon, they will occur monthly. This transition will allow MWU to better monitor and benchmark actuals against the budget. Leaders will be better equipped to make key financial and operational decisions.

Ratepayer Impacts

None expected.

Obstacles and Risks

New systems often entail steep learning curves. MWU staff will need time to learn the new system. Risk exists of data loss or data mistranslation, requiring additional vigilance and work to correct.

Operations Audit

The Common Council directed MWU to audit its operations. MWU and the Common Council are still developing the audit scope. In its 2018 water rate order, the PSC discussed MWU "operational and management challenges". The operations audit will identify and address those challenges.

Operational Impacts

The audit will not directly impact operations. Assuming the audit identifies redundancies or inefficiencies, it would improve operations.

Ratepayer Impacts

Ratepayers will pay for the operations audit. Assuming the audit identifies and resolves redundancies or inefficiencies, savings to ratepayers may offset the audit's cost over time.

Obstacles and Risks

Assuming the audit scope does not duplicate efforts by the GFOA or CFO, obstacles and risks should be minimal.

Performance Dashboard

MWU plans to create a dashboard of key performance metrics. It will make the dashboard available to local decision makers.

Operational Impacts

The performance dashboard will give users faster access to key indicators of MWU's performance and financial health. Greater data availability will likely reduce adverse surprises and may improve decision making.

Ratepayer Impacts

The performance dashboard will not directly impact ratepayers. If greater data availability improves decision making, ratepayers will benefit over time.

Obstacles and Risks

Assuming the dashboard is developed successfully and tracks meaningful metrics, risks are minimal. Greater data availability on key indicators of MWU's health and performance should not have a downside.

Conclusion

Despite the challenges facing water utilities throughout the Midwest, Madison Water Utility remains committed to investing in infrastructure to provide outstanding service. Madison Water Utility's ambitious financial targets, along with its financial and operational initiatives, will ensure that it can do so.

However, the complex issues facing Madison Water Utility – and water utilities throughout the state – require shared effort from utilities, municipal decision makers, water users, and regulators to solve. The PSC's ongoing efforts to provide cogent policies and manageable processes for alternate funding mechanisms such as surcharges and expense depreciation will invaluablely aid this work. Wisconsin water utilities would breathe more easily with the tools they need to provide stellar service at affordable rates.

For Madison Water Utility's part, from auditing its operations to setting ambitious, measurable goals to pioneering new regulatory frameworks, Madison Water Utility has charted a course toward healthier finances and long-term rate affordability.

Appendix A: Hypothetical Distribution System Investment Charge

In order point 12.f of its November 1, 2018, order, the PSC ordered MWU to evaluate using a surcharge to improve its financial situation. To facilitate that evaluation, MWU assumes the surcharge takes the following form. A surcharge along these lines would require PSC approval. MWU does not currently intend to apply to the PSC for or implement a surcharge policy.

1. Once per six months, MWU may increase its monthly service charges to account for eligible capital expenditures.
2. DSIC adjustments shall apply to monthly service charges in tariff schedules MG-1R, MG-1MF, MG-1S1, MG-1C, MG-1I, and MG-1PA.
3. Eligible capital expenditures are utility-financed capital additions to accounts 343.1 mains, 343.2 relined mains, 348 hydrants, 346 meters, and 345 services. MWU shall have received PSC approval for included capital expenditures if required by Wisconsin Admin Code ch. PSC 184.
4. Capital additions for the current DSIC adjustment shall be accounted for since MWU's previous conventional PSC rate review or DSIC rate increase.
5. MWU shall calculate the increases in monthly service charges from the following tables.

Table One

Account	Capital Additions, e.g.	Depreciation Rate	Benchmark Return, e.g.	Annual Capital Cost
343.1 Mains	\$6,000,000	1.3%	5.0%	\$378,000
343.2 Relined Mains	7,000,000	2.0%	5.0%	490,000
345 Services	1,000,000	2.9%	5.0%	79,000
346 Meters	400,000	5.5%	5.0%	42,000
348 Hydrants	2,000,000	2.2%	5.0%	144,000
Total Annual Cost				\$1,133,000
Safety Factor				90%
Maximum Cumulative Annual Capital Cost				\$3,000,000
Adjusted Annual Cost				1,019,700
Adjusted Monthly Cost				84,975
Customer Meter Equivalents				93,435
Adjusted Quarterly Cost per Meter Equivalent				\$0.91

Table Two

Meter Size (Inches)	Equivalent Units	DSIC Monthly Adjustment
5/8	1	\$0.91
¾	1.5	1.36
1	2.5	2.27
1 ¼	3.7	3.36
1 ½	5	4.55
2	8	7.28
3	15	13.64
4	25	22.74
6	50	45.47
8	80	72.76
10	120	109.13
12	160	145.51

6. Limitations: The total cumulative annual capital cost recovered through all DSIC adjustments since the previous conventional PSC rate review shall not exceed \$3 million. The date on which MWU files a DSIC adjustment shall not be more than three years from the effective date of the PSC rate order in MWU’s most recent conventional rate review.
7. MWU’s application for the DSIC adjustment shall include the following. Document notice to customers 30 days before filing the rate increase with the PSC.
8. MWU shall round the quarterly DSIC adjustment per meter equivalent to the nearest hundredth of a dollar.
9. During a PSC conventional rate review, the DSIC shall be reset to zero.
10. Notwithstanding other parts of the proposal, the DSIC adjustment to MWU’s tariffs shall be automatically effective the day after MWU’s filing without any action by the PSC.