



Agenda

City Commission Business Meeting

City of Kalamazoo

Monday, February 3, 2020

7:00 PM

City Commission Chambers – 241 West South Street

A. CALL TO ORDER/ROLL CALL

B. OPENING CEREMONY

1. Invocation: Chaplain Liz Candido, Kalamazoo College
2. Pledge of Allegiance
3. Introduction of Guests
 - a. Presentation by the Central County Transportation Authority
4. Proclamations
 - a. National 2-1-1 Day

C. ADOPTION OF FORMAL AGENDA

D. COMMUNICATIONS

1. Calendar of Upcoming Meetings

E. PUBLIC HEARINGS

F. CONSENT AGENDA

(Action: Motion to approve items “1-11”, postpone item “12” until February 17, 2020, and authorize the City Manager to sign all documents on behalf of the City)

1. Approval of a change order with Tetra Tech, Inc. for Corrosion Coupon Testing in the amount of \$104,500.

2. Approval of a professional services agreement with Prein & Newhoff to provide engineering and design services for the Bank Street Farmers' Market project in the amount of \$174,000.
3. Approval of a contract supplemental and change order with Hoffman Brothers, Inc. for the emergency repair of sanitary sewer infrastructure in the amount of \$204,980; and the appropriation of funds from the Wastewater Emergency Reserves for the same amount.
4. Approval of a contract with Ferguson Water Works to provide Neptune Water Meters in the amount of \$600,000.
5. Approval of a one-year term contract extension with Kalamazoo Oil, Inc. for gasoline and diesel fuel for an amount not to exceed \$600,000.
6. First reading of an ordinance to amend Section 38-32 of the Kalamazoo City Code to change the rates charged for water service.
7. First reading of an ordinance to amend Section 28-73 of the Kalamazoo City Code to change the rates charged for wastewater service.
8. Approval of an affiliation agreement between Western Michigan University (WMU) and the Kalamazoo Department of Public Safety (KDPS) allowing for WMU students to complete internships with KDPS.
9. Approval and acceptance of an easement with Consumers Energy for electrical utility equipment installation at the Station 18 Wellfield.
10. Approval of the appointment of Alyssa Stewart to the Shared Prosperity Kalamazoo Organizing Committee.
11. Approval of the minutes from the City Commission meetings on January 13 and January 21, 2020.
12. Approval of the purchase of a portion of the property at 1157 Bank Street for the realignment of Bank Street that is part of the Farmers' Market Improvement Project. *(Postpone until February 17, 2020)*

G. REGULAR AGENDA

H. REPORTS AND LEGISLATION

1. City Manager's Report

I. UNFINISHED BUSINESS

J. POLICY ITEMS

K. NEW BUSINESS

L. CITIZEN COMMENTS

M. COMMISSIONER COMMENTS

N. CLOSED SESSION

O. ADJOURNMENT

ADDITIONAL INFORMATION

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Questions regarding agenda items may be answered prior to the meeting by contacting the City Manager's Office at 269.337.8047.

Persons with disabilities who need accommodations to effectively participate in City Commission meetings should contact the City Clerk's Office at 337-8792 a week in advance to request mobility, visual, hearing or other assistance.

Agendas for the regular meetings of the Kalamazoo City Commission are available on the Internet at: www.kalamazoocity.org

The Kalamazoo City Commission business meetings are held on the first and third Mondays at 7:00 p.m. and are shown live on the Public Media Network (channel 190 for Charter customers, channel 99 for U-Verse customers). Business meetings are also web streamed live on the City's YouTube channel at <https://goo.gl/Q6DW37>. Public Media Network rebroadcasts these meetings on Tuesdays at 8:00 a.m., Wednesdays, at 1:00 a.m., and Thursdays at 3:00 p.m. Recorded meetings are also available on-demand on the YouTube channel.



Calendar of Upcoming Meetings

City of Kalamazoo

City Commission (next 30 days)

Regular Business Meetings – 7:00 p.m. in the City Commission Chambers

February 17th and March 2nd

Regular Neighborhood Meetings – 6:00 p.m. in the Community Room at City Hall

February 17th

Advisory Boards, Commissions and Committees (next two weeks)

The **Parks and Recreation Advisory Board** will meet on Tuesday, February 4, 2020 at 5:30 p.m., in the Parks and Recreation Community Room at Mayors' Riverfront Park, located at 251 Mills Street.

The **Tree Committee** will meet on Tuesday, February 4, 2020 at 2:00 p.m., in the Public Services Conference Room, located at 415 Stockbridge Avenue.

The **Planning Commission** will meet on Thursday, February 6, 2020 at 7:00 p.m., in the City Commission Chambers at City Hall.

The **Foundation for Excellence (FFE) Board of Directors** will meet on Monday, February 10, 2020 at 2:00 p.m. in the Community Room at City Hall.

The **Natural Features Protection Review Board** will meet on Tuesday, February 11, 2020 at 4:00 p.m., in the Community Room at City Hall.

The **Citizen-Public Safety Review and Appeals Board** will meet on Tuesday, February 11, 2020 at 6:00 p.m., in the Parks and Recreation Community Room at Mayors' Riverfront Park, located at 251 Mills Street.

The **Kalamazoo Historic Preservation Commission** will meet on Tuesday, February 11, 2020 at 6:00 p.m., in the Community Room at City Hall.

The **Traffic Board** will meet on Thursday, February 13, 2020 at 2:00 p.m., in the Public Services Conference Room, located at 415 Stockbridge Avenue.

The **Community Development Act Advisory Committee** will meet on Thursday, February 13, 2020 at 6:30 p.m., in the Community Room at City Hall.

The **Zoning Board of Appeals** will meet on Thursday, February 13, 2020 at 7:00 p.m., in the in the City Commission Chambers at City Hall.



City Commission Agenda Report

City of Kalamazoo

Date: **2/3/2020**

Item: **F.1.**

TO: Mayor Anderson, Vice Mayor Griffin, and City Commissioners

FROM: James K. Ritsema, City Manager
Reviewed by: James J. Baker, PE, Public Services Director & City Engineer
Prepared by: Stephen A. Skalski, PE, Assistant City Engineer – Water Resources

DATE: February 3, 2020

SUBJECT: Changer Order with Tetra Tech, Inc. for Corrosion Coupon Testing (Bid Ref# 906-29-017.1.4)

RECOMMENDATION:

It is recommended that City Commission approve a change order in the amount of \$104,500 with Tetra Tech, Inc. for Corrosion Coupon Testing Bid Ref# 906-29-017.1.4

BACKGROUND:

In June of 2019, Public Services retained the professional services of Tetra Tech, Inc. to develop plans and specifications for the optimization of Phosphate addition for the City of Kalamazoo's water system. In November, Public Services identified the need to perform coupon testing at Well Pumping Stations 5, 14, 25 and Central. As this work would line up directly with the work previously begun with Tetra Tech, Public Services requested a proposal for a change order to add in the coupon testing and analysis from Tetra Tech. Tetra Tech proposed a change order in the amount of \$104,500 for the additional coupon testing and analysis. Tetra Tech has performed excellently on similar work on projects for the City, and Public Services recommends approval of this change order.

STRATEGIC VISION ALIGNMENT:

Relevant Priority Based Budgeting Program:

Program Name and Description

Water Quality Administration - Testing and Performing Chemical Adjustments According to State and Federal Regulations and Evaluating Water Quality Concerns and Making

Necessary Changes.

This program/project has a high degree of impact on the following Strategic Goal(s):
Safe Community – Creating a safe environment for living, working, and playing.

COMMUNITY ENGAGEMENT:

Appropriate Depth of Engagement
Internal

Discussion:

Engagement/Communication Tools

FISCAL IMPACT:

The funding for the project is available in the City’s Water Operation and Maintenance Budget.
Project funding and costs area as follows:
Funding:

591-561-03-533-845.001	\$104,500.00
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Costs:	
Professional Services	\$104,500.00



City Commission Agenda Report

City of Kalamazoo

Date: **2/3/2020**

Item: **F.2.**

TO: Mayor Anderson, Vice Mayor Griffin, and City Commissioners

FROM: James K. Ritsema, City Manager
Prepared by: Sean R. Fletcher, Parks and Recreation Director

DATE: February 3, 2020

SUBJECT: Professional Service Agreement with Prein & Newhoff to provide engineering and design services for the Bank Street Farmers' Market (Bid Ref# 906-26-017.1.3)

RECOMMENDATION:

It is recommended that the City Commission approve a Professional Service Agreement with Prein & Newhoff, a pre qualified vendor, to provide engineering and design services for the Bank Street Farmers' Market project in the amount of \$174,000. Bid Ref# 906-29-017.1.3

BACKGROUND:

The Bank Street Farmers' Market planning has been ongoing for the past few years with the purchase of several properties making way for the realignment of Bank Street and parking to the south of the site. The past year has been spent refining plans and developing a phased plan for completing the market. Prein & Newhoff has been working with Parks and Recreation staff to develop a site plan that is "buildable" and within a reasonable budget. Construction of phase one will begin September 2020. Phase one includes a segment of the Kalamazoo River Valley Trail that will run along the west side of the realigned Bank Street, refurbishment of existing market sheds and a new shed along the western edge of the site, expansion and improvements to the restroom building, and some site work.

STRATEGIC VISION ALIGNMENT:

Relevant Priority Based Budgeting Program:

Farmer's Market

Access to Quality Recreational, Educational, and Cultural Opportunities - provides access to safe, clean and well-maintained parks, trails, green spaces, and open spaces and recreational facilities/areas that

meet the diverse needs and expectations of the community.

This program/project has a high degree of impact on the following Strategic Goal(s):



Inviting Public Places - Vibrant streets, exceptional parks, and welcoming activities.

COMMUNITY ENGAGEMENT:

Collaborate (two-way conversation) - the community will have a chance to shape the project by providing feedback.

The Parks and Recreation Department has worked closely with the People's Food Co-Op and Farmers' Market vendors to refine the plans for the market. A meeting with market vendors was held in November to obtain input about some of the finer details of the market based on the current plan. The meeting was attended by 26 vendors.

The concept rendering of the market site was on display at the final Farmers' Market held Saturday, November 23rd. Approximately forty people stopped to comment on the concept rendering and ask questions. **Each person that stopped to view the rendering was very excited about the improvements. This direct form of engagement with Farmers' Market visitors was very beneficial for staff and the visitors themselves.**

FISCAL IMPACT:

The fees for design and engineering services include geotechnical investigation, site layout and landscape architecture - design and construction documents, site civil engineering - design and construction documents, and bidding and construction documents.

The aforementioned services will be billed on a time and materials basis estimated at \$174,000. If the project scope or construction budget changes, the fee will adjust accordingly.

Funding for architectural and engineering services is available in the Farmers' Market project #cip0300057 2019 Capital Improvement budget.



City Commission Agenda Report

City of Kalamazoo

Date: **2/3/2020**

Item: **F.3.**

TO: Mayor Anderson, Vice Mayor Griffin, and City Commissioners

FROM: James K. Ritsema, City Manager
Reviewed by: James J. Baker, PE, Public Services Director & City Engineer
Prepared by: Ryan S. Stoughton, PE, Public Services Asst. City Engineer -
Wastewater

DATE: February 3, 2020

SUBJECT: Critical Infrastructure Failure – Emergency Repair – Kilgore Sanitary (Bid Ref# 968-39-013.0)

RECOMMENDATION:

It is recommended the City Commission approve a Contract Supplemental and subsequent Purchase Order Change Order to Hoffman Brothers Inc in the amount of \$204,980 for the emergency repair of sanitary sewer infrastructure and appropriate funds from the Wastewater Emergency Reserves for the same amount. Bid Ref# 968-39-013.0

BACKGROUND:

The sanitary sewer located on Kilgore Road at the intersection of Meredith failed causing a sinkhole and restricted sanitary flow. Hoffman Brothers Inc was directed to begin emergency repair work to complete the repair under the approval of the Purchasing Division.

STRATEGIC VISION ALIGNMENT:

Relevant Priority Based Budgeting Program (program name and description):

Environmental Responsibility –

Strategic Goal Impact:

Water Management

COMMUNITY ENGAGEMENT:

Appropriate Depth of Engagement
Internal

Discussion:

Engagement/Communication Tools

FISCAL IMPACT:

The Wastewater Utility Finance Policy establishes an Emergency Capital Fund to allow the system to make emergency repairs and replacements to the sytem. The funding for this project is available in the Wastewater Emergency Capital Fund. The requested appropriation will assign these funds to project #wwr0100227 Kilgore Sanitary Sewer Emergency Repair and allow existing appropriations to remain on planned projects.



City Commission Agenda Report

City of Kalamazoo

Date: **2/3/2020**

Item: **F.4.**

TO: Mayor Anderson, Vice Mayor Griffin, and City Commissioners

FROM: James K. Ritsema, City Manager
Reviewed by: James J. Baker, PE, Public Services Director and City Engineer
Prepared by: Stephen A. Skalski, PE, Assistant City Engineer – Water Resources

DATE: February 3, 2020

SUBJECT: Sole Source Purchase for Neptune Water Meters (Bid Ref# 89044-004.1)

RECOMMENDATION:

It is recommended that City Commission approve a sole source purchase with Ferguson Water Works to provide Neptune Water Meters in the amount of \$600,000.

BACKGROUND:

In 2018, the City of Kalamazoo initiated a “smart” meter replacement program, replacing older model meter with Neptune water meters system wide. The new meters would be able to provide near real time data, which can be used by the City of Kalamazoo as well as it’s customers for functions such as leak detection, water usage optimization, as well as many others.

Ferguson Water Works is the sole source vendor for Neptune water meters for this area. Public Services has been satisfied with the products that Ferguson Water works has supplied, and recommends a purchase order in the amount of \$600,000.00 for the new water meters.

STRATEGIC VISION ALIGNMENT:

Relevant Priority Based Budgeting Program:

Program Name
Utility Billing
Meter Maintenance

This program/project has a high degree of impact on the following Strategic Goal(s):



Safe Community- Creating a safe environment for living, working, and playing



Good Governance- Ensuring the City organization has the capacity and resources to effectively implement the community's Strategic Vision in a way that is sustainable over the long term.

COMMUNITY ENGAGEMENT:

Appropriate Depth of Engagement

Internal

Discussion:

Engagement/Communication Tools

FISCAL IMPACT:

This water meter program is included in the 2020 Water fund budget. Meters are held in inventory until installed, at which point they will become capital outlay to the Water fund.



City Commission Agenda Report

City of Kalamazoo

Date: **2/3/2020**

Item: **F.5.**

TO: Mayor Anderson, Vice Mayor Griffin, and City Commissioners

FROM: James K. Ritsema, City Manager
Reviewed by: James J. Baker, PE, Public Services Director & City Engineer
Prepared by: Gary Doorlag, Fleet Manager

DATE: February 3, 2020

SUBJECT: Term Contract for Gasoline and Diesel Fuel (Bid Ref#405-09-014.3)

RECOMMENDATION:

It is recommended that the City Commission approve a renewal of a one-year term contract extension with an approximate 3% increase for gasoline and diesel fuel with Kalamazoo Oil, Inc. for an amount not to exceed \$600,000. Bid Ref# 89044-004.1

BACKGROUND:

In 2017, the City of Kalamazoo and Kalamazoo County participated in a cooperative sealed bid purchase of gasoline and diesel fuel. A one-year contract was awarded to Kalamazoo Oil, Inc. as a result of that bidding process with the current extension expiring on December 31, 2019.

Since the petroleum market is continually changing, the contract was structured to obtain a firm and competitive price which stays current with the market by bidding the margin charged by the supplier. The margin includes the supplier's cost and profit to deliver the fuel to the City's storage site. The margin is added to the regional refinery's rack price, which fluctuates with the marketplace. The refinery provides a verification of the rack price with each shipment of fuel. The increase in margin from 2017 to 2019 reflects federal fee increases.

The City purchases fuel in bulk quantities ranging from 250 gallons to 6,000 gallons and dispenses them to City vehicles and equipment. A contract extension with Kalamazoo Oil is recommended for approval. Kalamazoo County will be making a separate award for their gasoline and diesel fuel requirements.

STRATEGIC VISION ALIGNMENT:

Relevant Priority Based Budgeting Program:

Program Name and Description

Fuel monitoring: Purchase and monitoring of all city diesel, gasoline and oils to maintain fleet.

This program/project has a high degree of impact on the following Strategic Goal(s):



Good Governance- Ensuring the City organization has the capacity and resources to effectively implement the community's Strategic Vision in a way that is sustainable over the long term.

COMMUNITY ENGAGEMENT:

Appropriate Depth of Engagement

Inform (one-way conversation) – no feasible alternatives available due to legal/regulatory restrictions, standards and best practices, or resource limitations; the community will be made aware of the project.

FISCAL IMPACT:

Funds are being budgeted in the proposed 2020 budget and fuel will be purchased on an as-needed basis. As it is dispensed, the fuel is charged to the individual department's expense budget accounts. The proposed contract amount is estimated based upon the current prices and historic usage.



City Commission Agenda Report

City of Kalamazoo

Date: **2/3/2020**

Item: **F.6.**

TO: Mayor Anderson, Vice Mayor Griffin, and City Commissioners

FROM: James K. Ritsema, City Manager
Reviewed by: James J. Baker, P.E. Public Services Director & City Engineer
Prepared by: Teresa T. Johnson, Public Services Deputy Director

DATE: February 3, 2020

SUBJECT: 2020 Water Rate Ordinance

RECOMMENDATION:

It is recommended that the City Commission adopt an ordinance amending Section 38-32 of the Kalamazoo City Code to increase the rates charged for water service. If approved the ordinance increases would be effective March 2, 2020.

BACKGROUND:

As part of the 2020 water system budget, the City Administration recommended an overall system revenue increase of 14% for water and 10% for wastewater. Approval and implementation of this increase will allow the Utilities to continue to operate and maintain the system and make capital improvements as outlined in the 2020 budget. Also, the new rates will work to improve reserve funds, debt coverage ratios and allow for the continued stabilization of the Utility's financial position. Future rate increases will be needed to continue to support system wide capital needs and financial health over the next several years. The Foster Group was commissioned to complete an analysis of overall 2020 revenue requirements and detailed rate charges within customer classes. The 2020 recommended utility rate increases will result in an increase to a typical Inside City customer's quarterly bill by \$14.13 (\$4.71 monthly) for both water and wastewater and an increase to a typical Outside City customer's quarterly bill by \$9.54 (\$3.18 monthly) for the same services.

STRATEGIC VISION ALIGNMENT:

Relevant Priority Based Budgeting Program (program name and description):

Water/Wastewater Rate Administration

Strategic Goal Impact:

This program/project has a high degree of impact on the following Strategic Goal(s):



Safe Community- Creating a safe environment for living, working, and playing

COMMUNITY ENGAGEMENT:

An infrastructure needs and proposed Utility rates presentation was held on January 13, 2020. This utility work session was open to the public and provided an opportunity for public comment.

FISCAL IMPACT:

The 2020 water and wastewater operational budgets and capital improvement plans were developed with the revenue increases of the proposed rate increases included.

The City Commission may deny or delay this request. However, if the increases are delayed or not approved, a budget adjustment equal to the loss in revenues would be required. Delaying or denying this request is not recommended.



2020 Water Rate Report

December 2019

TFG

THE FOSTER GROUP

tFg
THE FOSTER GROUP

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Leawood, KS 66225
Tel: (913) 345-1410

The Foster Group, LLC
Bart Foster, President
Cell: (913) 530-6240
bfoster@fostergroupllc.com

December 12, 2019

Mr. James Baker
Public Services Director
City of Kalamazoo
415 Stockbridge Avenue
Kalamazoo, Michigan 49001-2898

Dear Mr. Baker:

THE FOSTER GROUP is pleased to present our “Report on 2020 Water Rates” for the City of Kalamazoo Department of Public Services. This report is designed to introduce our recommended water rate schedules for 2020.

The 2020 Water Rates have been calculated to support further transition along a “glide path” towards Equalized Water Rates for City Customer and Township Customers starting in 2022, as envisioned by recent discussions to establish a new service agreement for Township Customers. In order to implement that strategy, the report focusses on introducing revenue requirements and cost of service allocations for a 2022 Test Year – the year for which Equalized Water Rates are tentatively intended to be implemented, pending final contract developments.

We appreciate this opportunity to be of service to the City of Kalamazoo.

Very truly yours,

THE FOSTER GROUP



Bart Foster
President

Enclosures

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Background

This report was prepared for the City of Kalamazoo, Michigan (the “City”) to document analyses conducted to result in a schedule of proposed water rates designed to become effective in January 2020 (the “2020 Water Rates”). The 2020 Water Rates have been developed to implement the third year of a five-year “glide path” towards a strategic goal of equalizing rates between City Customers and Township Customers, as defined herein. A brief historical discussion of water rates charged to these two major customer classes over time is appropriate to introduce the approach used to establish the 2020 Water Rates.

