

**City of Flint Water Department**  
**Technical, Management, and Financial Capacity**  
**Status Update March 2022**

The City of Flint has made great progress toward improving the reliability and quality of its water service since its 2014/2015 water crisis. The City has identified and fully developed its long-term primary and secondary water sources and completed several projects necessary to enhance the performance of its water system. However, the enduring sustainability of its system can only be achieved if the City has the proper technical, managerial, and financial (TMF) capacity to properly operate the system. This requirement is recognized in US EPA's First Amendment to Flint's Emergency Administrative Order (Paragraph 60.b.iii), Michigan DEQ's August 2017 Water System Sanitary Survey and the 2018 EGLE/Flint Voluntary Agreement.

This document provides a third update to the City of Flint Water Department's technical, management, and financial capacity (TMF) initiative. The initial TMF report was submitted to MDEQ/EGLE on October 30, 2018. This initial TMF report documented several of the financial challenges associated with the City's water system. A declining customer base, low collection rate, loss of commercial and industrial customers, water theft, and inaccurate meters had contributed to reduced system revenues. Additionally, the low median household income in the City and high water rates made it infeasible to increase revenues through an additional rate increase. Without appropriate revenues, there was a significant challenge for the utility to hire required staff, complete all required capital projects, and implement best operating practices.

A TMF status update was submitted to EGLE in July 2019. While the initial TMF report identified numerous methods and recommended actions to enhance Water Department revenues, the first TMF status update documented progress on several projects and initiatives impacting the Water Department's revenue and operating costs. Assumptions used for financial projections were revised and a new five-year financial projection was presented. These projections established when proper funds would be available to hire additional staff, establish a self-funded capital program, and allow implementation of all recommended Standard Operating Procedures (SOPs).

This second TMF update (September 2020) revised financial and operating assumptions and performance to primarily reflect the impact of the COVID-19 pandemic. Legislative and policy changes had impacted collection levels, social distancing requirements had impacted the ability to attract and hire qualified personnel, and construction projects had been delayed. The second update also presented potential increases in budgeted revenues, revised construction schedules for WIIN funded projects, and the plan for Standard Operating Procedure (SOP) development and implementation.

According to the most recent Arcadis report, the City of Flint will require \$280 million in a small main replacement program to properly maintain the City's drinking water system. This investment was identified as a high priority. The 2018 Arcadis report noted that there were several financing mechanisms available for this type of long-term investment, including rate increases, grant funding, cost-sharing, and debt funding. The report noted in Table ES - 2 regarding grant funding that "many of the most obvious

grants have already been awarded." However, this report was written before many of the important policy changes that have occurred in 2021, including the Federal American Rescue Plan Act, Federal Infrastructure Investment and Jobs Act (IIJA), and a surplus of State funding options making the comment in Table ES-2 outdated.

There are at least three sources of external funding that the City will seek to maximize before even considering a self-financing strategy for the Arcadis identified capital investments. The first source is the State of Michigan, as the State is continuing to identify local government capital investments, including water and sewer systems, as candidates for one-time state and federally sourced funds. The \$1 trillion IIJA is a second source of potential external funding for the City's drinking water system. Over the next few years, the City will aggressively seek to compete for these funds. Finally, the City could potentially use American Rescue Plan dollars, including both the City's portion and ARPA dollars outside of the City's direct allocation, for the purpose of long-term capital investment.

This report is divided into four sections: financial performance, managerial performance, technical performance, and ongoing action items and recommendations to investigate or implement.

## **Section 1 Financial Performance**

A utility cannot be properly operated and maintained unless the appropriate financial resources are available. The City Water Department's financial situation has been a challenge for several years. Table 1 presents the Water Department financials from a net position perspective. The City of Flint has made the following financial projections as part of its budgeting process.