The City of Kalamazoo owns and operates a water utility (the “System”) that provides potable water service to residents and businesses inside the City limits of Kalamazoo and to residents and businesses located in various townships, cities, and villages located outside the City limits. All service is retail – there are not any customers of the System that purchase wholesale water. For purposes of establishing water rates, retail customers of the System have traditionally been classified as “City Customers” and “Township Customers”, with the Township Customer class including all outside City customers.

Prior to 1982, there were actually two separate Township Customer classes, designated as Service Area 1 and Service Area 2. Retail water rates to these customer classes were computed by applying a multiplier to the corresponding rates charged to City Customers. The multiplier was 1.25 for customers in Service Area 1 and 1.50 for customers in Service Area 2.

In 1981 the State of Michigan enacted Public Act 89, which (in summary) required any municipal utility that served customers outside its territorial limits, and which provided water service to over one percent of the population of the state, to compute water rates on the “Utility Basis” of ratemaking. The System met the definition set forth by the statute, and the City engaged a consultant (CH2M Hill) to conduct a water rate study using the Utility Basis. The CH2M Hill study resulted in recommended water rates for 1982, which the City proposed to implement. Township representatives objected to certain aspects of the rate methodology recommended by the CH2M Hill study, and discussions ensued. The parties agreed upon specific modifications to the recommended CH2M Hill methodology, resulting in an “agreement in principle” rate methodology. That

methodology (the “1982 Methodology”) was utilized to develop the 1982 Water Rates, which were approved by the City Commission and implemented in the spring of 1982.

The 1982 Methodology eliminated the Service Area 1 and Service Area 2 designations. A uniform schedule of water rates was established for all Township Customers. Water rates charged to City Customers and Township Customers continued to be different due to specific methodology approaches which recognized:

- Specific allocation of costs of distribution system facilities located inside the City to City Customers and of costs of distribution system facilities located outside the City to Township Customers;¹
- Relative water use characteristics between City Customers and Township Customers;
- A differential in the Utility Basis rate of return included in Township Customer rates compared to City Customer rates. The rate of return differential was “capped” by the 1982 Methodology agreement at 5%.

In essence, the 1982 Water Rates still resulted in a differential between Township Customer rates and City Customer rates that could be expressed as a multiplier. With respect to a quarterly water bill for a “typical” residential customer, the 1982 Water Rates produced a multiplier of 1.36. In other words, the water bill to a “typical” residential Township Customer was 1.36 times that of a similar customer in the City.

The 1982 Methodology remained in place through 2017, and the overarching principles regarding the development of water rates remained consistent over time. Many minor adjustments were implemented over the years, as reflected in water rate studies that implemented the 1982 Methodology through various cost of service studies. There were two more material adjustments during this time.

Water rates developed for 2004 initiated a three-year phase out of the five percent cap on the differential in the rate of return applied to Township Customers and City Customers under the 1982 Methodology. Water rates computed for 2006, the third and final year of the phase out, computed a rate of return for Township Customers that employed a

¹ Under the 1982 Methodology depreciation expense on assets contributed (via contributions in aid of construction) to the System was included as a Utility Basis revenue requirement.

methodology in alignment with the *wastewater* rate methodology employed by the City, which limited the rate of return via contractual and legal agreements.

Water rates developed for 2010 continued to employ the basic 1982 Methodology, as moderately adjusted in 2004. However, as part of that study, certain of the major water rate methodology assumptions and approaches, which had been static since 1982, were subjected to a rigorous review and modifications were made. Those modifications were documented in a January 2010 report (the “2010 Report”) and its appendices, and included a change in approach to certain aspects. The slightly modified “2010 Methodology”:

- Continued to specifically allocate costs of distribution system facilities located inside the City to City Customers and of costs of distribution system facilities located outside the City to Township Customers;
- Eliminated depreciation expense on contributed assets as a Utility Basis revenue requirement;
- More definitively recognized relative water use characteristics – specifically differential peak residential water use characteristics - between City Customers and Township Customers;
- Completely eliminated any artificial limitations on the Utility Basis rate of return included in Township Customer rates, and employed a “reasonableness” standard.

The 2010 Methodology was employed to update water rates in 2011, 2012, and 2014.

Subsequent to implementation of the 2014 Water Rates, in early 2015 the City entered negotiations with Township Customer representatives in an effort to establish a new water service agreement. The parties discussed possible modifications and/or refinements to existing water rate methodologies, and the mechanisms for recognizing such methodologies in a service agreement. Negotiations continued through December 2016 without producing an agreement, and in January 2017 the City increased all water rates “across the board” by 8.0% (resulting in the “2017 Water Rates”).

Over time (from 1982 through 2017) the relative Township Customer / City Customer “multiplier” ranged from 1.32 to 1.88. The principal elements that created variances in this metric are related to different capital structures, financing plans, debt levels, and

resulting rate of return calculations. The effective multiplier under the 2017 Water Rates was 1.66.

Negotiations continued through December 2017, again without producing an agreement. Through the discussions the parties gained additional knowledge regarding specific assets of the System, and began to develop some core principles for an agreement. The 2010 Methodology was employed, along with the knowledge gained during the negotiations, to calculate water rates for 2018. The 2018 Water Rates were actually designed to serve as the initial year of three-year phase in implementation plan of knowledge gained during the negotiations, in order to achieve rate stability objectives. The expectation embraced by the 2018 Water Rates was that a modified version of the 2010 Methodology would emerge from the negotiations that would continue to differentiate water rates between City Customers and Township Customers.

Negotiations continued through December 2018, again without producing an agreement. However new core principles emerged through the discussions. These core principles include:

- Establish via contract a formal process for Township Customer representatives to have direct input to major decisions regarding the operations, maintenance, repair, replacement of the System, including financing plans, etc.;
- Equalize water rates between City Customers and Township Customers.

The second core principle (“Equalized Water Rates”), requires the parties to recognize and acknowledge:

- That traditional water rate development methodologies contained certain elements that resulted in lower rates for City Customers, and certain other elements that resulted in lower rates for Township Customers;
- A desire to establish a water rate methodology that results in shared benefits and simplifies the process of setting water rates;
- A willingness to implement Equalized Water Rates in a manner that embraces rate stability objectives.

The 2019 Water Rates were established with the assumption that Equalized Water Rates would be accomplished by 2022, via a “glide path” designed to mitigate significant, one-time changes. The 2019 Water Rates effectively reflected the first step along a four-year

glide path towards Equalized Water Rates². The plan behind the 2019 Water Rates envisioned continuation (for 2020, 2021, and 2022) of steady, uniform increases to City Customer water rates, and lower increases to Township Customer water rates.

The 2019 Water Rates remain in effect - and therefore constitute the existing rates referred to in this report.

Negotiations continued through November 2019, again without producing an agreement. However, the core principles have been effectively agreed to pending development of final contract language, and it is our understanding that the City intends to honor such core principles (including the glide path) in developing water rates for 2020. This study has been prepared to recommend the 2020 Water Rates in accordance with that intent.

² Together with the initial adjustments made to the 2018 Water Rates, the “glide path” period could be considered five years, depending on perspective.

Introduction

This report presents results of our calculations to prepare proposed Water Rates for 2020, (the “2020 Water Rates”). As noted in the Background, the objective of our study included embracing rate stability goals as well as knowledge gained during the negotiations with Township Customers towards a new service agreement. Our efforts to accommodate these objectives are specifically set forth where appropriate in this report.

Any thorough evaluation of municipal utility rates contains three fundamental assessments, as noted below. This report is structured in a manner to present study findings that specifically address each of the assessments undertaken to develop the proposed 2020 Water Rates.

1. A **Revenue Requirements** analysis, designed to essentially answer the question “*How much money is needed?*” to support the utility’s operating and capital financing functions;
2. A **Cost of Services** analysis, designed to allocated the revenue requirements to customer classes and answer the question “*From whom should the money be collected?*”; and
3. A **Rate Design** analysis, designed to answer the question “*How should services be priced?*” to equitably recover the allocated costs of service.

The purpose of this study is to prepare water rate calculations that accurately reflect the financial data, operating and capital budgets, and system usage projections in order to:

- Review and evaluate existing policies and procedures affecting water rates;
- Evaluate the adequacy of projected revenues under existing rates to meet projected revenue requirements;
- Develop a sound financial plan for the Water Utility covering a five-year study period for both ongoing operations and planned capital improvements;
- Allocate the Water Utility’s projected revenue requirements to the various customer classes in accordance with the respective service requirements;

- Develop a suitable schedule of water rates which will produce revenues adequate to meet financial needs on a basis which recognizes customer costs of service, contractual commitments, and local policy considerations and objectives.

In order to produce recommended rates that embrace the City's rate stability objectives, and to implement the "glide path" to equalized water rates, we have conducted cost of service allocations for a "test year" of 2022 in this report. A test year is defined as a year for which revenue requirements are allocated to customer classes for purposes of designing water rates and charges. Our prior studies and reports have effectively aligned the test year with the upcoming budget year, since rates were designed with a single year focus. The strategy embedded in this study seeks to establish proposed water rate schedules that reflect the next step in the glide path.

Chapter 1 - Revenue Requirements

“How much money is needed?”

The first evaluation goal of this study is the design of Revenue Requirements. For purposes of establishing proposed water rates, it is only necessary to establish such amounts for a single period. However, we believe that providing a longer-term revenue requirement forecast is beneficial to stakeholders as they review proposed modifications to water rate schedules. As such, the Revenue Requirements analysis provides a six-year (from 2019 through 2024) forecast³ of potential operating and capital financing plans for the Water Utility. In reviewing these projections, stakeholders should take note that:

- The first year (2019) is ***estimated***, based on a review of 2019 budgeted and estimated activity.
- The second year (2020) is ***proposed***, and supported by the City’s official 2020 Budget and the water rate schedule being proposed herein.
- The next two years (2021 and 2022) are ***forecasted***, and while they do not reflect any formal budget being acted upon by the City, analysis of projections for these years is fundamental to the rate stability strategy set forth in the proposed rates.
- The final two years (2023 and 2024) are ***forecasted***, and do not reflect any proposals for consideration or action.

The revenue requirement forecast summarized in this chapter of the report is similar in format to prior reports we have prepared on this topic.

³ *The projections set forth herein are intended as “forward-looking statements”. In formulating these projections, we have made certain assumptions with respect to conditions, events, and circumstances that may occur in the future. The methodology we utilized in performing these analyses follows generally accepted practices for such projections. Such assumptions and methodologies are reasonable and appropriate for the purpose for which they are used. While we believe the assumptions are reasonable and the projection methodology valid, actual results may differ materially from those projected, as influenced by conditions, events, and circumstances that may actually occur. Such factors may include, among other things, the City’s ability to execute the CIP as scheduled and within budget, regional climate and weather conditions affecting the amount of water sold and wastewater treated, and any adverse legislative, regulatory or legal decisions (including environmental laws and regulations) affecting the City’s ability to manage the utilities and maintain compliance with regulations.*

Table 1 presents baseline customer usage and revenue projections, including projected Water Utility customer accounts, water sales volumes and revenue under the existing water rate schedule. The table introduces the information for Test Year 2022, but actually reflects static assumptions for the entirety of the forecast period. In arriving at these projections, we have conducted a detailed review of historical data. While there has been a recent moderate increase in customer accounts, water sales volumes have fluctuated moderately and we conclude that a stable forecast of units of service is reasonable. ***For purposes of this study, we have assumed that stability will continue, and have projected future water sales volumes equivalent to existing levels throughout the five-year study period. As a result, the projected billing units and overall revenue stream is “flat” for the study period.***

Note that the top of Table 1 consolidates units of service for both City Customers and Township Customers into Customer Classes differentiated by property and service type. In the Equalized Water Rate environment envisioned for Test Year 2022 there is no need to distinguish between City Customers and Township Customers in order to perform cost of service and rate design calculations. The bottom of the table separates the data for City Customers and Township Customers in order to support impact analysis of the Equalized Water Rates. This format continues throughout the report.

Annual operation and maintenance expenses of the Water Utility include costs related to payroll and benefits, chemicals, other supplies, power, natural gas, and other items. Projected operation and maintenance expense for the study period is shown in Table 2. The 2020 budget serves as the basis for the first year of the projections. Projections for the period 2021 through 2024 are based on budgeted 2020 levels adjusted to reflect increased costs due to inflationary factors.

The Water Utility makes two separate payments to finance costs related to “Other Post Employment Benefits” (OPEB). The first is related to the Water Fund’s share of payments on bonds issued to finance a portion of the City’s obligation on this matter, as shown on Line 10. Funds generated by these bonds are held in a specific trust, outside the City’s control. The agreement also requires annual deposits to that Trust. The Water Fund’s share of those annual deposits is shown on Line 11. The City’s accounting practices treats these payments as operating expenses, and the City’s bond counsel has opined that they are operating expenses for purposes of complying with the City’s water revenue bond ordinances.

Various inflation factors have been applied throughout the study period based on conversations with Utility financial management.

Table 3 presents a projected plan to finance the System’s capital improvement program throughout the study period. The projected expenditures for the Water Utility Capital Improvement Program (CIP) for 2019 through 2024 are presented on Lines 1 through 11 of Table 5, in categories that support assignment of cost responsibility to cost pools and customers. The CIP was developed by Utility management and consists of capital improvement projects anticipated to be designed and constructed during the next five years. The CIP represents a significant increase in annual investments compared to recent years.

Lines 12 through 18 indicate capital financing sources. The forecasted sources reflect a strategic combination of bond issuances, revenue financing and use of reserves in a manner that supports the fiscal policies of the Water Utility.

The beginning balance figure shown on Line 12 for 2019 represents (as of December 31, 2018) remaining proceeds from revenue bonds issued in 2018 and 2019 plus an allocation of revenue generated funds that are not required for other reserve balances. Line 13 presents use of revenue generated funds to finance short lived assets contained in the CIP. To the extent that specific CIP projects are to be financed via contributions in aid of construction, those sources are shown on Line 14. The City has recently secured commitments from the Michigan Drinking Water Revolving Fund (“DWRF”) to finance specific CIP projects with low interest loans. Reimbursements of amounts projected to be spent on those projects are illustrated on Line 15. Any additional capital financing is assumed to be financed via issuance of new revenue bonds, as presented on Lines 16 through 18. The capital financing plan is designed to provide sufficient year end Improvement Fund balances to carry over into subsequent years.

Utility Financial Policy

Table 4 presents a projected Operating Fund financing plan for the study period, developed within the framework of the Utility Financial Policy and to accommodate overall revenue stability. The original Utility Financial Policy was developed in 1995 to

establish guiding principles when developing financial plans for the City's Water and Wastewater systems. The goals of the original Utility Financial Policy included:

1. Maintain a Reasonable Level of Reserves
2. Maintain the Net Worth of Both Systems
3. Uphold Obligations to Bond Holders
4. Keep Level of Debt and Debt to Equity Ratios Reasonable
5. Keep Rates at a Level Comparable to Other Michigan Utilities

The policy established guiding principles designed to meet these goals, which included:

1. Establish and maintain operating and capital reserve funds within a designated range.
2. Achieve annual debt service coverage ratios of 140%.
3. Protect owner's equity by providing revenue financing for the current capital improvement and reserve requirements that is at least equal to annual depreciation expense, less the principal payment portion of debt service.

The existing Utility Financial Policy seeks to achieve each of these principles, while acknowledging that circumstances may dictate that each may not be attained in every year. The key to sound financial planning and long-term utility financial health is achieving the appropriate balance of the three, while striving to realize all of them over the long-term.

The “core principles” envisioned by the potential new contract language include participation by Township Customer representatives in establishing recommended financial objectives and policies for the System.

Summarized in Table 4 are the annual revenues and revenue requirements showing end of year annual and cumulative balances and/or deficits of funds available for subsequent years' operations and indicated required increases in operating revenues.

Revenues under the existing rate schedule (as developed in Table 1) are presented on Line 1. The Operating Fund financing plan is designed based upon annual “system” rate increases of 14% each year from 2020 through 2022, and 7% for 2023 and 2024, as

indicated on Lines 2 through 6⁴. Total projected revenue from water rates is shown on Line 7.

Other revenues from miscellaneous and non-operating sources are indicated on Lines 8 through 11, and result in total projected revenues on Line 12. The majority of the “other revenue on Line 8 is related to the Administrative Revenue Credit identified in Table 2.

Total revenue requirements are shown on Lines 13 through 24. Operation and maintenance expenses from Table 2 are brought forth to Line 13. Projected Payment in Lieu of Taxes (PILOT) to the City of Kalamazoo is shown on Line 14. ***The “core principles” envisioned by the potential new contract language include capping this amount at \$300,000 annually. We have not reflected the cap in these projections pending formal contract execution.***

Debt service is separated between that on existing bonds (Line 15), proposed revenue bonds (Line 16), and repayments of DWRf Loans (Line 17) – based on anticipated financing from Table 3. The debt service on the DWRf Loans reflects and interest rate of 2.0% and interest is only applied as amounts are drawn, creating an attractive financing vehicle. Transfers of operating funds to finance capital improvements are indicated on Lines 19 through 21. In addition, revenue requirements include any amounts necessary to maintain minimum reserve fund balances established as part of the Utility Financial Policy, as shown on Lines 23 and 23.

Total revenue requirements are indicated on Line 24. The projected annual balance/deficit indicates the extent to which projected revenues can meet annual revenue requirements. Any deficits must be met from existing reserves, as limited by two factors: (1) projected actual Operating Fund balances compared to levels recommended by the Utility Financial Policy; and (2) annual debt service coverage requirements.

⁴ While the forecast is designed to support the City’s rate stability objective, forecasted system rate increases after 2020 are merely projections and are NOT part of any formal recommendation as part of this report. The existence and magnitude of any subsequent rate increases for the Utility is largely predicated on the actual progress of the Capital Improvement Program and potential changes in the need for capital financing from what is represented in this report.

Projected Operating Fund activity is summarized on Lines 28 through 31 of the table. The projected cumulative Operating Reserve balances are shown on Line 31. Line 32 presents the minimum target balance in this reserve as established by the Utility Financial Policy.

Readers should recognize that the “system rate increase” figures discussed above represent **overall** System revenue increases. Based on the results of the cost of service analyses presented in this report, the cost of service based rate increases can be expected to vary from this average for the various customer classes.

Presented in Table 5 are summaries of the projected annual activity, and beginning and ending balances in the various funds of the Water Utility.

A graphical depiction of the financial forecast summarized in Tables 1 through 5 is contained in Appendix A to this report.

Chapter 2 - Cost of Service Allocations

“From whom should the money be collected?”

Test Year Cost of Service

The revenue requirements to be derived from rates and charges for water service are synonymous with the definition of cost of service. The cost of service analyses described herein reflect an evaluation of the Test Year 2022 revenue requirements established in the prior section of the report.

The determination of the cost of service to be recovered through charges for water service is summarized in Lines 1 through 11 of Table 6. *The depiction of revenue requirements in Table 6 is consistent with the envisioned by the potential new contract language.* These lines summarize the cash basis revenue requirements. The total Test Year 2022 cost of service shown on Line 11 matches the projected rate revenue from water service shown on Line 7 in Table 4.

The cash basis revenue requirements are converted into their utility basis counterparts on Lines 12 through 16. The operation and maintenance expense and payment in lieu of taxes elements are expressed at the cash basis values. Test Year 2022 depreciation expense is projected based on a detailed evaluation of the Water Utility’s fixed asset records and capital improvement program, and is shown on Line 14. This figure excludes depreciation expense associated with assets funded by contributions in aid of construction. Deducting depreciation expense and payment in lieu of taxes from the total cash basis capital requirements leaves the balance (Line 15) that represents the System return on rate base.

In prior cost of service studies for the System, it was necessary apply different approaches to determine the return on rate base allocable to the City Customers and Township Customers, as the applicable rate of return was different for each class. Under the Equalized Water Rates protocol, all customers are allocated costs of service based on application of a uniform rate of return. The Test Year 2022 rate of return reflects the total return on rate base divided by the rate base developed in a subsequent table. The uniform rate of return is 3.20% for Test Year 2020, as shown on Line 19 of Table 6.

Allocation to Functional Cost Components

In order to assign costs of service to customer classes, the costs must first be allocated to functional cost components that align with measures of how customers use the System. Each element of cost is allocated to functional cost components on the basis of the parameter or parameters having the most significant influence on the magnitude of that element of cost.

In prior cost of service studies for the System, it was necessary to establish “common to all” functional components and separate “City Customer only” and “Township Customer only” functional components. Under the Equalized Water Rates protocol all costs are effectively “common to all” and there is no such need to differentiate based on facility locality.

The functional components are designed following the base-extra capacity method of cost allocation, as summarized below:

- Source of supply and treatment facilities are considered “max day” facilities. Max day facility costs are allocated 47% to the Base component and 53% to the Max Day component based on a review of System production statistics.
- Transmission and distribution mains are considered “peak hour” facilities.
 - The cost allocation methodology recognizes that a portion of the costs associated with distribution mains are appropriately allocable based on “readiness to serve”, rather than actual water use statistics. As such, one-third (33%) of distribution system costs are assigned to the Meters and Services component.
 - The remaining costs associated with distribution mains, and all of the costs associated with transmission mains, are allocated 35% to the Base component, 40% to the Max Day component, and 25% to the Peak Hour component, again based on a review of System production statistics.
- Reservoirs and elevated storage tank facilities exist primarily to meet peak hour requirements. Costs associated with these facilities are allocated 10% to the Base component, and 25% to the Peak Hour component.
- Operating costs related to chemicals reflect commodity costs only, irrespective of demand conditions. These costs are directly assigned to the Base component.
- Operating costs related to pumping reflect the fact that purchased electric costs, in addition to commodity charges, have a demand component. These costs are

- allocated 70% to the Base component, 15% to the Max Day component, and 15% to the Peak Hour component.
- Costs associated with service lines and meter installation and maintenance are directly assigned to the Meters and Services component.
 - Costs associated with fire hydrant installation and maintenance are directly assigned to the Fire Protection component.
 - Costs associated with meter reading and customer billing are directly assigned to the Billing component.
 - All other “general” costs are allocated to functional components based on subtotal allocation percentages indicated by the directly allocated facilities.

Projected test year 2022 operation and maintenance expense that was presented in Table 4 is allocated to the functional cost components in Table 7. The allocation follows the approach and allocation factors outlined above.

Under the Utility Basis, the allocation of capital related costs to the various customer classes is based on the City’s estimated investment in water system facilities. A summary of the projected Test Year 2022 capital asset values is presented in Table 8.

A detailed review of the System’s fixed asset portfolio as of 12/31/15 served as the starting point for these projections. This schedule was updated for total asset data reported in the audited financial statements for 2016, 2017, and 2018. We then added projected capital investments from the CIP, and deducted projected depreciation expense to arrive at the Test Year 2022 projections. The results are set forth in Table 8, which presents projected asset values for Original Cost, Accumulated Depreciation, Net Book Value, and Annual Depreciation Expense for each asset category. The table also identifies the estimated amount of each figure that was funded via a contribution in aid of construction (CIAC). The difference between the total amount and the CIAC portion is deemed to be “Local” and serves as the asset value for purposes of allocating costs of service to customers.

The allocation of estimated plant investment serving water customers is defined as the “rate base” under the Utility Basis for Test Year 2022 is shown in Table 9. This investment represents the projected original cost less depreciation of property, plant and equipment assets, as shown on Table 8. Total rate base on which the Water Utility is entitled to earn a return is the sum of net plant in service plus a working capital allowance of 90 days and inventory.

The allocation of rate base to the functional cost components follows the approach and allocation factors outlined above. On Line 15 the uniform rate of return of 3.20% from Table 6 is applied to the total rate base to compute allocated return on rate base of \$4.94 million to functional components. Table 9 also indicates allocation of Test Year 2022 PILOT to cost components, shown on Line 16. PILOT is only allocated to Base and Extra Capacity functions.

The allocation of Test Year 2022 depreciation expense (as established in Table 8) to functional cost components follows the same approach, and is illustrated in Table 10.

The total cost responsibility of each class of service may be established by developing unit costs of service for each cost function. These “prices” may then be used to assign costs to customer classes in correlation with the level of service that each class is projected to purchase from the Water Utility, as determined by their respective Base, Extra Capacity, Customer, and Fire Protection units of service.

Units of Service

The number of units of service required by each customer class provides a means for the proportionate distribution of cost previously allocated to respective cost categories. Table 11 summarizes the development of units of service for the various customer classes.

The responsibility for base costs varies with the volume of water used and is distributed to customer classes on that basis. Extra capacity costs are those associated with meeting peak rates of water use, and are distributed to customer classes on the basis of their respective capacity requirements in excess of average rates of use.

In determining the responsibility of each customer class for extra capacity costs, non-coincidental peak requirements of the various classes are estimated on the basis of past experience in the study of the Kalamazoo system and other similar water utility systems. The manner by which customer class extra capacity requirements are determined is via application of max day and peak hour “peaking factors” to base (average daily) water sales. The most recent update to peaking factors for the Water Utility was conducted in support of the 2010 Water Rates. For the Single Family customer class, that study indicated higher peaking factors for Township Customers than for City Customers. The peaking factors for all other customer classes were uniformly established.

In prior cost of service studies for the System, the different peaking factors for Single Family City Customers and Single Family Township Customers contributed to differential water rates for those customer classes. Under the Equalized Water Rates protocol all costs this differential is eliminated. The Single Family extra capacity demands shown on Line 1 of Table 11 reflect a consolidated customer class approach for the City Customer and Township Customer demands.

The same approach is applied to the other customer classes, but since the peaking factors are uniform irrespective of locale, there is not differential impact for the Test Year 2022 units of service.

Determination of peaking factors and extra capacity demands for future cost of service studies will be aided by implementation of metering technology included in the CIP.

A portion of the maximum day and maximum hour costs are allocated directly to the fire protection class to recognize, in part, peak fire flow requirements established by the Insurance Services Office. A portion of distribution main costs, as well as service line and meter installation and maintenance costs, are allocated on the basis of the number of number of equivalent 5/8 inch connections. Meter reading and billing services and meter costs are allocated based on the number of bills for each customer class. Fire protection costs are allocated among classes based on their number of equivalent hydrants.

As previously introduced, the top of Table 11 presents the consolidated units of service used to determine the unit costs of service discussed in the subsequent section. The bottom of the table separates the data for City Customers and Township Customers in order to support impact analysis of the Equalized Water Rates.

Initial Cost of Service Allocations

Costs of service are allocated to the customer classes by application of unit costs of service to respective service requirements. Unit costs of service are based upon the total costs previously allocated to functional components and the total number of applicable units of service. Dividing the costs allocated to functional cost components by the respective total units of service requirements develops unit costs of operation and maintenance expense, payment in lieu of taxes, depreciation expense, and return on rate base.

Unit Costs of Service

Unit costs of service are established for Test Year 2022 in Table 12. The total units of service from Table 11 are indicated on Line 1. Total Test Year 2022 operation and maintenance expense, payment in lieu of taxes, depreciation expense, and rate base are shown allocated to functional cost component as taken from Tables 7, 9, and 10.

Unit costs are determined for each revenue requirement element and are indicated in Table 11. The total unit costs of service for each cost component are shown on Line 11 of the table.

Distribution of Costs of Service to Customer Classes

The customer class responsibility for service is obtained by applying the unit costs of service to the number of units for which the customer class is responsible. This process is illustrated for Test Year 2022 in Table 13, in which the unit costs of service from Table 12 are applied to the customer class units of service from Table 11. Individual elements are summed for each customer class to result in the total allocated test year cost of service indicated in Column 1.

Once again, the top of Table 13 presents the consolidated customer class cost of service allocations. The bottom of the table separates the results for City Customers and Township Customers in order to support impact analysis of the Equalized Water Rates.

Adequacy of Existing Rates to Meet Cost of Service

Presented in Table 14 is a comparison of the allocated Test Year 2022 cost of service and revenue under existing rates by individual customer class and for the System in total. The total allocated cost of service from Table 13 is shown in Column 1. These figures are then adjusted to reflect two specific policies employed by the Water Utility in developing water rates.

The first adjustment is related to the Utility's approach to recovery of costs associated with public fire protection. The City employs a policy that foregoes direct recovery of public fire protection costs from municipalities. These revenue requirements are recovered from all customers of the System based on their relative equivalent connections. Private fire protections costs continue to be limited to \$40/hydrant/year, as established in the 1999 Report. The costs originally allocated to fire protection over and above these amounts must be recovered from all other customers of the system. This is accomplished in Column 2 of Table 14.

The second policy adjustment relates to cost of service rates established for the Seasonal customer class. The original cost of service allocated to this class would produce commodity water rates that are actually greater than the combined water and wastewater commodity charge for an entity that would cede Seasonal classification, effectively negating the rationale of the Seasonal class. An adjustment is calculated in Column 3 to rectify this effect, and to allocate the adjusted revenue requirements to other customer classes, similar to the fire protection adjustment.

Applying the two adjustments produces the “Adjusted Allocated Cost of Service” for Test Year 2022 in Column 4. Column 5 presents the projected revenue under the existing (2019) rate structure for each customer class. Column 6 compares these values, and indicates the adequacy of existing rates to recover the *adjusted* allocated cost of service for all customer classes. As indicated on Line 10 of the table, the existing rates in total need to be increased by 48.2 percent to recover allocated Test Year 2022 costs of service. ***This is equivalent to the compounded projected annual System rate increases of 14% each year for 2020, 2021, and 2022, as identified in Table 4.***

The potential impacts of Test Year 2022 cost of service allocations on the various City Customer and Township Customer classes are illustrated at the bottom of the table. The different relative results for City Customers and Township Customers indicate the impact of fully implementing Equalized Water Rates for Test Year 2022.

Chapter 3 – Rate Design

“How should services be priced?”

Potential Test Year 2022 “Ultimate” Water Rates

The Test Year 2022 cost of service allocations discussed in Chapter 2 establish a basis for design of *potential* water rates for Test Year 2022. As noted previously, the intent of this study and report is to prepare *proposed* water rates for 2020. In order to fully implement the rate stability strategy towards Equalized Water Rates, the “ultimate” equalized rates must first be determined.

The proposed water rate schedule will continue to consist 3 separate charges:

1. *Commodity Charges* applied to metered water sales. The commodity charges are designed to recover costs allocated to base and extra capacity functional components and will vary by customer class to reflect their respective extra capacity demands.
2. *Meter Service Charges* billed in equivalent monthly or quarterly amounts. These charges are designed to recover the costs allocated to the “customer” functional components and will vary based on meter size.
3. *Fire Protection Charges* billed in equivalent monthly or quarterly amounts. These charges are designed to recover the costs allocated to the fire protection functional component and will vary based on connection size.

Tables 15 and 16 illustrate the first step towards preparing an Equalized Water Rate schedule for Test Year 2022. Table 15 presents the calculation of commodity charges and meter service charges for “regular customers, or all rates other than fire protection charges. Commodity charges for each customer class are simply the result of dividing the allocated cost of service for base and extra capacity functional components from Table 13 (as slightly modified for the adjustments noted in Table 14) by the projected water sales from Table 1. The meter service charges are designed to uniformly recover allocated billing charges based on the number of bills for the class, and to graduate the allocated meter and service costs based on connection size.

Table 16 presents the fire protection charges for the detector check accounts. The commodity charge is limited to that applied to the Commercial customer class. The difference between the originally allocated commodity revenue requirement and this level is recovered via billing charges. A similar graduated scale, based on equivalent hydrant

ratios, is applied to allocated meter and service allocated meter and service and direct fire protection costs.

Test Year 2020 Rate Schedules

The current water rates are reflected under the “Existing Rates” column heading in Table 17. The potential Test Year 2020 water rate schedule is identical in format to the existing schedule. The different relative results for City Customers and Township Customers are generally consistent with the Test Year 2022 cost of service results. The percentage variances in Column 4 indicates the cumulative percentage adjustment in each rate element that would be required to implement the ultimate Equalized Water Rates for Test Year 2022. *These indices establish the implementation strategy for the Proposed 2020 Water Rates discussed in the next section.*

Test Year 2020 Typical Bills

Typical bills shown in Table 18 indicate the potential impact of implementing the Test Year 2022 water rates on the Utility’s various customers. Once again, the different relative results for City Customers and Township Customers are generally consistent with the Test Year 2022 cost of service results.

Proposed 2020 Water Rates

The proposed 2020 Rates are designed in a manner to accommodate a goal of rate stability, and reflect the next step along the “glide path” to Equalized Water Rates in 2022, as envisioned by the potential new contract language.

Water Rate Equalization Implementation Strategy

The Test Year 2022 Equalized Water Rate Schedules computed in the prior section establishes the “finish line” of the glide path. The strategy employed for the proposed 2020 Water Rates is simply to plan for three equal adjustments between existing rates and the finish line for each specific element of the rate schedule. The implementation of this strategy is illustrated in Table 19.

The relative percentage variances in Column 4 of Table 17 can be used to establish “Glide Path Annual Indices” necessary to implement the glide path. In effect the indices, which are shown in Column 2 of Table 19, represent one third (adjusted for compounding effects) of the overall percentage adjustment. For instance, in order to increase the existing Inside City Single Family commodity charge by 100.8% to arrive at the Test

Year 2022 Equalized Water Rate, it would have to be increased 26.2% annually three times - in 2020, 2021, and 2022. The proposed 2020 Water Rates simply reflect the first of these annual adjustments, as shown in Column 3 of the table.

Column 4 of the table indicates the *projected* rates for 2021. These projected rates are based on the second annual adjustment indicated by the glide path indices. Column 5 of the table indicates the *projected* Test Year 2022 rates, originally presented in Table 17. The Test Year 2022 rate reflect the third and final adjustment indicated by the glide path indices. ***These projected rates are not intended to represent rate proposals for 2021 and 2022. Rather, it is our understanding that an updated Test Year 2022 cost of service study will be prepared in a year to recalculate Test Year 2022 Equalized Water Rates and to update the last step of the glide path implementation plan.***

Typical Bills

Typical bills shown in Table 20 indicate the projected impact of implementing the 2020 Water Rates on the Utility's various customers.

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REPORT TABLES

Table 1
Water Utility
Baseline Units of Service and Revenue Projections
Test Year 2022

Line No.		(1) Estimated <u>Accounts</u>	(2) Estimated <u>Sales</u>	(3) Estimated <u>Revenue</u>
REGULAR CUSTOMERS				
1	Single Family	36,695	9,533,800	9,703,800
2	Multi-Family	1,834	3,408,200	1,840,900
3	Commercial/Industrial	3,556	8,239,800	4,523,100
4	Seasonal	291	954,500	803,400
5	Subtotal	42,376	22,136,300	16,871,200
FIRE PROTECTION				
6	Detector Checks	918	14,000	438,700
7	Private Hydrants	803		32,200
8	Subtotal	1,721	14,000	470,900
9	TOTAL	44,097	22,150,300	17,342,100
<u>Customer Class Detail</u>				
<u>City Customers</u>				
10	Single Family	18,187	4,073,900	3,665,800
11	Multi-Family	964	1,753,500	862,000
12	Commercial/Industrial	2,116	5,260,400	2,625,100
13	Seasonal	175	520,500	364,400
14	Subtotal	21,442	11,608,300	7,517,300
<u>City Fire Protection</u>				
15	Detector Checks	513	10,800	219,200
16	Private Hydrants	354		14,200
17	Subtotal	867	10,800	233,400
18	Total City Customers	21,955	11,619,100	7,736,500
<u>Township Customers</u>				
19	Single Family	18,508	5,459,900	6,038,000
20	Multi-Family	870	1,654,700	978,900
21	Commercial/Industrial	1,440	2,979,400	1,898,000
22	Seasonal	116	434,000	439,000
23	Subtotal	20,934	10,528,000	9,353,900
<u>Township Fire Protection</u>				
24	Detector Checks	405	3,200	219,500
25	Private Hydrants	449		18,000
26	Subtotal	854	3,200	237,500
27	Total Township Customers	21,339	10,531,200	9,573,400

Table 2
Water Utility
Estimated and Projected Operation and Maintenance Expenses
Forecast Period 2020-2024

Line No.		(1)	(2)	(3)	(4)	(5)
		<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
		\$	\$	\$	\$	\$
1	Personnel	5,289,000	5,421,200	5,556,800	5,695,700	5,838,100
	Supplies					
2	Chemicals	1,080,000	1,112,400	1,145,800	1,180,200	1,215,600
3	Other	1,283,100	1,321,600	1,361,200	1,402,000	1,444,100
4	Subtotal	2,363,100	2,434,000	2,507,000	2,582,200	2,659,700
	Services					
5	Power	1,618,300	1,666,800	1,716,800	1,768,300	1,821,300
6	Gas	52,000	53,600	55,200	56,900	58,600
7	Other	4,967,700	5,116,700	5,270,100	5,428,200	5,591,000
8	Subtotal	6,638,000	6,837,100	7,042,100	7,253,400	7,470,900
9	Subtotal "Normal" O&M Budget	14,290,100	14,692,300	15,105,900	15,531,300	15,968,700
10	OPEB Amortization	551,500	551,500	551,500	551,500	551,500
11	OPEB Fund Deposit	283,600	283,600	283,600	283,600	283,600
12	Total O&M Expense	15,125,200	15,527,400	15,941,000	16,366,400	16,803,800
13	<i>less: Administrative Revenue Credit</i>	<i>(1,333,700)</i>	<i>(1,373,700)</i>	<i>(1,414,900)</i>	<i>(1,457,300)</i>	<i>(1,501,000)</i>
14	<i>Net O&M to Recover from Rates</i>	<i>13,791,500</i>	<i>14,153,700</i>	<i>14,526,100</i>	<i>14,909,100</i>	<i>15,302,800</i>

Table 3
Water Utility

Estimated and Projected Capital Improvement Program Flow of Funds
Forecast Period 2020-2024

Line No.	0 Estimated 2019 \$	(1) 2020 \$	(2) 2021 \$	(3) Projected 2022 \$	(4) 2023 \$	(5) 2024 \$
<u>CIP Financing Requirements</u>						
1 Water Pumping	4,750,000	13,755,000	9,390,000	7,720,000	3,650,000	2,350,000
2 Reservoirs	0	0	0	0	0	0
3 Elevated Storage Tank	0	0	0	0	0	0
4 Transmission Mains	5,870,000	10,614,500	13,236,800	7,632,925	5,005,000	6,125,000
5 Distribution Mains	375,000	175,000	180,000	300,000	0	103,000
6 Service Connections	3,089,000	5,935,000	4,030,000	6,074,585	2,562,000	2,579,000
7 Water Metering Devices	750,000	2,250,000	2,000,000	6,000,000	6,000,000	6,000,000
8 Hydrants	125,000	150,000	150,000	150,000	150,000	150,000
9 Subtotal	14,959,000	32,879,500	28,986,800	27,877,510	17,367,000	17,307,000
10 Water General	1,493,300	3,262,500	3,063,800	1,876,700	1,889,700	1,702,700
11 Total Requirements	16,452,300	36,142,000	32,050,600	29,754,210	19,256,700	19,009,700
<u>CIP Financing Sources</u>						
12 Beginning Balance	20,638,100	5,768,100	1,781,100	1,376,700	1,389,690	1,202,690
13 Operating Fund Transfers	1,582,300	1,762,500	2,600,500	2,375,700	2,394,700	2,334,700
14 Contributions in Aid of Construction	0	0	0	0	0	0
15 DWRP Reimbursements	0	10,270,000	7,938,200	7,761,500	0	0
16 Projected Bond Issues	0	20,500,000	21,500,000	20,000,000	17,000,000	17,000,000
17 less: Issuance Expenses	0	(377,500)	(392,500)	(370,000)	(325,000)	(325,000)
18 Net Bond Proceeds	0	20,122,500	21,107,500	19,630,000	16,675,000	16,675,000
19 Total Sources	22,220,400	37,923,100	33,427,300	31,143,900	20,459,390	20,212,390
20 Ending Balance	5,768,100	1,781,100	1,376,700	1,389,690	1,202,690	1,202,690

Table 4
Water Utility

Estimated and Projected Operating Fund Financing Plan (Revenues and Revenue Requirements)
Forecast Period 2020-2024