Table 1 - Water Department Budget and Net Position

Water Fund	FY2021 Actual	FY2022 Adopted	FY2023 Proposed	FY2024 Forecasted	FY2025 Projected
Revenue	\$65.2M	\$30.3M	\$29.8M	\$29.8M	\$30.4M
Expense	3.4M*	38.2M	38.8M	39.9M	40.7M
Change	\$61.8M	(\$7.9M)	(\$9.0M)	(\$10.1M)	(\$10.3M)
Net Position	\$130.9M	\$123.0M	\$114.0M	\$103.9M	\$93.6M

\* The FY2021 Actual Expense is artificially low due to pension and retiree healthcare accounting adjustments related to the actuarial report.

The Water Enterprise Fund had a total net position of \$130.9M and total cash and investments of \$16.3M on June 30, 2021 (based on the FY2021 audit). However, most of this value is associated with capital assets

and this value should continue to increase as WIIN funded projects are completed. Therefore, this “net position” does not reflect the total cash funds available to support the Water Departments budget deficit or future TMF and infrastructure requirements.

As with all budgets, there are assumptions built into these projections. The total number of water customers is assumed to be constant for the next three years with the same mix of residential and commercial customers. The water charges are assumed to remain at their current rates. As explained later in this report, the city has recently begun to implement water shutoffs, after a nearly two-year moratorium, which will result in improved collection rates.

Table 2 – Water Department Expense Details

Water Fund	FY2021 Actual	FY2022 Adopted	FY2023 Proposed	FY2024 Forecasted	FY2025 Projected
Personnel Services	\$3,292,625	\$4,378,407	\$4,844,294	\$4,844,294	\$4,941,180
Pension & OPEB	(25,049,883)	4,533,507	3,688,994	4,426,940	4,515,479
Supplies & Operating Expenses	14,497,574	18,592,351	20,523,139	21,113,721	21,535,995
Capital Outlay	4,087,771	4,056,850	3,094,000	2,915,000	2,973,300
Debt Service	6,582,575	6,649,200	6,652,402	6,652,402	6,785,450
Total Expense	\$3,410,662	\$38,210,315	\$38,802,829	\$39,952,357	\$40,751,404

Operating costs for FY2022 and beyond include all positions (including vacant positions) shown on the current organization chart (Appendix A). The pension and retiree healthcare accounting adjustment can be observed in FY2021. The supplies and operating expenses include an expectation of inflationary adjustments and any GLWA rate increases. Capital outlay is dedicated to any needed maintenance items. Debt service is the required payment to KWA for debt that is then credited against the City’s GLWA charges. Total expenses are expected to rise due to capital needs, inflation adjustments, and staffing required positions.

### Collections

The City’s financial system cannot adequately differentiate revenue sources, which makes it difficult to determine a collection rate based solely on current billing records. However, the Water Department budget was developed using a residential and commercial collection rate of 85%, which is low compared to other utilities. This performance is understandable. In 2018 and 2019, the City was aggressively pursuing customers that were delinquent in payment of their water bills. At that time, water service was being terminated for non-payment. To reconnect, customers were required to pay their current bill, a percentage of their outstanding balance, and a reconnection fee to reinstate water service. These actions increased current year customer revenue per account through the partial payment of overdue bills and prompt payment of new bills.

The City discontinued “service termination for non-payment” during the fall of 2019. Due to the pandemic, this practice has continued, and some previous service terminations have been reconnected for health reasons in accordance with Governor Whitmer’s Executive Orders. Some of the revenue lost from these conditions has been offset by State-funded payment assistance programs. However, there is the potential to ultimately increase collection rates by at least 10 percent to return the City to pre-water crisis collection levels. The recently implemented Water Payment Assistance Program, which would be funded from the CARES Act, Water Residential Assistance Program (WRAP), and other public service projects, should assist with improved collections. If a 95 percent collection level is achieved, annual revenues would increase by approximately \$2.5M in the short term. Pursuing payment from delinquent commercial accounts has recently commenced.

Additionally, under the terms of the purchased water agreement with GLWA, the City can have its escrow funds released if it can properly document that its residential collection rate exceeds 90%, has made all payments due under the water contract in full and on time, and has met all obligations payable from its water and sewer funds, including obligations to its bond holders, suppliers, vendors, and employees in a timely matter after the first two years of the contract, which was entered into in November of 2017 . Using best practices for collections should easily achieve this goal and make another \$3.75M available to the Water Fund. If not, then the security deposit funds would not be available until 2023.