Line No.	0 Estimated 2019 \$	(1) 2020 \$	(2) 2021 \$	(3) Projected 2022 \$	(4) 2023 \$	(5) 2024 \$
<u>Revenue</u>						
Operating Revenue						
1 Revenue @ Existing Rates	17,370,400	17,342,100	17,342,100	17,342,100	17,342,100	17,342,100
Projected Rate Increases						
2 2020 Rate Increase 14.0%		2,427,900	2,427,900	2,427,900	2,427,900	2,427,900
3 2021 Rate Increase 14.0%			2,767,800	2,767,800	2,767,800	2,767,800
4 2022 Rate Increase 14.0%				3,155,300	3,155,300	3,155,300
5 2023 Rate Increase 7.0%					1,798,500	1,798,500
6 2024 Rate Increase 7.0%						1,924,400
7 Total Rate Revenue	17,370,400	19,770,000	22,537,800	25,693,100	27,491,600	29,416,000
8 Other	1,508,000	1,731,300	1,783,200	1,836,700	1,891,800	1,948,600
Non-Operating Revenue						
Interest Income						
9 Operating Fund	39,100	44,300	43,900	46,700	61,600	75,000
10 Other Funds	204,800	154,700	51,600	56,800	60,900	65,800
11 Other	5,000	5,000	5,200	5,400	5,600	5,800
12 Total Revenue	19,127,300	21,705,300	24,421,700	27,638,700	29,511,500	31,511,200
<u>Revenue Requirements</u>						
13 Operation and Maintenance	13,461,000	15,125,200	15,527,400	15,941,000	16,366,400	16,803,800
14 Payment In Lieu of Taxes	615,000	623,100	641,800	661,100	680,900	701,300
<u>Debt Service</u>						
15 Existing Revenue Bonds	2,729,600	2,756,400	2,753,900	2,761,800	2,760,000	2,763,800
16 Proposed Bonds	0	1,257,400	2,576,100	3,802,800	4,845,500	5,888,200
17 DWRP Loans	0	205,400	364,200	519,400	1,588,200	1,588,200
18 Total Debt Service	2,729,600	4,219,200	5,694,200	7,084,000	9,193,700	10,240,200
<u>Transfers to the Improvement Fund</u>						
19 Revenue Designated CIP	1,582,300	1,762,500	1,563,800	1,376,700	1,389,700	1,202,700
20 Other Major CIP	0	0	1,036,700	985,600	1,005,000	1,132,000
21 Total Revenue Funded Improvements	1,582,300	1,762,500	2,600,500	2,362,300	2,394,700	2,334,700
22 Req'd Transfer to Operating Reserves	472,800	475,600	742,700	0	0	0
23 Req'd Transfer to Emerg Cap Fund	326,200	141,800	135,800	0	63,800	89,200
24 Total Revenue Requirements	19,186,900	22,347,400	25,342,400	26,048,400	28,699,500	30,169,200
25 Annual Balance/(Deficit)	(59,600)	(642,100)	(920,700)	1,590,300	812,000	1,342,000
26 Use of Reserves	0	0	0	0	0	0
27 Rate Covenant DS Coverage	208%	156%	156%	165%	143%	144%
28 Beginning Balance	2,892,500	3,305,700	3,139,200	2,961,200	4,551,500	5,363,500
29 Required Transfer Rev Req't	472,800	475,600	742,700	0	0	0
30 Net Operations	(59,600)	(642,100)	(920,700)	1,590,300	812,000	1,342,000
31 Cumulative Operating Reserve Balance	3,305,700	3,139,200	2,961,200	4,551,500	5,363,500	6,705,500
32 Minimum Target Balance	3,365,300	3,781,300	3,881,900	3,985,300	4,091,600	4,201,000

Table 5
Water Utility

Estimated and Projected Fund Balances Under Projected Rates (Excludes Bond Reserve Account)
Forecast Period 2020-2024

Line No.	0 Estimated 2019 \$	(1) 2020 \$	(2) 2021 \$	(3) Projected 2022 \$	(4) 2023 \$	(5) 2024 \$
<u>Improvement Fund</u>						
1	Beginning Balance	20,638,100	5,768,100	1,781,100	1,376,700	1,389,700
	Deposits					
2	Net Transfers & CIA	1,582,300	1,762,500	2,600,500	2,375,700	2,394,700
3	Bond Proceeds	0	20,122,500	21,107,500	19,630,000	16,675,000
4	DWRF Reimbursements	0	10,270,000	7,938,200	7,761,500	0
	Withdrawals					
5	Capital Expenditures	(16,452,300)	(36,142,000)	(32,050,600)	(29,754,200)	(19,256,700)
6	Ending Balance	5,768,100	1,781,100	1,376,700	1,389,700	1,202,700
<u>Operating Reserve Fund (a)</u>						
7	Beginning Balance	2,892,500	3,305,700	3,139,200	2,961,200	4,551,500
	Deposits					
8	Required Transfer Rev Req't	472,800	475,600	742,700	0	0
9	Net Operations	(59,600)	(642,100)	(920,700)	1,590,300	812,000
10	Ending Balance	3,305,700	3,139,200	2,961,200	4,551,500	5,363,500
<u>Emergency Capital Reserve Fund (a)</u>						
11	Beginning Balance	1,800,800	2,127,000	2,268,800	2,404,600	2,391,200
	Deposits					
12	Net Transfers	326,200	141,800	135,800	0	63,800
	Withdrawals					
13	Transfer to Imp. Fund	0	0	0	(13,400)	0
14	Ending Balance	2,127,000	2,268,800	2,404,600	2,391,200	2,455,000
15	Total Ending Balance	11,200,800	7,189,100	6,742,500	8,332,400	10,452,400
16	<i>(a) Subtotal "Reserves"</i>	<i>5,432,700</i>	<i>5,408,000</i>	<i>5,365,800</i>	<i>6,942,700</i>	<i>9,249,700</i>

Table 6
Water Utility
Cost of Service to be Recovered from Rates
Test Year 2022

Line No.		(1) O&M <u>Expense</u> \$	(2) Capital <u>Costs</u> \$	(3) <u>Total</u> \$
	Revenue Requirements			
1	Operation and Maintenance Expense (a)	13,691,000		13,691,000
2	OPEB Debt Service and Contribution	835,100		835,100
3	Debt Service		7,084,000	7,084,000
4	Payment in Lieu of Taxes		661,100	661,100
5	Other Cash Capital		2,362,300	2,362,300
6	Total Revenue Requirements	14,526,100	10,107,400	24,633,500
	Less Other Income Sources			
7	Interest Income	(21,800)	(87,100)	(108,900)
8	Other Income	(421,800)		(421,800)
9	Available Operating Reserves		1,590,300	1,590,300
10	Total Other Sources	(443,600)	1,503,200	1,059,600
11	Total Cost of Service to be Recovered From Rates	14,082,500	11,610,600	25,693,100
	<u>Total Cost of Service on a Utility Basis</u>			
12	Operation and Maintenance Expense	14,082,500		14,082,500
13	Payment in Lieu of Taxes		661,100	661,100
14	Depreciation Expense Recovered		5,898,000	5,898,000
15	Return on Rate Base		5,051,500	5,051,500
16	Total Cost of Service to be Recovered from Rates	14,082,500	11,610,600	25,693,100
	<u>Rate of Return Calculation</u>			
17	Return on Rate Base (from Line 15)		5,051,500	
18	Rate Base (from Table 9)		154,667,600	
19	Rate of Return (18) / (17)		3.27%	

(a) Net of Administrative Revenue Credit

Table 7
Water Utility

Allocation of Operation and Maintenance Expense to Functional Cost Components
Test Year 2022

Line No.	Allocation Basis	(1)	(2)	(3)	(4)	(5)	(6)	(7)
		Total	Base	Extra Capacity		Customers		Fire Protection
				Max Day	Peak Hour	Meters and Services	Billing	
1	Administrative & General	3,337,500	823,700	931,700	132,300	1,047,100	277,100	125,600
	<u>Supply & Pumping</u>							
2	Source of Supply <i>Max Day</i>	988,900	464,800	524,100	0	0	0	0
3	Pumping - Power <i>Power</i>	1,617,200	1,132,000	242,600	242,600	0	0	0
4	Pumping - Other <i>Max Day</i>	842,400	395,900	446,500	0	0	0	0
5	Treatment - Chemicals <i>Base</i>	1,141,700	1,141,700	0	0	0	0	0
6	Treatment - Other <i>Max Day</i>	227,800	107,100	120,700	0	0	0	0
7	Supply/Pumping/Treatment Maint <i>Max Day</i>	868,600	408,200	460,400	0	0	0	0
8	Total Supply & Pumping	5,686,600	3,649,700	1,794,300	242,600	0	0	0
	<u>Distribution System</u>							
9	Distribution Operations <i>Subtotal</i>	16,400	1,900	2,100	1,300	9,900	0	1,200
10	Main Maintenance <i>Mains</i>	1,534,200	359,700	411,200	257,000	506,300	0	0
11	Service Lines <i>Svcs</i>	1,438,300	0	0	0	1,438,300	0	0
12	Hydrants <i>Hydrs</i>	237,000	0	0	0	0	0	237,000
13	Jobbing <i>Subtotal</i>	211,400	23,700	27,100	16,900	128,100	0	15,600
14	System Maintenance <i>Subtotal</i>	117,700	13,200	15,100	9,400	71,300	0	8,700
15	General Maintenance <i>Subtotal</i>	60,400	800	900	500	50,100	0	8,100
16	Total Distribution System	3,615,400	399,300	456,400	285,100	2,204,000	0	270,600
	<u>Commercial Activities</u>							
17	Meter Reading <i>Cust</i>	211,400	0	0	0	0	211,400	0
18	Meter Maintenance <i>Eq Mtrs</i>	52,900	0	0	0	52,900	0	0
19	Customer Billing / Cust Svc <i>Cust</i>	385,900	0	0	0	0	385,900	0
20	Total Commercial Activities	650,200	0	0	0	52,900	597,300	0
21	Building Services <i>Subtotal</i>	582,800	143,800	162,700	23,100	182,900	48,400	21,900
22	Fleet <i>Subtotal</i>	653,900	653,900	0	0	0	0	0
23	GRAND TOTAL O&M	14,526,400	5,670,400	3,345,100	683,100	3,486,900	922,800	418,100
24	less: Credit for Other Income	(443,600)	(173,000)	(102,200)	(20,900)	(106,500)	(28,200)	(12,800)
25	Net Allocated Total	14,082,800	5,497,400	3,242,900	662,200	3,380,400	894,600	405,300

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Table 8
Water Utility
Development of Capital Asset Values for Cost of Service
Test Year 2022

Line No.		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
		Original Cost			Accumulated Depreciation			Original Cost Less Depreciation			Annual Depreciation Expense		
		Funding		Local	Funding		Local	Funding		Local	Funding		Local
		Total	CIAC		Total	CIAC		Total	CIAC		Total	CIAC	
1	Water Pumping	71,206,100	882,500	70,323,600	24,390,000	388,900	24,001,100	46,816,100	493,600	46,322,500	1,906,500	17,800	1,888,700
2	Reservoirs	0	0	0	0	0	0	0	0	0	0	0	0
3	Elevated Storage Tank	12,391,500	0	12,391,500	5,409,800	0	5,409,800	6,981,700	0	6,981,700	226,900	0	226,900
4	Transmission Mains	61,813,300	14,747,100	47,066,200	10,894,500	4,932,000	5,962,500	50,918,800	9,815,100	41,103,700	1,803,600	295,900	1,507,700
5	Distribution Mains	51,505,100	37,979,900	13,525,200	24,450,100	18,843,100	5,607,000	27,055,000	19,136,800	7,918,200	927,700	706,200	221,500
6	Service Connections	55,011,400	29,923,000	25,088,400	18,248,800	14,848,300	3,400,500	36,762,600	15,074,700	21,687,900	1,325,900	559,300	766,600
7	Water Metering Devices	19,154,800	0	19,154,800	7,839,900	0	7,839,900	11,314,900	0	11,314,900	603,500	0	603,500
8	Hydrants	9,107,400	6,197,700	2,909,700	3,886,800	2,915,900	970,900	5,220,600	3,281,800	1,938,800	178,600	117,000	61,600
9	Subtotal	280,189,600	89,730,200	190,459,400	95,119,900	41,928,200	53,191,700	185,069,700	47,802,000	137,267,700	6,972,700	1,696,200	5,276,500
10	Water General	23,644,400	2,305,700	21,338,700	9,984,400	1,623,700	8,360,700	13,660,000	682,000	12,978,000	681,400	59,900	621,500
11	TOTAL	303,834,000	92,035,900	211,798,100	105,104,300	43,551,900	61,552,400	198,729,700	48,484,000	150,245,700	7,654,100	1,756,100	5,898,000

Table 9
Water Utility

Allocation of Rate Base to Functional Cost Components
Test Year 2022

Line No.	Allocation Basis	(1)	(2)	(3)	(4)	(5)	(6)	(7)
		Total	Base	Extra Capacity		Customers		Fire Protection
				Max Day	Peak Hour	Meters and Services	Billing	
1	Water Pumping	46,322,500	21,771,600	24,550,900	0	0	0	0
2	Reservoirs	0	0	0	0	0	0	0
3	Elevated Storage Tank	6,981,700	698,200	0	6,283,500	0	0	0
4	Transmission Mains	41,103,700	14,386,300	16,441,500	10,275,900	0	0	0
5	Distribution Mains	7,918,200	1,856,700	2,122,100	1,326,400	2,613,000	0	0
6	Service Connections	21,687,900	0	0	0	21,687,900	0	0
7	Water Metering Devices	11,314,900	0	0	0	11,314,900	0	0
8	Hydrants	1,938,800	0	0	0	0	0	1,938,800
9	Subtotal	137,267,700	38,712,800	43,114,500	17,885,800	35,615,800	0	1,938,800
10	Water General	12,978,000	3,660,100	4,076,300	1,691,000	3,367,300	0	183,300
11	Net Plant Investment	150,245,700	42,372,900	47,190,800	19,576,800	38,983,100	0	2,122,100
Plus:								
12	Working Capital	3,985,300	1,124,000	1,251,700	519,300	1,034,000	0	56,300
13	Inventory	436,600	123,100	137,100	56,900	113,300	0	6,200
14	Total Rate Base	154,667,600	43,620,000	48,579,600	20,153,000	40,130,400	0	2,184,600
15	Return on Rate Base @ 3.27%	5,051,500	1,424,700	1,586,600	658,200	1,310,700	0	71,300
16	Payment in Lieu of Taxes (PILOT)	661,200	256,700	285,900	118,600	0	0	0

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Table 10
Water Utility

Allocation of Depreciation Expense to Functional Cost Components
Test Year 2022

Line No.	Allocation Basis	(1)	(2)	(3)	(4)	(5)	(6)	(7)
		<u>Total</u>	<u>Base</u>	<u>Extra Capacity</u>		<u>Customers</u>		<u>Fire Protection</u>
				<u>Max Day</u>	<u>Peak Hour</u>	<u>Meters and Services</u>	<u>Billing</u>	
1	Water Pumping	1,888,700	887,700	1,001,000	0	0	0	0
2	Reservoirs	0	0	0	0	0	0	0
3	Elevated Storage Tank	226,900	22,700	0	204,200	0	0	0
4	Transmission Mains	1,507,700	527,700	603,100	376,900	0	0	0
5	Dist Mains - City	221,500	51,900	59,400	37,100	73,100	0	0
6	Service Conn - City	766,600	0	0	0	766,600	0	0
7	Water Metering Devices	603,500	0	0	0	603,500	0	0
8	Hydrants	61,600	0	0	0	0	0	61,600
9	Subtotal	5,276,500	1,490,000	1,663,500	618,200	1,443,200	0	61,600
10	Water General	621,500	175,500	195,900	72,800	170,000	0	7,300
11	Net Plant Investment	5,898,000	1,665,500	1,859,400	691,000	1,613,200	0	68,900

Table 11
Water Utility

Customer Class Units of Service
Test Year 2022

Line No.		(1)	(2)	(3)	(4)	(5)	(6)
			Extra Capacity		Customers		
		<u>Base</u> cu mtr	<u>Max Day</u> cu mtr/day	<u>Peak Hour</u> cu mtr/hr	<u>Meters and</u> <u>Services</u> eq conn	<u>Billing</u> <u>bills</u>	<u>Fire</u> <u>Protection</u> eq hyd
REGULAR CUSTOMERS							
1	Single Family	9,533,800	44,249	18,486	41,972	148,444	0
2	Multi-Family	3,408,200	7,469	3,736	4,861	20,288	0
3	Commercial/Industrial	8,239,800	27,090	9,030	10,333	33,344	0
4	Seasonal	954,500	7,192	9,806	674	2,884	0
5	Total Regular Customers	22,136,300	86,000	41,058	57,840	204,960	0
FIRE PROTECTION							
6	Detector Checks	14,000	2,433	3,461	1,729	10,656	828
7	Public Fire Hydrants	0	12,130	16,983	0	4,063	4,063
8	Private Fire Hydrants	0	2,398	3,356	0	803	803
9	Total Fire Protection	14,000	16,961	23,800	1,729	15,522	5,694
10	TOTAL	22,150,300	102,961	64,858	59,569	220,482	5,694
Customer Class Detail							
<u>City Customers</u>							
11	Single Family	4,073,900	18,907	7,899	19,244	73,476	0
12	Multi-Family	1,753,500	3,843	1,922	2,507	10,048	0
13	Commercial/Industrial	5,260,400	17,294	5,765	6,097	19,392	0
14	Seasonal	520,500	3,922	5,347	433	1,652	0
15	Subtotal	11,608,300	43,967	20,933	28,281	104,568	0
<u>City Fire Protection</u>							
16	Detector Checks	10,800	1,340	1,919	944	5,900	459
17	Public Fire Hydrants	0	5,708	7,992	0	1,912	1,912
18	Private Fire Hydrants	0	1,057	1,480	0	354	354
19	Subtotal	10,800	8,105	11,391	944	8,166	2,725
20	Total City Customers	11,619,100	52,072	32,324	29,225	112,734	2,725
<u>Township Customers</u>							
21	Single Family	5,459,900	25,342	10,587	22,728	74,968	0
22	Multi-Family	1,654,700	3,626	1,814	2,354	10,240	0
23	Commercial/Industrial	2,979,400	9,796	3,265	4,236	13,952	0
24	Seasonal	434,000	3,270	4,459	241	1,232	0
25	Subtotal	10,528,000	42,033	20,125	29,559	100,392	0
<u>Township Fire Protection</u>							
26	Detector Checks	3,200	1,093	1,542	785	4,756	369
27	Public Fire Hydrants	0	6,422	8,991	0	2,151	2,151
28	Private Fire Hydrants	0	1,341	1,876	0	449	449
29	Subtotal	3,200	8,856	12,409	785	7,356	2,969
30	Total Township Customers	10,531,200	50,889	32,534	30,344	107,748	2,969

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Table 12
Water Utility
Unit Costs of Service
Test Year 2022

		(1)	(2)	(3)	(4)	(5)	(6)	
Line No.		Total	Extra Capacity		Customers		Fire Protection	
			Base	Max Day	Peak Hour	Meters and Services		Billing
1	Units of Service <i>Units</i>	22,150,300 <i>cu mtr</i>	102,961 <i>cu mtr/day</i>	64,858 <i>cu mtr/hr</i>	59,569 <i>eq conn</i>	220,482 <i>bills</i>	5,694 <i>eq hyd</i>	
2	Net Operating Expense	14,082,800	5,497,400	3,242,900	662,200	3,380,400	894,600	405,300
3	Unit Cost, /Unit	0.2482	31.4964	10.2100	56.7476	4.0575	71.1802	
4	Payment in Lieu of Taxes	661,200	256,700	285,900	118,600	0	0	0
5	Unit Cost, /Unit	0.0116	2.7768	1.8286	0.0000	0.0000	0.0000	
6	Depreciation Expense	5,898,000	1,665,500	1,859,400	691,000	1,613,200	0	68,900
7	Unit Cost, /Unit	0.0752	18.0593	10.6540	27.0812	0.0000	0.0000	12.1005
8	Return on Rate Base	5,051,500	1,424,700	1,586,600	658,200	1,310,700	0	71,300
9	Unit Cost, /Unit	0.0643	15.4097	10.1483	22.0031	0.0000	0.0000	12.5220
10	TOTAL Cost of Service	25,693,500	8,844,300	6,974,800	2,130,000	6,304,300	894,600	545,500
11	Unit Cost, /Unit	0.3993	67.7422	32.8410	105.8319	4.0575	95.8026	

Table 13
Water Utility

Initial Allocation of Cost of Service to Customer Classes
Test Year 2022

Line No.		(1)	(2)	(3)	(4)	(5)	(6)	(7)
		<u>Total</u>	<u>Base</u>	<u>Extra Capacity</u>		<u>Customers</u>		<u>Fire Protection</u>
				<u>Max Day</u>	<u>Peak Hour</u>	<u>Meters and Services</u>	<u>Billing</u>	
1	Total Cost of Service	25,693,500	8,844,300	6,974,800	2,130,000	6,304,300	894,600	545,500
2	Unit Costs of Service		0.3993	67.7422	32.8410	105.8319	4.0575	95.8026
REGULAR CUSTOMERS								
3	Single Family	12,455,900	3,806,800	2,997,600	607,100	4,442,000	602,300	100
4	Multi-Family	2,586,200	1,360,800	506,000	122,700	514,400	82,300	0
5	Commercial/Industrial	6,650,600	3,290,000	1,835,100	296,600	1,093,600	135,300	0
6	Seasonal	1,273,300	381,100	487,200	322,000	71,300	11,700	0
7	Total Regular Customers	22,966,000	8,838,700	5,825,900	1,348,400	6,121,300	831,600	100
FIRE PROTECTION								
8	Detector Checks	589,600	5,600	164,800	113,700	183,000	43,200	79,300
9	Public Fire Hydrants	1,785,100	0	821,700	557,700	0	16,500	389,200
10	Private Fire Hydrants	352,800	0	162,400	110,200	0	3,300	76,900
11	Total Fire Protection	2,727,500	5,600	1,148,900	781,600	183,000	63,000	545,400
12	TOTAL	25,693,500	8,844,300	6,974,800	2,130,000	6,304,300	894,600	545,500
Customer Class Detail								
<u>City Customers</u>								
13	Single Family	5,501,900	1,626,700	1,280,900	259,500	2,036,700	298,200	(100)
14	Multi-Family	1,329,600	700,100	260,300	63,100	265,300	40,800	0
15	Commercial/Industrial	4,185,300	2,100,400	1,171,600	189,300	645,300	78,700	0
16	Seasonal	701,600	207,800	265,700	175,600	45,800	6,700	0
17	Subtotal	11,718,400	4,635,000	2,978,500	687,500	2,993,100	424,400	(100)
<u>City Fire Protection</u>								
18	Detector Checks	325,900	4,300	90,800	63,000	99,900	23,900	44,000
19	Public Fire Hydrants	840,200	0	386,700	262,500	0	7,800	183,200
20	Private Fire Hydrants	155,500	0	71,600	48,600	0	1,400	33,900
21	Subtotal	1,321,600	4,300	549,100	374,100	99,900	33,100	261,100
22	Total City Customers	13,040,000	4,639,300	3,527,600	1,061,600	3,093,000	457,500	261,000
<u>Township Customers</u>								
23	Single Family	6,954,000	2,180,100	1,716,700	347,700	2,405,300	304,200	0
24	Multi-Family	1,256,500	660,700	245,600	59,600	249,100	41,500	0
25	Commercial/Industrial	2,465,300	1,189,600	663,600	107,200	448,300	56,600	0
26	Seasonal	571,700	173,300	221,500	146,400	25,500	5,000	0
27	Subtotal	11,247,500	4,203,700	2,847,400	660,900	3,128,200	407,300	0
<u>Township Fire Protection</u>								
28	Detector Checks	263,700	1,300	74,000	50,600	83,100	19,300	35,400
29	Public Fire Hydrants	945,100	0	435,000	295,300	0	8,700	206,100
30	Private Fire Hydrants	197,200	0	90,800	61,600	0	1,800	43,000
31	Subtotal	1,406,000	1,300	599,800	407,500	83,100	29,800	284,500
32	Total Township Customers	12,653,500	4,205,000	3,447,200	1,068,400	3,211,300	437,100	284,500

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Table 14
Water Utility
Cost of Service Allocated to Customer Class
Test Year 2022

Line No.	Description	(1) Allocated Cost of Service	(2) Fire Protection	(3) Seasonal	(4) Adjusted Allocated Cost of Service	(5) Revenue Under Existing Rates	(6) Adjustment Indicated	(7) % Variance
REGULAR CUSTOMERS								
1	Single Family	12,455,900	1,528,000	110,100	14,094,000	9,703,800	4,390,200	45.2%
2	Multi-Family	2,586,200	177,000	12,800	2,776,000	1,840,900	935,100	50.8%
3	Commercial/Industrial	6,650,600	376,200	27,100	7,053,900	4,523,100	2,530,800	56.0%
4	Seasonal	1,273,300	24,500	(150,000)	1,147,800	803,400	344,400	42.9%
5	Total Regular Customers	22,966,000	2,105,700	0	25,071,700	16,871,200	8,200,500	
FIRE PROTECTION								
6	Detector Checks	589,600			589,600	438,700	150,900	34.4%
7	Public Fire Hydrants	1,785,100	(1,785,100)		0	0	0	NA
8	Private Fire Hydrants	352,800	(320,600)		32,200	32,200	0	0.0%
9	Total Fire Protection	2,727,500	(2,105,700)	0	621,800	470,900	150,900	32.0%
10	TOTAL	25,693,500	0	0	25,693,500	17,342,100	8,351,400	48.2%
Customer Class Detail								
City Customers								
11	Single Family	5,501,900	700,600	50,500	6,253,000	3,665,800	2,587,200	70.6%
12	Multi-Family	1,329,600	91,300	6,600	1,427,500	862,000	565,500	65.6%
13	Commercial/Industrial	4,185,300	222,000	16,000	4,423,300	2,625,100	1,798,200	68.5%
14	Seasonal	701,600	15,800	(81,900)	635,500	364,400	271,100	74.4%
15	Subtotal	11,718,400	1,029,700	(8,800)	12,739,300	7,517,300	5,222,000	69.5%
City Fire Protection								
16	Detector Checks	325,900			325,900	219,200	106,700	48.7%
17	Public Fire Hydrants	840,200	(840,200)		0	0	0	NA
18	Private Fire Hydrants	155,500	(141,300)		14,200	14,200	0	0.0%
19	Subtotal	1,321,600	(981,500)	0	340,100	233,400	106,700	45.7%
20	Total City Customers	13,040,000	48,200	(8,800)	13,079,400	7,750,700	5,328,700	68.8%
Township Customers								
21	Single Family	6,954,000	827,400	59,600	7,841,000	6,038,000	1,803,000	29.9%
22	Multi-Family	1,256,500	85,700	6,200	1,348,400	978,900	369,500	37.7%
23	Commercial/Industrial	2,465,300	154,200	11,100	2,630,600	1,898,000	732,600	38.6%
24	Seasonal	571,700	8,800	(68,100)	512,400	439,000	73,400	16.7%
25	Subtotal	11,247,500	1,076,100	8,800	12,332,400	9,353,900	2,978,500	31.8%
Township Fire Protection								
26	Detector Checks	263,700			263,700	219,500	44,200	20.1%
27	Public Fire Hydrants	945,100	(945,100)		0	0	0	NA
28	Private Fire Hydrants	197,200	(179,200)		18,000	18,000	0	0.0%
29	Subtotal	1,406,000	(1,124,300)	0	281,700	237,500	44,200	18.6%
30	Total Township Customers	12,653,500	(48,200)	8,800	12,614,100	9,591,400	3,022,700	31.5%

Table 15
Water Utility

Calculation of Water Rates - "Regular Customers"
Test Year 2022

Line No.	Description	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Commodity Charges			Meter & Service Charges			Billing Charges		
		Allocated Cost of Service \$	Billable Units cu meters	Cost of Service Rate \$/cu meter	Allocated Cost of Service \$	Billable Units eq conn	Cost of Service Rate \$/eq conn	Allocated Cost of Service \$	Billable Units bills	Cost of Service Rate \$/bill
REGULAR CUSTOMERS										
1	Single Family	7,521,700	9,533,800	0.789	5,970,000	41,972	142.24	602,300	148,444	4.06
2	Multi-Family	2,002,300	3,408,200	0.587	691,400	4,861	142.23	82,300	20,288	4.06
3	Commercial/Industrial	5,448,800	8,239,800	0.661	1,469,800	10,333	142.24	135,300	33,344	4.06
4	Seasonal	1,040,300	954,500	1.090	95,800	674	142.14	11,700	2,884	4.06
5	Total Regular Customers	16,013,100	22,136,300	0.723	8,227,000	57,840	142.24	831,600	204,960	4.06

Meter Service Charges ->

Meter Size (inches)	Billing Costs \$/bill	Meters and Services Costs \$/eq conn/yr	Equivalent Meter and Service Ratio	Total Quarterly Service Charge \$/bill	Total Monthly Service Charge \$/bill
5/8"-3/4"	4.06	142.24	1.0	39.62	15.91
1"	4.06	142.24	1.4	53.84	20.65
1-1/2"	4.06	142.24	1.8	68.07	25.40
2"	4.06	142.24	2.9	107.18	38.43
3"	4.06	142.24	11.0	395.22	134.45
4"	4.06	142.24	14.0	501.90	170.01
6"	4.06	142.24	21.0	750.82	252.98
8"	4.06	142.24	29.0	1,035.30	347.81

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Table 16
Water Utility
Calculation of Water Rates - Fire Protection
Test Year 2022

	(1)	(2)	(3)	(4)	(5)	(6)	
<u>Adjusted Unit Cost Calculations</u>		<u>Commodity Charges</u>	<u>Meters & Service Charges</u>	<u>Billing Charges</u>	<u>Fire Protection Charges</u>	<u>Total</u>	
<u>Initial Allocations</u>							
1 Allocated Revenue Requirements		284,100	183,000	43,200	79,300	589,600	
2 Units		14,000	1,729	10,656	828		
3 Unit Costs		20.293	105.84	4.05	95.77		
<u>Initial Allocations</u>							
4 Commodity Rate - Commercial		0.661					
5 Commodity Revenue		9,300					
6 Additional Revenue via Service Charges		(274,800)		274,800		0	
7 Rate Design Revenue Requirements		9,300	183,000	318,000	79,300	589,600	
8 Units		14,000	1,729	10,656	828		
9 Unit Costs		0.661	105.84	29.84	95.77		
<u>Rate Design</u>							
	Detector Check <u>Size</u> (inches)	<u>Billing Costs</u> /bill	Meters and Services <u>Costs</u> /eq conn/yr	Equivalent Meter and Service <u>Ratio</u>	Fire Protection <u>Costs</u> /eq hyd	Equivalent Hydrant <u>Ratio</u>	Total Service Charge /bill
Monthly							
10 4"		29.84	105.84	1.4	95.77	0.363	45.09
11 6"		29.84	105.84	1.8	95.77	1.000	53.70
12 8"		29.84	105.84	2.9	95.77	2.053	71.80
13 10"		29.84	105.84	11.0	95.77	3.586	155.48
Quarterly							
14 4"		29.84	105.84	1.4	95.77	0.363	75.58
15 6"		29.84	105.84	1.8	95.77	1.000	101.41
16 8"		29.84	105.84	2.9	95.77	2.053	155.73
17 10"		29.84	105.84	11.0	95.77	3.586	406.76

Table 17
Water Utility
Comparison of Existing and "Ultimate" Water Rates
Test Year 2022

Line No.		(1) <u>Existing Rates</u> \$/unit	(2) <u>Ultimate Rates</u> \$/unit	(3) <u>Variance</u> \$/unit	(4) <u>% Variance</u>
Commodity Charges - \$/cu mtr					
<u>Inside City</u>					
1	Single Family	0.393	0.789	0.396	100.8%
2	Multi Family	0.337	0.587	0.250	74.2%
3	Commercial	0.376	0.661	0.285	75.8%
4	Seasonal	0.611	1.090	0.479	78.4%
<u>Outside City</u>					
5	Single Family	0.604	0.789	0.185	30.6%
6	Multi-Family	0.414	0.587	0.173	41.8%
7	Commercial	0.464	0.661	0.197	42.5%
8	Seasonal	0.941	1.090	0.149	15.8%
<u>Fire Protection Detector Checks</u>					
9	Inside City	0.370	0.661	0.291	78.6%
10	Outside City	0.459	0.661	0.202	44.0%

Table 17
Water Utility
Comparison of Existing and "Ultimate" Water Rates
Test Year 2022

Line No.		(1) <u>Existing Rates</u> \$/unit	(2) <u>Ultimate Rates</u> \$/unit	(3) <u>Variance</u> \$/unit	(4) <u>% Variance</u>
Meter Service Charges - \$/bill					
<u>Inside City - Quarterly</u>					
11	5/8"-3/4"	27.03	39.62	12.59	46.6%
12	1"	36.03	53.84	17.81	49.4%
13	1-1/2"	45.06	68.07	23.01	51.1%
14	2"	69.82	107.18	37.36	53.5%
15	3"	225.47	395.22	169.75	75.3%
16	4"	299.63	501.90	202.27	67.5%
17	6"	447.13	750.82	303.69	67.9%
18	8"	615.69	1,035.30	419.61	68.2%
<u>Inside City - Monthly</u>					
19	5/8"-3/4"	11.99	15.91	3.92	32.7%
20	1"	15.00	20.65	5.65	37.7%
21	1-1/2"	18.00	25.40	7.40	41.1%
22	2"	26.27	38.43	12.16	46.3%
23	3"	87.09	134.45	47.36	54.4%
24	4"	109.63	170.01	60.38	55.1%
25	6"	162.19	252.98	90.79	56.0%
26	8"	222.24	347.81	125.57	56.5%
<u>Outside City - Quarterly</u>					
27	5/8"-3/4"	30.82	39.62	8.80	28.6%
28	1"	41.55	53.84	12.29	29.6%
29	1-1/2"	52.29	68.07	15.78	30.2%
30	2"	81.82	107.18	25.36	31.0%
31	3"	296.80	395.22	98.42	33.2%
32	4"	376.65	501.90	125.25	33.3%
33	6"	562.95	750.82	187.87	33.4%
34	8"	775.88	1,035.30	259.42	33.4%
<u>Outside City - Monthly</u>					
35	5/8"-3/4"	12.93	15.91	2.98	23.0%
36	1"	16.51	20.65	4.14	25.1%
37	1-1/2"	20.09	25.40	5.31	26.4%
38	2"	29.93	38.43	8.50	28.4%
39	3"	102.40	134.45	32.05	31.3%
40	4"	129.23	170.01	40.78	31.6%
41	6"	191.85	252.98	61.13	31.9%
42	8"	263.42	347.81	84.39	32.0%

Table 17
Water Utility
Comparison of Existing and "Ultimate" Water Rates
Test Year 2022

Line No.		(1) <u>Existing Rates</u> \$/unit	(2) <u>Ultimate Rates</u> \$/unit	(3) <u>Variance</u> \$/unit	(4) <u>% Variance</u>
Fire Protection					
<u>Quarterly Detector Checks - Service Charges - \$/bill</u>					
43	Inside City				
44	4"	42.83	75.58	32.75	76.5%
45	6"	49.15	101.41	52.26	106.3%
46	8"	66.97	155.73	88.76	132.5%
47	10"	200.36	406.76	206.40	103.0%
Outside City					
48	4"	59.12	75.58	16.46	27.8%
49	6"	78.44	101.41	22.97	29.3%
50	8"	117.77	155.73	37.96	32.2%
51	10"	295.48	406.76	111.28	37.7%
<u>Monthly Detector Checks - Service Charges - \$/bill</u>					
52	Inside City				
53	4"	29.73	45.09	15.36	51.7%
54	6"	36.67	53.70	17.03	46.4%
55	8"	50.56	71.80	21.24	42.0%
56	10"	106.48	155.48	49.00	46.0%
Outside City					
57	4"	37.50	45.09	7.59	20.2%
58	6"	45.52	53.70	8.18	18.0%
59	8"	61.43	71.80	10.37	16.9%
60	10"	123.73	155.48	31.75	25.7%
<u>Fire Hydrants - \$/hydrant/year</u>					
61	Public	0.00	0.00	0.00	NA
62	Private	40.00	40.00	0.00	0.0%

Table 18
Water Utility
Typical Customer Water Bills Under Existing and "Ultimate" Rates
Test Year 2022

Line No.	Customer Class	Meter Size	Water Use cu mtr	Bill Under Existing Rates \$	Bill Under "Ultimate" Rates \$	Increase (Decrease) \$	Percent Increase (Decrease) %
CITY CUSTOMERS - QUARTERLY							
1	Single Family	5/8"-3/4"	0	27.03	39.62	12.59	46.6%
2	Single Family	5/8"-3/4"	55	48.65	83.02	34.37	70.6%
3	Single Family	5/8"-3/4"	70	54.54	94.85	40.31	73.9%
4	Single Family	1"	100	75.33	132.74	57.41	76.2%
5	Multi Family	1"	300	137.13	229.94	92.81	67.7%
6	Commercial	1"	750	318.03	549.59	231.56	72.8%
7	Commercial	2"	2,250	915.82	1,594.43	678.61	74.1%
8	Seasonal	1-1/2"	100	106.16	177.07	70.91	66.8%
9	Seasonal	2"	300	253.12	434.18	181.06	71.5%
CITY CUSTOMERS - MONTHLY							
10	Multi Family	1"	100	48.70	79.35	30.65	62.9%
11	Multi Family	2"	200	93.67	155.83	62.16	66.4%
12	Commercial	2"	500	214.27	368.93	154.66	72.2%
13	Commercial	4"	3,000	1,237.63	2,153.01	915.38	74.0%
14	Commercial	6"	20,000	7,682.19	13,472.98	5,790.79	75.4%
15	Seasonal	2"	400	270.67	474.43	203.76	75.3%
TOWNSHIP CUSTOMERS - QUARTERLY							
16	Single Family	5/8"-3/4"	0	30.82	39.62	8.80	28.6%
17	Single Family	5/8"-3/4"	55	64.04	83.02	18.98	29.6%
18	Single Family	5/8"-3/4"	70	73.10	94.85	21.75	29.8%
19	Single Family	1"	100	101.95	132.74	30.79	30.2%
20	Multi-Family	1"	300	165.75	229.94	64.19	38.7%
21	Commercial	1"	750	389.55	549.59	160.04	41.1%
22	Commercial	2"	2,250	1,125.82	1,594.43	468.61	41.6%
23	Seasonal	1-1/2"	100	146.39	177.07	30.68	21.0%
24	Seasonal	2"	300	364.12	434.18	70.06	19.2%
TOWNSHIP CUSTOMERS - MONTHLY							
25	Multi-Family	1"	100	57.91	79.35	21.44	37.0%
26	Multi-Family	2"	200	112.73	155.83	43.10	38.2%
27	Commercial	2"	500	261.93	368.93	107.00	40.9%
28	Commercial	4"	3,000	1,521.23	2,153.01	631.78	41.5%
29	Commercial	6"	20,000	9,471.85	13,472.98	4,001.13	42.2%
30	Seasonal	2"	200	218.13	256.43	38.30	17.6%

Table 19
Water Utility
Development of 2020 Water Rates

Line		(1)	(2)	(3)	(4)	(5)
		<u>Existing Rates</u>	<i>Glide Path</i> <u>Annual</u> <i>Index</i>	<u>Proposed</u> <u>2020 Rates</u>	<i>Projected</i> <u>2021 Rates</u>	<i>Projected</i> Test Year <u>2022 Rates</u>
<u>No.</u>		\$/unit	<i>1/3 of Adj</i> <i>from Table 17</i>	\$/unit <i>[1] * (1+[2])</i>	\$/unit <i>[3] * (1+[2])</i>	<i>from Table 17</i>
Commodity Charges - \$/cu mtr						
<u>Inside City</u>						
1	Single Family	0.393	26.2%	0.496	0.626	0.789
2	Multi Family	0.337	20.3%	0.405	0.487	0.587
3	Commercial	0.376	20.7%	0.454	0.548	0.661
4	Seasonal	0.611	21.3%	0.741	0.899	1.090
<u>Outside City</u>						
5	Single Family	0.604	9.3%	0.660	0.721	0.789
6	Multi-Family	0.414	12.3%	0.465	0.522	0.587
7	Commercial	0.464	12.5%	0.522	0.587	0.661
8	Seasonal	0.941	5.0%	0.988	1.038	1.090
<u>Fire Protection Detector Checks</u>						
9	Inside City	0.370	21.3%	0.449	0.545	0.661
10	Outside City	0.459	12.9%	0.518	0.585	0.661

Table 19
Water Utility
Development of 2020 Water Rates

Line		(1)	(2)	(3)	(4)	(5)
		<u>Existing Rates</u>	<i>Glide Path</i> <u>Annual</u> <u>Index</u>	<u>Proposed</u> <u>2020 Rates</u>	<u>Projected</u> <u>2021 Rates</u>	<u>Projected</u> <u>Test Year</u> <u>2022 Rates</u>
<u>No.</u>		\$/unit	<i>1/3 of Adj</i> <i>from Table 17</i>	\$/unit <i>[1] * (1+[2])</i>	\$/unit <i>[3] * (1+[2])</i>	<i>from Table 17</i>
Meter Service Charges - \$/bill						
<u>Inside City - Quarterly</u>						
11	5/8"-3/4"	27.03	13.6%	30.70	34.87	39.62
12	1"	36.03	14.3%	41.19	47.09	53.84
13	1-1/2"	45.06	14.7%	51.70	59.32	68.07
14	2"	69.82	15.4%	80.54	92.91	107.18
15	3"	225.47	20.6%	271.86	327.79	395.22
16	4"	299.63	18.8%	355.85	422.61	501.90
17	6"	447.13	18.9%	531.46	631.69	750.82
18	8"	615.69	18.9%	732.14	870.62	1,035.30
<u>Inside City - Monthly</u>						
19	5/8"-3/4"	11.99	9.9%	13.18	14.48	15.91
20	1"	15.00	11.2%	16.69	18.57	20.65
21	1-1/2"	18.00	12.2%	20.19	22.65	25.40
22	2"	26.27	13.5%	29.82	33.85	38.43
23	3"	87.09	15.6%	100.65	116.33	134.45
24	4"	109.63	15.7%	126.89	146.87	170.01
25	6"	162.19	16.0%	188.10	218.14	252.98
26	8"	222.24	16.1%	258.03	299.58	347.81
<u>Outside City - Quarterly</u>						
27	5/8"-3/4"	30.82	8.7%	33.51	36.44	39.62
28	1"	41.55	9.0%	45.30	49.39	53.84
29	1-1/2"	52.29	9.2%	57.09	62.34	68.07
30	2"	81.82	9.4%	89.52	97.95	107.18
31	3"	296.80	10.0%	326.53	359.24	395.22
32	4"	376.65	10.0%	414.47	456.09	501.90
33	6"	562.95	10.1%	619.67	682.10	750.82
34	8"	775.88	10.1%	854.18	940.39	1,035.30
<u>Outside City - Monthly</u>						
35	5/8"-3/4"	12.93	7.2%	13.86	14.85	15.91
36	1"	16.51	7.7%	17.79	19.17	20.65
37	1-1/2"	20.09	8.1%	21.72	23.49	25.40
38	2"	29.93	8.7%	32.53	35.36	38.43
39	3"	102.40	9.5%	112.13	122.78	134.45
40	4"	129.23	9.6%	141.60	155.16	170.01
41	6"	191.85	9.7%	210.38	230.70	252.98
42	8"	263.42	9.7%	288.99	317.04	347.81