#### Water Rates

The City has contracted with Tetra Tech to perform a water rate study. The City is in the process of evaluating the rate structure to meet revenue requirements and reduce the economic hardship to residents. Moreover, the City will increase collection efforts. The City will utilize outside sources as well as City employees to collect utility payments. Collection agencies and attorneys will assist with collecting inactive water accounts via collection activities and the court system. The City will ramp up efforts to collect on delinquent active water accounts by mailing out shut-off notices and turning off the water when payments are not made. The City will also create flyers to inform customers of utility bill assistance.

#### GM Credit

Full water service from the Flint water system was reinstated at the GM-Flint Engine Operations in October 2018. Since that date, the potential revenue increase from this industrial account meter connection is approximately \$0.4M per year. However, a City sewer billing error resulted in overbilling the GM-Flint Complex by approximately \$1.2M for sewer service from December 2014 to July 2017. Therefore, GM is receiving monthly credits that offset water/sewer bills. However, this credit should discontinue in December 2023 resulting in increased revenue.

#### Meters

The City selected the Badger E-Series meters for their residential meter replacement. These meters are being installed with AMR/AMI technology which allows meters to be read remotely. The storage and transmission of meter reads to a central location result in more efficient and accurate meter reads.

Additionally, customers will benefit from access to continuous water use information which can help identify household leaks and promote water conservation.

The Badger E-Series meters consist of sealed, tamper protected meters and registers (with alarms) which will reduce meter tampering and water theft. To protect the City's investment in the new meter technology, the City has taken steps to penalize any customer tampering with their water service and return those customers back onto the system legally as paying customers.

The accuracy of the new meters will increase residential revenue by several percent (on the average) per household. The increased revenue from meter replacements by FY21-22 would be approximately \$0.5M annually. However, it is difficult to quantify the potential increased revenue resulting from reduced water theft.

The City will continue to attempt to determine the portion of its significant Non-Revenue Water (NRW) levels that may be associated with this theft. The first step in this process would be to undertake, update, and analyze the data from a leak detection survey. Secondly, meter reading data should be reviewed to assess where abnormal water use patterns are occurring that might indicate water theft, such as backflow conditions due to reversing the flow through a meter.

## **Section 2 Managerial Performance**

### Water Department Staffing

The Water Department's financial performance directly impacts its ability to hire needed staff. The City continues to attempt to fill all positions shown on its current Water Department organization chart (see Appendix A). However, eleven (11) budgeted positions continue to be vacant that primarily support the Water Service Center and its distribution system responsibilities. "Full-employment" within the Water Department has also been difficult to achieve since it is a challenge to attract qualified personnel. Additionally, the pandemic has made it difficult to interview and test potential employees. The City is looking at using grant funding to help attract talent to the positions with signing bonuses. Critical operating responsibilities, such as the licensed treatment plant operator and laboratory services, have been outsourced to F&V Operations and Resource Management.

Arcadis recommended that the following additional positions be added to provide the appropriate TMF capacity.

1. Laboratory Technician
2. Cross Connection Program Manager
3. Water Distribution Valve and Hydrant Crew (3)
4. Customer Service/ Call Center Staff (4)
5. Enterprise Asset Manager

6. GIS Specialist/ Hydraulic Modeler
7. Construction Inspectors
8. Leak Detection Team
9. Flushing Team (2)

The first six listed positions are considered “high priority”. The current City Water Department budget does include the laboratory and cross connection positions and these positions have been filled or the responsibility outsourced. The City has hired a GIS Supervisor, but still needs a hydraulic modeler. The City has also contracted for leak detection services every other year. The City does directional flushing annually, along with prepping fire hydrants for the winter. The remaining positions have not been included in the three-year plan due to budget concerns and the challenge of attracting qualified personnel. The total annual costs of these positions would be approximately \$1M. However, given the projected financial performance of the Water Department, these critical positions cannot be added. Some of these responsibilities could be outsourced, such as valve exercising, if it is found to be cost-effective.