Table 19
Water Utility
Development of 2020 Water Rates

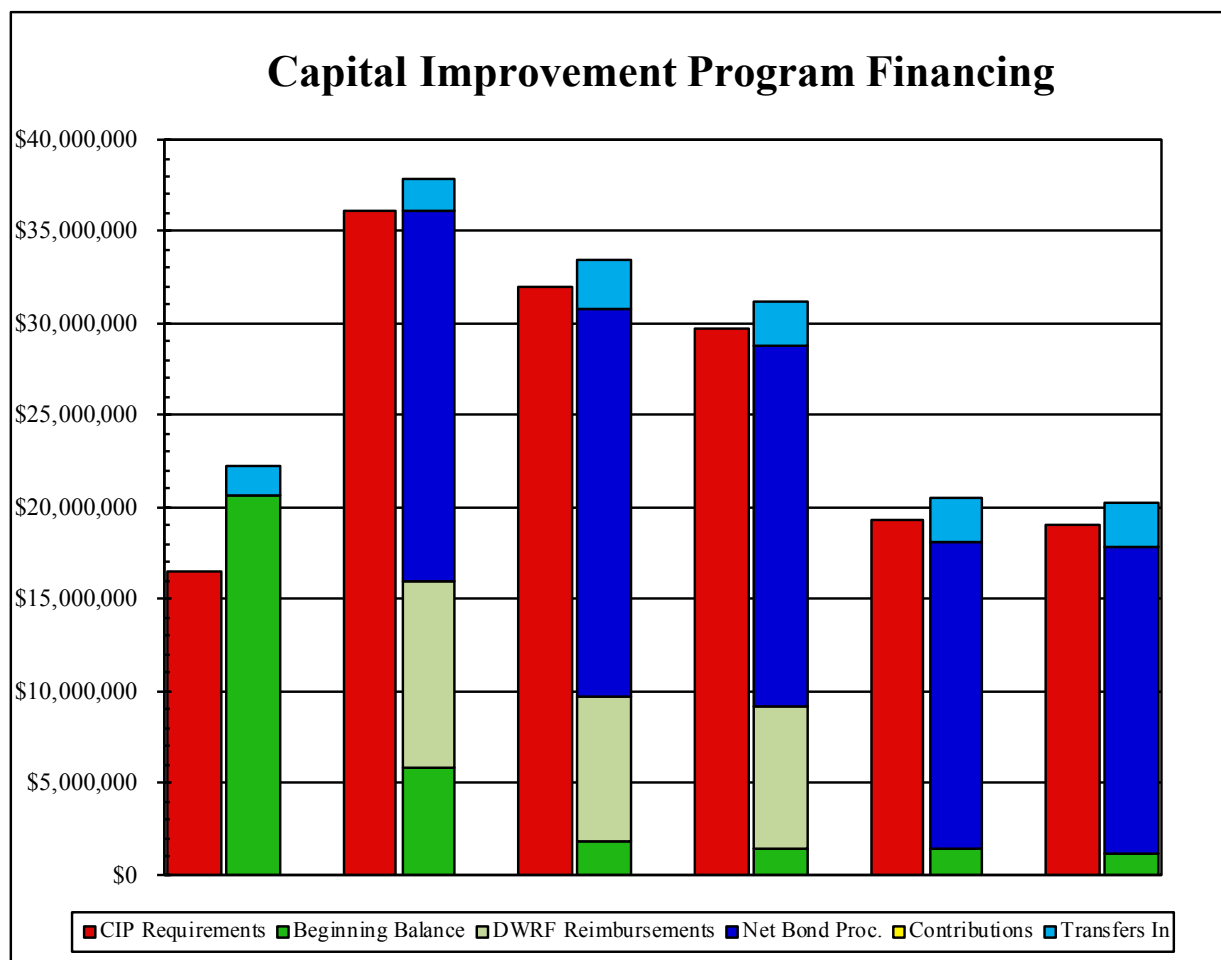
Line		(1)	(2)	(3)	(4)	(5)
		<u>Existing Rates</u>	<i>Glide Path</i> <u>Annual</u> <i>Index</i>	<u>Proposed</u> <u>2020 Rates</u>	<u>Projected</u> <u>2021 Rates</u>	<i>Projected</i> <u>Test Year</u> <u>2022 Rates</u>
<u>No.</u>		\$/unit	<i>1/3 of Adj</i> <i>from Table 17</i>	\$/unit <i>[1] * (1+[2])</i>	\$/unit <i>[3] * (1+[2])</i>	<i>from Table 17</i>
Fire Protection						
<u>Quarterly Detector Checks - Service Charges - \$/bill</u>						
43	Inside City					
44	4"	42.83	20.8%	51.76	62.55	75.58
45	6"	49.15	27.3%	62.57	79.66	101.41
46	8"	66.97	32.5%	88.72	117.54	155.73
47	10"	200.36	26.6%	253.70	321.24	406.76
	Outside City					
48	4"	59.12	8.5%	64.16	69.63	75.58
49	6"	78.44	8.9%	85.45	93.09	101.41
50	8"	117.77	9.8%	129.26	141.88	155.73
51	10"	295.48	11.2%	328.70	365.65	406.76
<u>Monthly Detector Checks - Service Charges - \$/bill</u>						
52	Inside City					
53	4"	29.73	14.9%	34.16	39.25	45.09
54	6"	36.67	13.6%	41.64	47.29	53.70
55	8"	50.56	12.4%	56.83	63.88	71.80
56	10"	106.48	13.4%	120.80	137.05	155.48
	Outside City					
57	4"	37.50	6.3%	39.88	42.41	45.09
58	6"	45.52	5.7%	48.10	50.82	53.70
59	8"	61.43	5.3%	64.71	68.16	71.80
60	10"	123.73	7.9%	133.52	144.08	155.48
<u>Fire Hydrants - \$/hydrant/year</u>						
61	Public	0.00		0.00		0.00
62	Private	40.00	0.0%	40.00	40.00	40.00

Table 20
Water Utility
Typical Customer Water Bills Under Existing and Proposed Rates

Line No.	Customer Class	Meter Size	Water Use cu mtr	Bill Under Existing Rates \$	Bill Under Proposed Rates \$	Increase (Decrease) \$	Percent Increase (Decrease) %
CITY CUSTOMERS - QUARTERLY							
1	Single Family	5/8"-3/4"	0	27.03	30.70	3.67	13.6%
2	Single Family	5/8"-3/4"	55	48.65	57.98	9.33	19.2%
3	Single Family	5/8"-3/4"	70	54.54	65.42	10.88	19.9%
4	Single Family	1"	100	75.33	90.79	15.46	20.5%
5	Multi Family	1"	300	137.13	162.69	25.56	18.6%
6	Commercial	1"	750	318.03	381.69	63.66	20.0%
7	Commercial	2"	2,250	915.82	1,102.04	186.22	20.3%
8	Seasonal	1-1/2"	100	106.16	125.80	19.64	18.5%
9	Seasonal	2"	300	253.12	302.84	49.72	19.6%
CITY CUSTOMERS - MONTHLY							
10	Multi Family	1"	100	48.70	57.19	8.49	17.4%
11	Multi Family	2"	200	93.67	110.82	17.15	18.3%
12	Commercial	2"	500	214.27	256.82	42.55	19.9%
13	Commercial	4"	3,000	1,237.63	1,488.89	251.26	20.3%
14	Commercial	6"	20,000	7,682.19	9,268.10	1,585.91	20.6%
15	Seasonal	2"	400	270.67	326.22	55.55	20.5%
TOWNSHIP CUSTOMERS - QUARTERLY							
16	Single Family	5/8"-3/4"	0	30.82	33.51	2.69	8.7%
17	Single Family	5/8"-3/4"	55	64.04	69.81	5.77	9.0%
18	Single Family	5/8"-3/4"	70	73.10	79.71	6.61	9.0%
19	Single Family	1"	100	101.95	111.30	9.35	9.2%
20	Multi-Family	1"	300	165.75	184.80	19.05	11.5%
21	Commercial	1"	750	389.55	436.80	47.25	12.1%
22	Commercial	2"	2,250	1,125.82	1,264.02	138.20	12.3%
23	Seasonal	1-1/2"	100	146.39	155.89	9.50	6.5%
24	Seasonal	2"	300	364.12	385.92	21.80	6.0%
TOWNSHIP CUSTOMERS - MONTHLY							
25	Multi-Family	1"	100	57.91	64.29	6.38	11.0%
26	Multi-Family	2"	200	112.73	125.53	12.80	11.4%
27	Commercial	2"	500	261.93	293.53	31.60	12.1%
28	Commercial	4"	3,000	1,521.23	1,707.60	186.37	12.3%
29	Commercial	6"	20,000	9,471.85	10,650.38	1,178.53	12.4%
30	Seasonal	2"	200	218.13	230.13	12.00	5.5%

APPENDICES

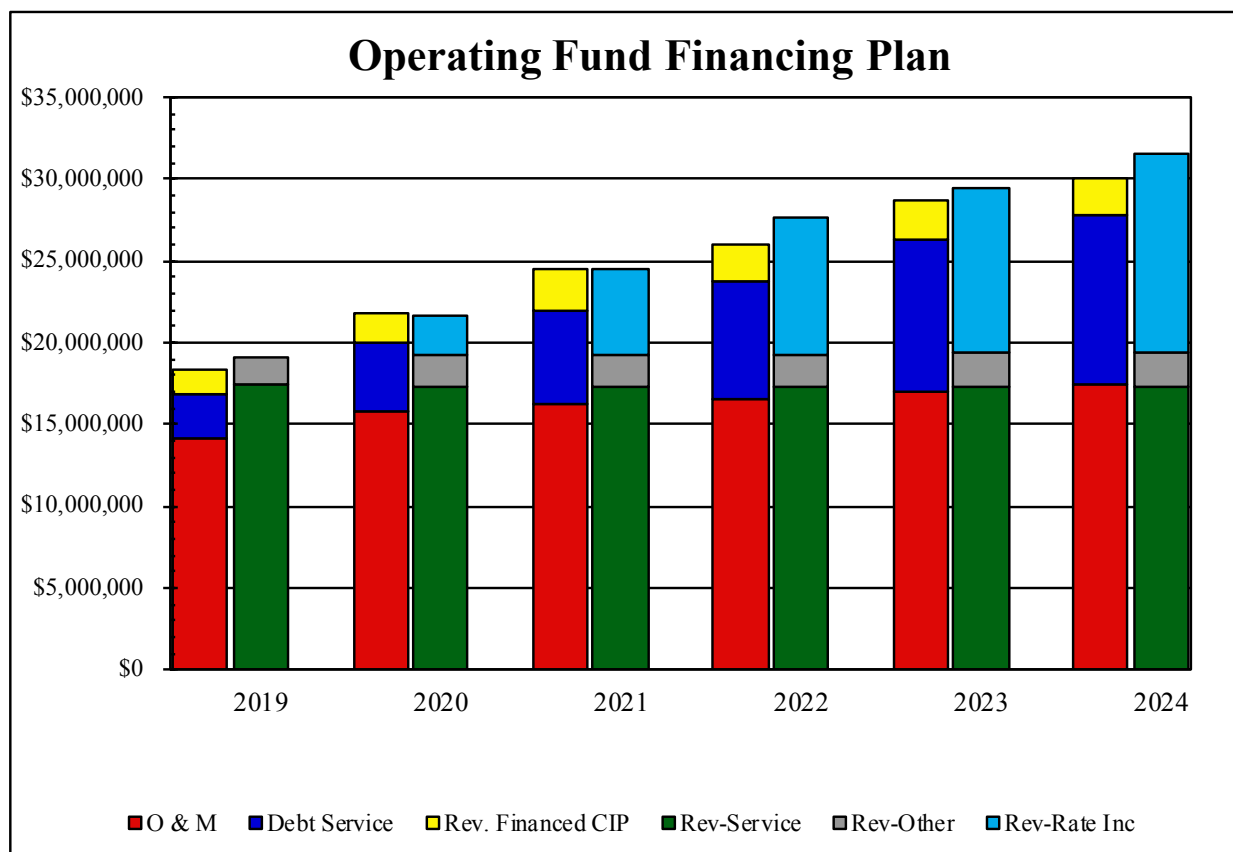
Water Utility Financial Plan Summary



	2019	2020	2021	2022	2023	2024
CIP Req't	16,452,300	36,142,000	32,050,600	29,754,200	19,256,700	19,009,700
Sources						
Beg Balance	20,638,100	5,768,100	1,781,100	1,376,700	1,389,700	1,202,700
DWRf Reimb	0	10,270,000	7,938,200	7,761,500	0	0
Bond Sale	0	20,500,000	21,500,000	20,000,000	17,000,000	17,000,000
less: Issue Exp	0	(377,500)	(392,500)	(370,000)	(325,000)	(325,000)
Revs / Op Fund:	1,582,300	1,762,500	2,600,500	2,375,700	2,394,700	2,334,700
CIAC	0	0	0	0	0	0
Total Sources	22,220,400	37,923,100	33,427,300	31,143,900	20,459,400	20,212,400
End Balance	5,768,100	1,781,100	1,376,700	1,389,700	1,202,700	1,202,700

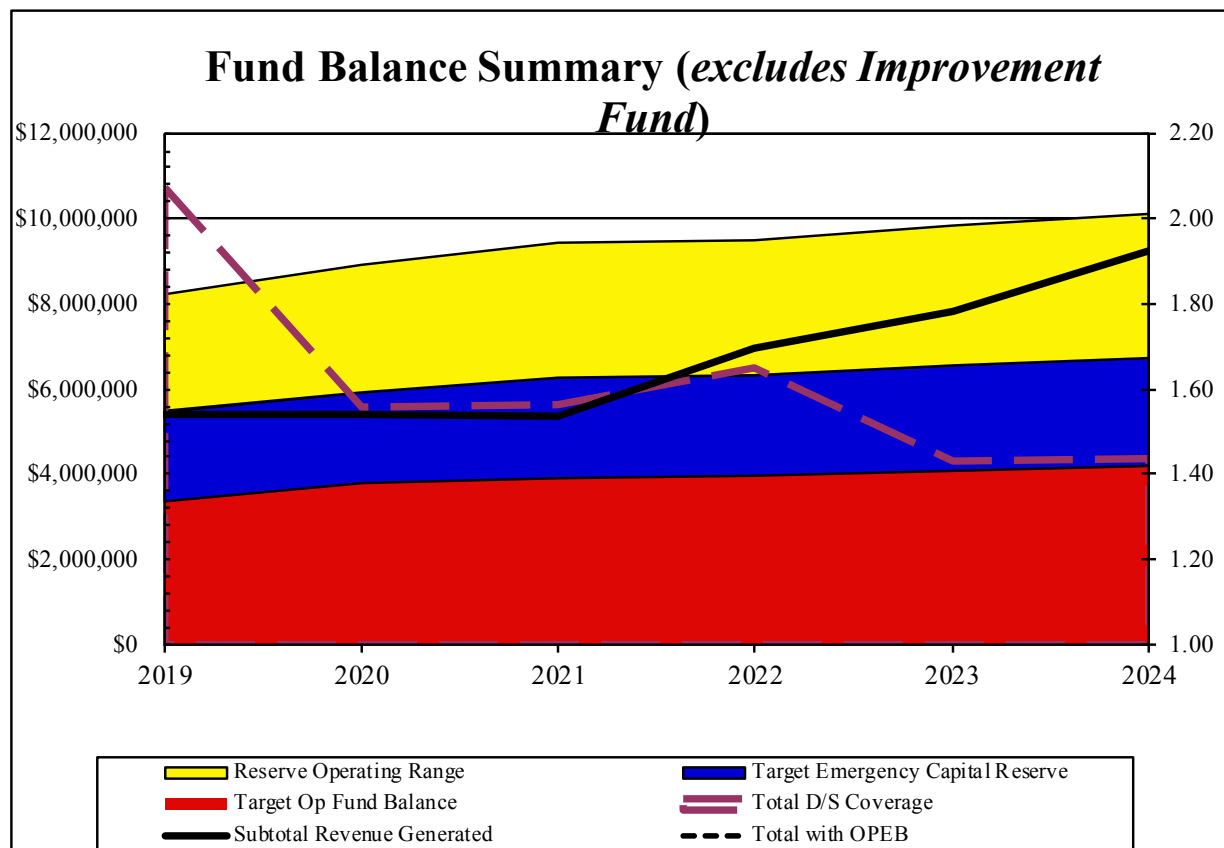
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Water Utility Financial Plan Summary



	2019	2020	2021	2022	2023	2024	
Revenue							
Rates	17,370,400	17,342,100	17,342,100	17,342,100	17,342,100	17,342,100	
Rate Increases	0.00%	14.00%	14.00%	14.00%	7.00%	7.00%	69.6%
Rate Increases	0	2,427,900	5,195,700	8,351,000	10,149,500	12,073,900	
Other	1,756,900	1,935,300	1,883,900	1,945,600	2,019,900	2,095,200	
Total Revenue	19,127,300	21,705,300	24,421,700	27,638,700	29,511,500	31,511,200	
Revenue Req'ts							
O&M *	14,076,000	15,748,300	16,169,200	16,602,100	17,047,300	17,505,100	20%
Debt Service	2,729,600	4,219,200	5,694,200	7,084,000	9,193,700	10,240,200	
Rev. Financed C	1,582,300	1,762,500	2,600,500	2,362,300	2,394,700	2,334,700	
Total Rev Req'ts	18,387,900	21,730,000	24,463,900	26,048,400	28,635,700	30,080,000	
Balance - Rsrvs	739,400	(24,700)	(42,200)	1,590,300	875,800	1,431,200	
DS Covg	207%	156%	156%	165%	143%	144%	
<i>* Includes OPEB Debt Service and Contributions and PILOT</i>							

Water Utility Financial Plan Summary



	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
<u>Fund Balance Mins</u>						
Operating Fund	3,365,300	3,781,300	3,881,900	3,985,300	4,091,600	4,201,000
Emerg Cap	2,127,000	2,138,600	2,404,600	2,315,700	2,453,800	2,544,200
Subtotal	5,492,300	5,919,900	6,286,500	6,301,000	6,545,400	6,745,200
Range Max	8,238,450	9,075,150	9,429,750	9,564,750	9,819,900	10,117,800
<u>Projections</u>						
Operating Fund	3,305,700	3,139,200	2,961,200	4,551,500	5,363,500	6,705,500
Emerg Cap	2,127,000	2,268,800	2,404,600	2,391,200	2,455,000	2,544,200
Subtotal	5,432,700	5,408,000	5,365,800	6,942,700	7,818,500	9,249,700
DS Covg	207%	156%	156%	165%	143%	144%
Rate Increase	0.00%	14.00%	14.00%	14.00%	7.00%	7.00% 69.6%

CITY OF KALAMAZOO, MICHIGAN

ORDINANCE NO. _____

**AN ORDINANCE TO AMEND SECTION 38-32 OF THE KALAMAZOO CITY CODE
TO CHANGE THE RATES CHARGED FOR WATER SERVICE**

THE CITY OF KALAMAZOO ORDAINS:

1. Section 1. Sec. 38-32 of the Kalamazoo Code is hereby amended to read as follows:

“Sec. 38-32. **Rate schedules established.**

The charge for water service furnished by the city shall be the sum of the service charge, dependent upon the size of the meter, plus the commodity charge, dependent upon the amount of water used, and the applicable customer class schedules as set forth below:

(1) SCHEDULE A (Quarterly)

Service Charge (per quarter)

<u>Size of Meter</u> (inches)	<u>City</u>	<u>Outside City</u>
5/8-3/4	\$30.70	33.51
1	41.19	45.30
1-1/2	51.70	57.09
2	80.54	89.52

(2) SCHEDULE B (Monthly)

Service Charge (per month)

<u>Size of Meter</u> (inches)	<u>City</u>	<u>Outside City</u>
5/8-3/4	13.18	13.86
1	16.69	17.79
1-1/2	20.19	21.72
2	29.82	32.53
3	100.65	112.13
4	126.89	141.60
6	188.10	210.38
8	258.03	288.99

(3) **COMMODITY CHARGES, RATES SCHEDULES A & B**

Rate Per Cubic Meter (on all water used)

<u>Customer Class</u>	<u>City</u>	<u>Outside City</u>
Single Family	0.496	0.660
Multi Family	0.405	0.465
Commercial	0.454	0.522

(4) **FIRE PROTECTION, RATE SCHEDULE C (Monthly)**

Demand Charge (monthly)

<u>Size of Detector Check (inches)</u>	<u>City</u>	<u>Outside City</u>
4	34.16	39.88
6	41.64	48.10
8	56.83	64.71
10	120.80	133.52

Demand Charge (quarterly)

<u>Size of Detector Check (inches)</u>	<u>City</u>	<u>Outside City</u>
4	51.76	64.16
6	62.57	85.45
8	88.72	129.26
10	253.70	328.70

Commodity Charge (per month) Per Cubic Meter

	<u>City</u>	<u>Outside City</u>
First 15 m ³ /mo.	0.449	0.518
Over 15 m ³ /mo.	1.346	1.555

Fire hydrants: \$40.00 per year on each private fire hydrant maintained in service inside the City.