### **Section 3 Technical Performance**

#### WIIN Projects

The City has completed the design of all WIIN funded projects included in the Project Plan, except for the Cedar Street Pumping Station. Most of the projects listed below are completed or currently being constructed. The intent is to complete the construction of seven (7) of the nine (9) primary WIIN funded projects by the following dates.

<u>Project</u>	<u>Functional Completion</u>
LSL Replacement and Restoration	December 2022
Chemical Building	May 2022
Dort Pumping Stations	November 2022
Dort Reservoir Rehabilitation	Complete
Cedar St. Pumping Station and Storage	Project to be completed without WIIN funding
Water Quality Monitoring Panels	Complete
Secondary Water Supply	April 2022
Northwest Transmission Main	Project to be completed without WIIN funding
Water Meter Replacement	December 2022

When the WIIN fund allocation was planned, it was assumed that approximately \$25M would be available for small main projects beginning in 2023. These funds were committed to on-going main projects and service line work, which will require the City to self-fund or grant-fund all capital expenditure requirements after the completion of WIIN projects in 2022. Arcadis identified over \$300M of capital expenditure requirements for the Flint water system over the next 20 years (\$15M/year) to meet the TMF requirements. Most of these projects are small main replacements. As shown in Table 1, the City will not

be able to support an additional \$11M (\$4M of capital expenditure is in the current budget) for a self-funded infrastructure replacement program beginning in 2023.

#### Standard Operating Procedures (SOPs)

The Water Department has implemented numerous Standard Operating Procedures (SOPs) included in the Arcadis report. However, the execution of several of the SOPs was deferred until several of the appropriate WIIN construction projects were completed and/or additional staffing was available. While the process and procedures included in the SOPs listed below are being used, these additional staff are required to achieve the recommended maintenance frequencies for proper system operations.

<u>Staff</u>	<u>SOP</u>
Water Distribution Valve and Hydrant Crew (3)	-Valve Inspection, Testing and Maintenance
Flushing Team (2)	-Unidirectional Flushing/ Conventional Flushing for Water Turnover

The recommended positions of Enterprise Asset Manager, GIS Specialist/Hydraulic Modeler, and Construction Inspectors were to be hired to support the capital program beginning in FY2023. Implementing the Customer Complaint Tracking SOP will require the hiring of a customer service/call center staff (4 employees recommended by Arcadis).

The remaining Water Age Management SOP will be implemented in conjunction with the completion of the Dort and Cedar Street water storage projects, when better water age management will be required.

#### **Section 4 Recommendations and Action Items**

- When appropriate, adjust operating procedures and practices to improve residential revenue collection rates. Adjust accounting practices so collection rates can be more accurately monitored.
- Given the ongoing revenue required to meet TMF requirements, investigate the availability and apply for grant funding and low/no interest loans to meet future operating and/or capital requirements.
- Prioritize filling the significant number of budgeted vacant positions within the Water Department organization. Also, given the high levels of automation being added to Water Treatment Plant operation by early 2022, consider deployment of some of this operating staff to other inadequately staffed functions within the Water Department. Begin hiring the additional employees recommended in the “Water Distribution System Optimization Plan.”

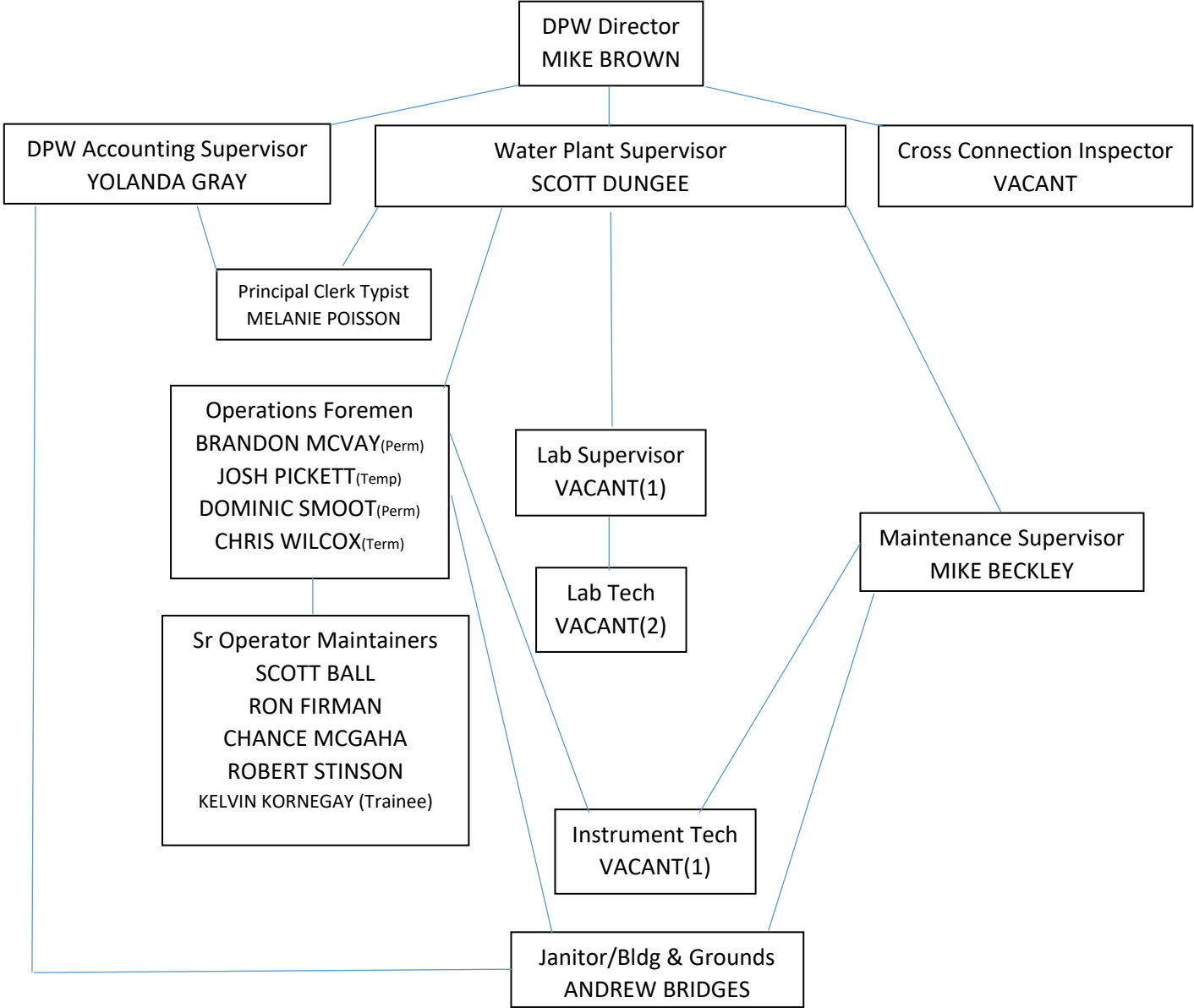
- Diligently pursue the completion of the LSL replacement program and completion of the Dort Pumping Station and Cedar St. Pumping Station and Storage projects.
- With the completion of the meter replacement program, which should reduce water theft, undertake a leak detection study, and review meter reading/billing data to update the Non-Revenue Water quantities within the water system.
- Revise and implement several of the referenced Standard Operating Procedures (SOPs) as construction projects associated with the SOPs are completed and staffing becomes available to facilitate these best practices.
- Formalize the Asset Management programs to assure that the most critical projects (considering service quality, reliability, risk, public health, etc.) are being prioritized to assure that capital funds are efficiently deployed.



## APPENDIX A

### Water Department Organizational Chart

# Water Plant Organization Chart (3/8/22)



# Flint Water Service Center Organization Chart FY 2020- 2021