Fire hydrants: \$40.00 per year on each private fire hydrant maintained in service outside the City.

(5) **LAWN SPRINKLING & SEASONAL USE, SCHEDULE D**

Monthly and quarterly service charges under this schedule are based upon meter size and are the same as in Schedules A & B. Minimum annual service charges are equal to four times the quarterly service charge.

Commodity Charge. Rate per cubic meter on all water used.

City	\$0.741 per cubic meter
Outside City	\$0.988 per cubic meter

(6) **WATER SERVICE INSTALLATION CHARGES, SCHEDULE E**

New service line installations shall be charged \$5,500 (for street plus yard service), and \$2,500 (for partial service)/ Such amounts shall be payable in full to the City of Kalamazoo prior to the scheduling of any work.

The rates established by this ordinance amendment shall go into effect for water bills rendered on or after **March 2, 2020**.

REPEALER

All former ordinances or parts of ordinances conflicting or inconsistent with the provisions of this ordinance are hereby repealed.

SEVERABILITY

If any section, subsection, sentence, clause, phrase or portion of this ordinance is for any reason held invalid or unconstitutional by any Court of competent jurisdiction, said portion shall be deemed a separate, distinct and independent provision and such holding shall not affect the validity of the remaining portions of this ordinance.

CERTIFICATE

The foregoing is a true and complete copy of an ordinance adopted by the City Commission of the City of Kalamazoo at a regular meeting held on [REDACTED]. Public notice was given and the meeting was conducted in full compliance with the Open Meetings Act, (PA 267,1976). Minutes of the meeting will be available as required by the Act, and the ordinance was duly recorded, posted, and authenticated by the Mayor and City Clerk as required by the Charter of said City.

David Anderson, Mayor

Scott A. Borling, City Clerk



City Commission Agenda Report

City of Kalamazoo

Date: **2/3/2020**

Item: **F.7.**

TO: Mayor Anderson, Vice Mayor Griffin, and City Commissioners

FROM: James K. Ritsema, City Manager
Reviewed by: James J. Baker, P.E. Public Services Director & City Engineer
Prepared by: Teresa T. Johnson, Public Services Deputy Director

DATE: February 3, 2020

SUBJECT: 2020 Wastewater Rate Ordinance

RECOMMENDATION:

It is recommended that the City Commission adopt an ordinance amending Section 28-73 of the Kalamazoo City Code to increase the rates charged for wastewater service. If approved the ordinance increases would be effective March 2, 2020.

BACKGROUND:

As part of the 2020 water and wastewater system budget, the City Administration recommended an overall system revenue increase of 14% for water and 10% for wastewater. Approval and implementation of this increase will allow the Utilities to continue to operate and maintain the system and make capital improvements as outlined in the 2020 budget. Also, the new rates will work to improve reserve funds, debt coverage ratios and allow for the continued stabilization of the Utility's financial position. Future rate increases will be needed to continue to support system wide capital needs and financial health over the next several years. The Foster Group was commissioned to complete an analysis of overall 2020 revenue requirements and detailed rate charges within customer classes. The 2020 recommended utility rate increases will result in an increase to a typical Inside City customer's quarterly bill by \$14.13 (\$4.71 monthly) for both water and wastewater and an increase to a typical Outside City customer's quarterly bill by \$9.54 (\$3.18 monthly) for the same services.

STRATEGIC VISION ALIGNMENT:

Relevant Priority Based Budgeting Program (program name and description):

Water/Wastewater Rate Administration

Strategic Goal Impact:

This program/project has a high degree of impact on the following Strategic Goal(s):



Safe Community- Creating a safe environment for living, working, and playing

COMMUNITY ENGAGEMENT:

An infrastructure needs and proposed Utility rates presentation was held on January 13, 2020. This utility work session was open to the public and provided an opportunity for public comment.

FISCAL IMPACT:

The 2020 water and wastewater operational budgets and capital improvement plans were developed with the revenue increases of the proposed rate increases included.

The City Commission may deny or delay this request. However, if the increases are delayed or not approved, a budget adjustment equal to the loss in revenues would be required. Delaying or denying this request is not recommended.



Report on 2020 Wastewater Rates

January 2020

TFG

THE FOSTER GROUP

tFg
THE FOSTER GROUP

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THE FOSTER GROUP, LLC
BART FOSTER, PRESIDENT
CELL: (913) 530-6240
BFOSTER@FOSTERGROUPLLC.COM

January 5, 2020

Mr. James Baker
Public Services Director
City of Kalamazoo
415 Stockbridge Avenue
Kalamazoo, Michigan 49001-2898

Dear Mr. Baker:

THE FOSTER GROUP is pleased to present our "Report on 2020 Wastewater Rates" for the City of Kalamazoo Department of Public Services. This report is designed to introduce our recommended wastewater rate schedules for 2020.

The 2020 Wastewater Rates have been calculated in accordance with existing agreements between the City and certain of its non-owner, outside City customers. The proposed rates are designed in a manner to further accommodate a goal of rate stability, and to complete the implementation of the results of the Wastewater True-Up studies for 2013, 2014, 2015, and 2016. The report also contains a brief presentation of the City's basic financial planning theory and wastewater rate methodology.

We appreciate this opportunity to be of service to the City of Kalamazoo.

Very truly yours,

THE FOSTER GROUP



Bart Foster
President

Enclosures

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Background

This report was prepared for the City of Kalamazoo, Michigan (the “City”) to document analyses conducted to result in a schedule of proposed wastewater rates designed to become effective in January 2020 (the “2020 Wastewater Rates”). The 2020 Wastewater Rates have been developed in accordance with existing agreements between the City and certain of its non-owner, outside City customers. The 2020 Wastewater Rates to the outside City customer classes have also been developed to implement the third and final year of “true up” adjustments for the years 2013 through 2016.

The City of Kalamazoo owns and operates a wastewater utility (the “System”) that provides wastewater collection, treatment, and disposal services to residents and businesses inside the City limits of Kalamazoo and to residents and businesses located in various townships, cities, and villages located outside the City limits. For purposes of establishing wastewater costs of service allocations and rates, customers are classified based on the level and type of service they receive. There are retail (full service) customers located both inside the City and outside the City. There are also wholesale (bulk service) customers (“Municipalities” and/or “Townships”) that are served via wholesale contracts. In addition, contractual service is provided to two large industrial customers – Pfizer and Graphics Packaging. The contract industries, and certain retail industrial customer located both inside the City and outside the City, are monitored for the level of pollutants they contribute to the System and charged accordingly.

The City’s wastewater system originated with the installation of the first sanitary sewer in 1881. Periodic expansion of the system continued, culminating with construction of the original wastewater treatment plant, which was placed in service in 1955. Service was subsequently extended on a contractual basis to industries and municipalities located outside the City limits, leading to construction of secondary treatment facilities and plant expansions, the first of which occurred in 1967.

The wastewater system was originally operated as a major division of the City’s Department of Public Works. In 1982 the City reorganized certain of its departments and combined the administration of the system with the wastewater Supply System under the Department of Public Utilities.

Wastewater rates for the System have consistently been computed by applying the “Utility Basis” of ratemaking. This application of this approach differentiates service provided to inside City (owner) customers and outside City (non-owner) and recognizes different capital cost structures for each. The System is operated as an enterprise fund of the City and is supported by revenues generated through rates and charges for wastewater service.

Over the years there have been various disputes regarding the establishment of those rates and charges. In 1987 certain of the Municipalities filed suit in Circuit Court alleging that the City had breached its contracts with the Townships. The Townships claims were primarily related to the wastewater rates being charged by the City. In order to resolve the differences between the parties, a settlement agreement (the “1988 Rate Settlement Agreement”) was entered into on November 3, 1988. Among the settlement agreement provisions was the development of a Wastewater Advisory Board comprised of representatives of outside City retail and contract municipal customers, and a new wastewater rate study designed in part to reduce the amount of reserve fund balances held by the System. A comprehensive cost of service and rate design study was subsequently commissioned and conducted in 1990 and resulted in wastewater rates that were placed in effect in January 1991 (the “1991 Wastewater Rates” computed via the “1991 Methodology”). These rates represented an overall decrease of 7.5% from rate levels then currently in effect.

The 1991 Wastewater Rates remained in effect through 1998. During this period the City continually met with the Wastewater Advisory Board to discuss financial plans and results of the System. Revenues during this period fluctuated greatly due in large part to the varying levels of pollutant contributions from the contract industries¹. Overall, revenues generated were positive compared to budgeted levels and reserve balances remained healthy.

¹ During this period the System served a third contract industry, Georgia Pacific. Georgia Pacific ceased being a System customer in 2000.

As part of the City's efforts to assure the financial integrity of the Wastewater Utility, the City developed a "Utility Financial Policy" in 1995. This policy addressed many of the issues that continued to be discussed with the Wastewater Advisory Board.

In 1997 the City of Portage, the largest customer in the Municipality customer class, filed suit in Circuit Court alleging that the wastewater rates that had been charged by the City of Kalamazoo to the City of Portage were unreasonable. The primary bases for Portage claims were related to the wastewater rates in effect prior to the 1991 Wastewater Rates. In order to resolve the differences between the parties, a second settlement agreement (the "1998 Rate Settlement Agreement") was entered into in May 1998. Among the 1998 Rate Settlement Agreement provisions were the establishment of four key elements regarding the establishment of wastewater rates:

1. A defined process for determining the rate of return to be included in rates charged to outside City customers;
2. A requirement that a portion of the then existing wastewater utility reserve funds be recognized and credited against future revenue requirements allocated to, and serve to lower to future wastewater rates charged to, outside City customers;
 - This provision was designed to be implemented over 20 years.
3. A requirement to update wastewater rates not less than every two years;
4. A requirement to "true up" wastewater rates to outside City customers not less than every two years.
 - Effectively, this provision required rates to be retroactively recalculated based on actual financial results and that future outside City wastewater rates be increased or decreased accordingly to implement the true-up study results.

In effect, the 1998 Rate Settlement Agreement modified certain aspects of the 1991 Methodology, while not changing the core approach. The resulting "1999 Methodology" was utilized to compute wastewater rates for 1999, and to subsequently periodically modify wastewater rates through 2013.

Simultaneously throughout this period, true-up studies were being conducted, and the results implemented to modify wastewater rates to outside City customer classes. During

the period from 2001 through 2010 significant reductions in wastewater contributions from contract industries (specifically Pfizer) occurred, and corresponding revenue shortfalls were realized. As a result, the true-up studies computed for 2001 through 2010 resulted in additional charges to the outside City customer classes totaling approximately \$9.6 million. This amount was reflected in rate “surcharges” to those customers through 2012. True up studies for 2011 and 2012 resulted in minor (approximately \$250,000) credits that were reflected as adjustments to wastewater rates charged in 2014.

In 2012 the System invested in and implemented a modified secondary treatment process. In accordance with the contractual agreement with Pfizer, the parties negotiated a “direct participation” investment by Pfizer for a portion (approximately \$4.85 million) of the approximate \$7.5 million cost of the project. This development required a modification to the 1999 Methodology to recognize that Pfizer had essentially “pre-paid” the capital costs that would have otherwise been allocated to them associated with the project and investment. The 1999 Methodology was modified, again without altering the core approach. The resulting “2014 Methodology” was used to compute wastewater rates for 2014 (the “2014 Wastewater Rates”).

The 2014 Wastewater Rates remained in place through 2017. During this period true up studies were computed for 2013 through 2016. The results of these studies indicated that the outside City customer classes were due a credit of approximately \$3.15 million.

Wastewater rates were modified in 2018 to reflect the results of a cost of service study that applied the 2014 Methodology for 2018 through 2020. These rates were computed to “phase in” the results of the true-up studies for 2013 through 2016, and to incorporate the sunseting of the “reserve credit adjustment” that reduced outside City customer class rates, as 2018 was the last of the 20 years for that provision of the 1998 Rate Settlement Agreement.

The 2019 Wastewater Rates were adjusted to implement the second year of the implementation plan noted above. These rates constitute the existing rates referred to in this report.

Introduction

This report presents results of our calculations to prepare proposed Wastewater Rates for 2020, (the “2020 Wastewater Rates”). As noted in the Background, the objective of our study included embracing rate stability goals originally established in the 2018 Wastewater Rates in order to implement the three-year implementation plan for the 2013 through 2016 true-up adjustments and to phase out an aspect of the 1998 Rate Settlement Agreement that was fully accommodated at the end of 2018. Our efforts to accommodate these objectives are specifically set forth where appropriate in this report.

Any thorough evaluation of municipal utility rates contains three fundamental assessments, as noted below. This report is structured in a manner to present study findings that specifically address each of the assessments undertaken to develop the proposed 2020 Wastewater Rates.

1. A **Revenue Requirements** analysis, designed to essentially answer the question “*How much money is needed?*” to support the utility’s operating and capital financing functions;
2. A **Cost of Services** analysis, designed to allocated the revenue requirements to customer classes and answer the question “*From whom should the money be collected?*”; and
3. A **Rate Design** analysis, designed to answer the question “*How should services be priced?*” to equitably recover the allocated costs of service.

The purpose of this study is to prepare wastewater rate calculations that accurately reflect the financial data, operating and capital budgets, and system usage projections in order to:

- Review and evaluate existing policies and procedures affecting wastewater rates;
- Evaluate the adequacy of projected revenues under existing rates to meet projected revenue requirements;
- Develop a sound financial plan for the Wastewater Utility covering a five-year study period for both ongoing operations and planned capital improvements;

- Allocate the Wastewater Utility's projected revenue requirements to the various customer classes in accordance with the respective service requirements;
- Develop a suitable schedule of wastewater rates which will produce revenues adequate to meet financial needs on a basis which recognizes customer costs of service, contractual commitments, and local policy considerations and objectives.

Chapter 1 - Revenue Requirements

“How much money is needed?”

The first evaluation goal of this study is the design of Revenue Requirements. For purposes of establishing proposed wastewater rates, it is only necessary to establish such amounts for a single period. However, we believe that providing a longer-term revenue requirement forecast is beneficial to stakeholders as they review proposed modifications to wastewater rate schedules. As such, the Revenue Requirements analysis provides a six-year (from 2019 through 2024) forecast² of potential operating and capital financing plans for the Wastewater Utility. In reviewing these projections, stakeholders should take note that:

- The first year (2019) is ***estimated***, based on a review of 2019 budgeted and estimated activity.
- The second year (2020) is ***proposed***, and supported by the City’s official 2020 Budget and the wastewater rate schedule being proposed herein.
- The final four years (2021 through 2024) are ***forecasted***, and do not reflect any proposals for consideration or action.

The revenue requirement forecast summarized in this chapter of the report is similar in format to prior reports we have prepared on this topic.

Table 1 presents baseline customer usage and revenue projections, including projected Wastewater Utility customer accounts, billable wastewater volumes and contributed

² *The projections set forth herein are intended as “forward-looking statements”. In formulating these projections, we have made certain assumptions with respect to conditions, events, and circumstances that may occur in the future. The methodology we utilized in performing these analyses follows generally accepted practices for such projections. Such assumptions and methodologies are reasonable and appropriate for the purpose for which they are used. While we believe the assumptions are reasonable and the projection methodology valid, actual results may differ materially from those projected, as influenced by conditions, events, and circumstances that may actually occur. Such factors may include, among other things, the City’s ability to execute the CIP as scheduled and within budget, regional climate and weather conditions affecting the amount of wastewater sold and wastewater treated, and any adverse legislative, regulatory or legal decisions (including environmental laws and regulations) affecting the City’s ability to manage the utilities and maintain compliance with regulations.*

pollutants for monitored customers, and revenue under the existing wastewater rate schedule. The table introduces the information for Test Year 2020, but actually reflects static assumptions for the entirety of the forecast period. In arriving at these projections, we have conducted a detailed review of historical data. While there has been a recent moderate increase in customer accounts, billable wastewater volumes have fluctuated moderately and we conclude that a stable forecast of units of service is reasonable. ***For purposes of this study, we have assumed that stability will continue, and have projected future billable wastewater volumes and pollutant contributions equivalent to existing levels throughout the five-year study period. As a result, the projected billing units and overall revenue stream is “flat” for the study period.***

Annual operation and maintenance expenses of the Wastewater Utility include costs related to payroll and benefits, chemicals, other supplies, power, natural gas, and other items. Projected operation and maintenance expense for the study period is shown in Table 2. The 2020 budget serves as the basis for the first year of the projections. Projections for the period 2021 through 2024 are based on budgeted 2020 levels adjusted to reflect increased costs due to inflationary factors.

The Wastewater Utility makes two separate payments to finance costs related to “Other Post Employment Benefits” (OPEB). The first is related to the Wastewater Fund’s share of payments on bonds issued to finance a portion of the City’s obligation on this matter, as shown on Line 10. Funds generated by these bonds are held in a specific trust, outside the City’s control. The agreement also requires annual deposits to that Trust. The Wastewater Fund’s share of those annual deposits is shown on Line 11. The City’s accounting practices treats these payments as operating expenses, and the City’s bond counsel has opined that they are operating expenses for purposes of complying with the City’s wastewater revenue bond ordinances.

Various inflation factors have been applied throughout the study period based on conversations with Utility financial management.

Table 3 presents a projected plan to finance the System’s capital improvement program throughout the study period. The projected expenditures for the Wastewater Utility Capital Improvement Program (CIP) for 2019 through 2024 are presented on Lines 1 through 10

of Table 5, in categories that support assignment of cost responsibility to cost pools and customers. The CIP was developed by Utility management and consists of capital improvement projects anticipated to be designed and constructed during the next five years. The CIP represents a significant increase in annual investments compared to recent years.

Lines 11 through 18 indicate capital financing sources. The forecasted sources reflect a strategic combination of bond issuances, revenue financing and use of reserves in a manner that supports the fiscal policies of the Wastewater Utility.

The beginning balance figure shown on Line 11 for 2019 represents (as of December 31, 2018) remaining proceeds from revenue bonds issued in 2018 and 2019 plus an allocation of revenue generated funds that are not required for other reserve balances. Line 12 presents use of revenue generated funds to finance short lived assets contained in the CIP. To the extent that specific CIP projects are to be financed via contributions in aid of construction, those sources are shown on Line 16. Any additional capital financing is assumed to be financed via issuance of new revenue bonds, as presented on Lines 13 through 15. The capital financing plan is designed to provide sufficient year end Improvement Fund balances to carry over into subsequent years.

Utility Financial Policy

Table 4 presents a projected Operating Fund financing plan for the study period, developed within the framework of the Utility Financial Policy and to accommodate overall revenue stability. The original Utility Financial Policy was developed in 1995 to establish guiding principles when developing financial plans for the City's Water and Wastewater systems. The goals of the original Utility Financial Policy included:

1. Maintain a Reasonable Level of Reserves
2. Maintain the Net Worth of Both Systems
3. Uphold Obligations to Bond Holders
4. Keep Level of Debt and Debt to Equity Ratios Reasonable
5. Keep Rates at a Level Comparable to Other Michigan Utilities

The policy established guiding principles designed to meet these goals, which included:

1. Establish and maintain operating and capital reserve funds within a designated range.

2. Achieve annual debt service coverage ratios of 140%.
3. Protect owner's equity by providing revenue financing for the current capital improvement and reserve requirements that is at least equal to annual depreciation expense, less the principal payment portion of debt service.

The existing Utility Financial Policy seeks to achieve each of these principles, while acknowledging that circumstances may dictate that each may not be attained in every year. The key to sound financial planning and long-term utility financial health is achieving the appropriate balance of the three, while striving to realize all of them over the long-term.

Summarized in Table 4 are the annual revenues and revenue requirements showing end of year annual and cumulative balances and/or deficits of funds available for subsequent years' operations and indicated required increases in operating revenues.

Revenues under the existing rate schedule (as developed in Table 1) are presented on Line 1. The Operating Fund financing plan is designed based upon annual "system" rate increases of 10% for 2020, 7% for 2021 and 2022, and 5% for 2023 and 2024, as indicated on Lines 2 through 6³. Total projected revenue from wastewater rates is shown on Line 7.

Other revenues from miscellaneous and non-operating sources are indicated on Lines 8 through 11, and result in total projected revenues on Line 12.

Total revenue requirements are shown on Lines 13 through 23. Operation and maintenance expenses from Table 2 are brought forth to Line 13. Projected Payment in Lieu of Taxes (PILOT) to the City of Kalamazoo is shown on Line 14. Debt service is separated between that on existing bonds (Line 15) and proposed revenue bonds (Line 16) based on anticipated financing from Table 3. Transfers of operating funds to finance capital improvements are indicated on Lines 18 through 20. In addition, revenue requirements

³ While the forecast is designed to support the City's rate stability objective, forecasted system rate increases after 2020 are merely projections and are NOT part of any formal recommendation as part of this report. The existence and magnitude of any subsequent rate increases for the Utility is largely predicated on the actual progress of the Capital Improvement Program and potential changes in the need for capital financing from what is represented in this report.

include any amounts necessary to maintain minimum reserve fund balances established as part of the Utility Financial Policy, as shown on Lines 21 and 22.

Total revenue requirements are indicated on Line 23. The projected annual balance/deficit indicates the extent to which projected revenues can meet annual revenue requirements. Any deficits must be met from existing reserves, as limited by two factors: (1) projected actual Operating Fund balances compared to levels recommended by the Utility Financial Policy; and (2) annual debt service coverage requirements.

Projected Operating Fund activity is summarized on Lines 27 through 30 of the table. The projected cumulative Operating Reserve balances are shown on Line 30.

Readers should recognize that the “system rate increase” figures discussed above represent **overall** System revenue increases. Based on the results of the cost of service analyses presented in this report, the cost of service based rate increases can be expected to vary from this average for the various customer classes.

Presented in Table 5 are summaries of the projected annual activity, and beginning and ending balances in the various funds of the Wastewater Utility. ***We note that the beginning balance (as of 1/1/2019) shown in this table for the Operating Fund is net of approximately \$2.0 million that has been “earmarked” to accommodate the remaining implementation of the True-Up Adjustments for 2013, 2014, 2015, and 2016. See***

_____.

A graphical depiction of the financial forecast summarized in Tables 1 through 5 is contained in Appendix A to this report.

Chapter 2 - Cost of Service Allocations

“From whom should the money be collected?”

Test Year Cost of Service

The revenue requirements to be derived from rates and charges for wastewater service are synonymous with the definition of cost of service. The cost of service analyses described herein reflect an evaluation of the Test Year 2020 revenue requirements established in the prior section of the report.

The determination of the cost of service to be recovered through charges for wastewater service is summarized in Lines 1 through 11 of Table 6. These lines summarize the cash basis revenue requirements. The total Test Year 2020 cost of service shown on Line 11 matches the projected rate revenue from wastewater service shown on Line 7 in Table 4.

The cash basis revenue requirements are converted into their utility basis counterparts on Lines 12 through 16. The operation and maintenance expense and payment in lieu of taxes elements are expressed at the cash basis values. Test Year 2020 depreciation expense is projected based on a detailed evaluation of the Wastewater Utility’s fixed asset records and capital improvement program, and is shown on Line 14. This figure excludes depreciation expense associated with assets funded by federal and state grants and contributions in aid of construction. Deducting depreciation expense and payment in lieu of taxes from the total cash basis capital requirements leaves the balance (Line 15) that represents the System return on rate base. The negative value indicates that the cash basis capital financing needs of the utility⁴ for 2018 are projected to be less than the projected annual depreciation expense.

Allocation to Functional Cost Components

In order to assign costs of service to customer classes, the costs must first be allocated to functional cost components that align with measures of how customers use the System.

Customers are classified to reflect groups of customers with similar service requirements who can be served at similar cost. Each class represents a particular type of service requirement or load on the System in terms of customer related infiltration/inflow, volume

⁴ Excluding PILOT

related infiltration/inflow, wastewater flow, biochemical oxygen demand (BOD) strength, suspended solids strength, ammonia strength, and number of customers served.

As noted previously, the Wastewater Utility customer classifications incorporated into this wastewater rate schedule are retail customers (further subclassified into residential, commercial, industrial, and industrial monitored categories), contract municipalities, contract industries, and dewatering. These customer classes are assumed to exhibit similar types of system load characteristics. The Wastewater Utility has both quarterly and monthly billed retail customers.

As a basis for allocating costs of service among customer classes, costs are first allocated to functional cost components, then allocated to cost categories, and subsequently distributed to customer classes. In this study there are four primary cost components: (1) flow, or volume costs, (2) wastewater strength costs, (3) customer costs, and (4) directly assigned costs.

Flow or volume costs are those that tend to vary directly with the total quantity of wastewater flow contributed plus those operation and maintenance expenses and capital costs related to system facilities which are sized on the basis of, or required because of, total wastewater flow.

Wastewater strength costs consist of operation and maintenance and capital costs related to system facilities, which are designed principally based on the projected strength concentrations of contributed wastewater flow. BOD costs are those costs which are influenced in magnitude by the BOD of the raw wastewater, and include costs related to aeration and disposal of BOD related sludge. Suspended solids strength costs are those costs of wastewater treatment, which tend to vary according to the quantity of suspended solids in the raw wastewater. Ammonia costs are those costs related to the conversion of ammonia present in the raw wastewater into nitrate during the secondary treatment process.

Customer costs comprise those costs associated with serving customers, irrespective of the amount of wastewater flow contributed by the customer. They include the costs such as customer service, billing, customer accounting, and meter reading expenses.

Directly assigned costs include costs associated with surveillance, monitoring and testing of high strength customers and costs associated with the Industrial Pretreatment Program.

Costs associated with certain processes and facilities are assigned to and recovered from only those customer classes that utilize those processes and facilities. For example, costs associated with *municipal collectors are pump stations* are assigned to and recovered from municipal retail and dewatering customers, but not from contract municipalities since it is assumed that these customers do not utilize the smaller collector sewers of the system. Costs associated with the *municipal interceptor system* are allocated to all customers (except for two of the contract industries, who do not utilize alternative facilities) since all customers are assumed to benefit proportionately from these facilities. In addition, there is a need to establish a series of “common except Pfizer” cost functions to accommodate and recognize Pfizer’s “direct participation” investment. Table 7 illustrates the methodology applied to assigning cost responsibility of individual processes and facilities to each customer class.

Each element of cost is allocated to functional cost components on the basis of the parameter or parameters having the most significant influence on the magnitude of that element of cost. Capital costs are considered on a utility basis, that is, in terms of taxes, depreciation, and return on rate base. Taxes are related to an allocation of the depreciated original cost of the wastewater system, while return on rate base is related to an allocation of the depreciated original cost of the wastewater system less depreciated grants. Depreciation expense and operation and maintenance expense items are allocated directly to appropriate cost components.

Allocation of Operation and Maintenance Expense

The operation and maintenance expenses that were presented in Table 2 are allocated to functional cost components in Table 9 based on the methodology summarized in Table 7 and the specific wastewater treatment allocation factors set forth in Table 8.

Costs of the Department’s Industrial Services Section and certain laboratory costs are assigned to the Industrial Surveillance and Industrial Pretreatment Program cost components. These costs are then reallocated to the three pollutant cost components to be recovered from these rate elements, as illustrated on Lines 13 and 14 of Table 9.

The net operation and maintenance expense to be recovered for wastewater service is derived by deducting funds available from other sources from the total test year expense. Net test year operation and maintenance expense of \$22,492,600 is shown allocated to cost components on Line 15 of Table 9.

Allocation of Net Plant Investment, Rate Base, and Depreciation Expense

Under the Utility Basis, the allocation of capital related costs to the various customer classes is based on the City's estimated investment in wastewater system facilities. A summary of the projected Test Year 2020 capital asset values is presented in Table 10.

A detailed review of the System's fixed asset portfolio as of 12/31/15 served as the starting point for these projections. This schedule was updated for total asset data reported in the audited financial statements for 2016, 2017, and 2018. We then added projected capital investments from the CIP, and deducted projected depreciation expense to arrive at the Test Year 2020 projections. The results are set forth in Table 10, which presents projected asset values for Original Cost, Accumulated Depreciation, Net Book Value, and Annual Depreciation Expense for each asset category. The table also identifies the estimated amount of each figure that was funded via a contribution in aid of construction (CIAC), including federal and state grants. The difference between the total amount and the CIAC portion is deemed to be "Local" and serves as the asset value for purposes of allocating costs of service to customers.

The allocation of estimated plant investment serving wastewater customers is defined as the "rate base" under the Utility Basis for Test Year 2020 is shown in Table 11. This investment represents the projected original cost less depreciation of property, plant and equipment assets, as shown on Table 8. Total rate base on which the wastewater Utility is entitled to earn a return is the sum of net plant in service plus a working capital allowance of 90 days and inventory.

The allocation of rate base to the functional cost components follows the approach and allocation factors outlined above. Table 11 also indicates allocation of Test Year 2020 PILOT to cost components, shown on Line 26.

The allocation of Test Year 2020 depreciation expense (as established in Table 10) to functional cost components follows the same approach, and is illustrated in Table 12.

The total cost responsibility of each class of service may be established by developing unit costs of service for each cost function. These "prices" may then be used to assign costs to customer classes in correlation with the level of service that each class is projected to purchase from the wastewater Utility, as determined by their respective volume, strength, and other units of service.

Units of Service

The number of units of service required by each customer class provides a means for the proportionate distribution of costs previously allocated to respective cost categories. Table 13 summarizes of the development of units of service for the various customer classes, which have been determined in precisely the same manner as delineated in prior cost of service studies, and documented in prior reports.

Wastewater Strength

The manner in which wastewater loadings are assigned to individual customers classes is identical to that established for the existing rates. The Wastewater Utility has traditionally monitored certain industrial customers to determine their specific contributions of Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), and Ammonia (NH₃) to the System, and to charge these customers in proportion to their total loadings. This approach originally was implemented through a “surcharge” program, which was replaced by application of “quantity/quality” rate structure in 1991, such structure remaining in place today. This approach is designed to equitably recover costs from all customers whose wastewater strengths significantly vary from the “domestic” strengths. The approach is most effective when applied to all customers for whom it is practical to monitor wastewater strengths. Currently the City monitors 15 industrial customer accounts (including contract industries Pfizer and Graphic Packaging) to determine wastewater strengths for billing purposes⁵.

Estimated wastewater pollutant loadings are shown for each customer class in Columns 6 through 8 of Table 13. The loadings indicated in the table for the monitored customers represent projected wastewater quality based on strengths indicated by the monitoring data. Wastewater strengths for all other customer classes are classified as “domestic”, and all non-monitored customers are assigned a uniform “domestic” strength for each of these pollutants. For purposes of the 2020 Wastewater Rates we have continued to assume domestic strengths of 239 mg/l for BOD, 259 mg/l for TSS, and 18.4 mg/l for NH₃.

⁵ To the extent that additional customers exist whose wastewater quality potentially varies significantly from “domestic” and/or whose quantity of contributed wastewater volume makes it practical, the quantity/quality approach should be applied to these customers.

Cost of Service Allocations

Costs of service are allocated to the customer classes by application of unit costs of service to respective service requirements. Unit costs of service are based upon the total costs previously allocated to functional components and the total number of applicable units of service. Dividing the costs allocated to functional cost components by the respective total units of service requirements develops unit costs of operation and maintenance expense, payment in lieu of taxes, depreciation, and return on rate base.

Rate of Return

The 1998 Rate Settlement Agreement stipulates that the rate of return for non-owner customers be determined via a “debt/equity” approach. This method applies separate rates of return to the debt and equity portions of the Wastewater Utility’s capital structure and determines a weighted average. This approach is illustrated in Table 14 and serves as the basis of the rate of return on allocated rate base to charge outside City customers.

Line 1 of Table 14 indicates the estimated capital structure of Wastewater Utility for Test Year 2020. For purposes of this analysis, the difference between total rate base established in Table 13 and the total outstanding debt has been used as a proxy for the estimated owner’s equity value. The estimated long-term debt figure reflects the projected outstanding balance at the end of the test year. As indicated on Line 2 of Table 14, approximately 68 percent of the capital structure is related to equity with the remaining 32 percent allocated to long-term debt. The owner’s equity rate of return for Test Year 2020 is defined by the 1998 Rate Settlement Agreement to be equal to the June 30, 2019 interest rate on 30-year treasury bonds plus 300 basis points (3 percent). The calculation of this figure of 5.52 percent is indicated on Lines 3 through 5. The rate of return applied to the long-term debt portion of the capital structure is equivalent to the imbedded average cost of carrying that debt. Applying the capital structure percentages to the appropriate rates of return results in a rate of return applicable to rate based allocated outside City customers of 5.19 percent, as indicated on Line 7 of Table 14.

Unit Costs of Service

Unit costs of service are established in Table 15. The total units of service from Table 13 are indicated on Line 3. Total operation and maintenance expense, payment in lieu of taxes, depreciation expense, and rate base are shown allocated to functional cost component as taken from Tables 9, 11, and 12. On Lines 10 and 11 the rate base element is allocated to inside City and outside City customers based on the individual units of

service for each functional cost component. On Line 16 return on rate base for outside City customers is determined by applying the 5.19 percent rate of return from Table 14 to the allocated outside City rate base shown on Line 11. This results in total return on rate base allocable to outside City customers of \$2.19 million. In Table 6 a total system return requirement of negative \$0.86 million was established. Therefore the return to be recovered from inside City customers (the difference between the two previous figures) is actually a *credit* of \$3.05 million. Dividing this figure by the rate based assigned to inside City customers on Line 11 results in an effective rate of return of negative 9.4 percent for these customers. The overall projected System rate of return for 2020 is approximately negative 1.2 percent.

Unit costs are determined for each revenue requirement element and indicated in Table 15. The total unit costs of service for each cost component for inside and outside City customers are shown on Lines 20 and 21 of the table.

Distribution of Costs of Service to Customer Classes

The customer class responsibility for service is obtained by applying the unit costs of service to the number of units for which the customer class is responsible. This process is illustrated in Table 16, in which the unit costs of service from Table 15 are applied to the customer class units of service from Table 13. Individual elements are summed for each customer class to result in the total allocated Test Year 2020 cost of service indicated in Column 1.

Adequacy of Existing Rates to Meet Cost of Service

Presented in Table 17 is a comparison of the allocated Test Year 2020 cost of service and revenue under existing rates by individual customer class and for the System in total. The total allocated cost of service from Table 16 is shown in Column 1. Column 2 presents the projected revenue under the existing (2019) rate structure for each customer class⁶. Column 3 compares these values, and indicates the adequacy of existing rates to recover the allocated cost of service for all customer classes. As indicated on Line 26 of the table, the existing rates in total need to be increased by 10.0 percent to recover allocated Test Year 2020 costs of service.

⁶ The projected revenue figures for the outside City customer classes are computed using the “gross” rates and do not reflect credits associated with the 2013 – 2016 True-Up Implementation Plan, which results in “net” rates for each of these customer classes.

Impact Analysis

As noted in Table 17, the allocated cost of service for inside City customers indicates a need for rates to these customers to be increased by approximately 15 percent, while the approximate increase in rates to outside City customers is about eight percent. This difference is a result of the Utility Basis application of capital revenue requirements, and how that approach impacts “owner” inside City customers and “non-owner” outside City customers.

The 2020 wastewater revenue requirement reflects a large increase in operation and maintenance expense, which is allocated proportionally *irrespective of ownership status*. Thus rates for all customers increase proportionally as a result. The principal difference in the impact of the cost of service on customer classes is related to the capital revenue requirements. The recent and proposed revenue bond sales increase the relative debt service in the revenue requirement, and result in an increase in the "cash capital" revenue requirements, which are directly borne by inside City customers. Meanwhile, due to the bond sales, the capital structure of the Wastewater Utility is more weighted towards debt than the prior rates, and the treasury bond rate is significantly lower than in prior cost of service studies. Both of these elements have the effect of lowering the rate of return and the utility basis capital revenue requirement paid by outside City customers.

Chapter 3 – Rate Design

“How should services be priced?”

Test Year 2020 Wastewater Rates – “Gross Rates”

The Test Year 2020 cost of service allocations discussed in Chapter 2 establish the basis for design of the proposed 2020 Wastewater Rates. The proposed rate schedule for 2020 is identical in form to the existing schedule.

Table 18 illustrates the calculation of the monthly and quarterly service charges for retail customers classes. The service charge is designed to recover allocated customer costs associated with meter reading and billing expense and a portion of the costs associated with assigned infiltration/inflow. The service charges vary by meter size to recognize that more infiltration/inflow costs are assigned to and recovered from customers receiving water service through larger meters.

Table 19 illustrates the calculation of commodity rates and quantity / quality rates for monitored customers. The commodity charges are the same for each customer class within the inside City and outside City retail classes, and are designed to recover the allocated cost of service for that class in excess of the costs recovered through volume related costs associated with contributed wastewater and strength related costs in relation to “domestic” strength wastes. A similar modification is made to compute the quantity charges for the monitored customers. The quality (pollutant) charges for these customers are simply the unit cost of service (per kg) computed in Table 15.

Table 20 presents a comparison of the existing and proposed rate schedules for each component of the rate schedule.

Typical Bills

Typical bills shown in Table 21 indicate the impact of implementing the “gross” sewer rates on various customers of the Utility. Note that these typical bills do not reflect any impact on outside City customers associated with implementing any True-Up studies.

Test Year 2020 Wastewater Rates – “Net Rates”

As noted in “Background”, the 2018 Wastewater Rates for the outside City customer classes were computed in a manner that “phased in” the results of the true-up studies for

2013 through 2016 over three years. In effect, the “net” rate charged to those customers included a credit to each rate type. This credit continued to be applied in the 2019 Wastewater Rates, and will be applied in 2020 to finalize the implementation of the 2013 through 2016 True-Up adjustments.

These adjustments are illustrated in Table 21. The existing and proposed “gross” rates from Table 19 are shown in Columns 1 and 4. Each of these rates is adjusted by an amount designed to implement the 2013 through 2016 True-Up adjustments, as shown in Columns 2 and 5, to produce the “net” rates in Columns 3 and 6.

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REPORT TABLES

Table 1
Wastewater Utility
Baseline Units of Service and Revenue Projections
Test Year 2020

Line No.		(1) Estimated Accounts	(2) Estimated Volume cu mtr	(3) Estimated Monitored Pollutant Loadings BOD kg	(4) TSS kg	(5) NH3 kg	(6) Estimated Revenue \$
Inside City Retail							
1	Residential	17,151	3,005,800	(a)	(a)	(a)	1,973,500
2	Commercial	2,518	4,998,500	(a)	(a)	(a)	2,537,700
3	Industrial	96	934,900	(a)	(a)	(a)	447,100
4	Industrial Monitored	10	649,900	413,100	132,300	1,300	389,400
5	Total	19,775	9,589,100	413,100	132,300	1,300	5,347,700
Outside City Retail							
6	Residential	11,944	2,643,700	(a)	(a)	(a)	3,046,600
7	Commercial	1,662	3,054,600	(a)	(a)	(a)	2,904,700
8	Industrial	25	269,700	(a)	(a)	(a)	243,200
9	Industrial Monitored	8	488,200	1,153,000	488,500	6,600	1,306,300
10	Total	13,639	6,456,200	1,153,000	488,500	6,600	7,500,800
Contract							
11	Pfizer	1	3,673,700	2,683,800	2,694,800	40,700	4,261,800
12	Graphic Packaging	1	1,247,700	2,719,600	266,600	0	1,501,600
13	Total	2	4,921,400	5,403,400	2,961,400	40,700	5,763,400
Municipalities							
14	Portage	1	5,666,900	(a)	(a)	(a)	3,254,600
15	Galesburg	1	179,700	(a)	(a)	(a)	115,200
16	Parchment	1	75,500	(a)	(a)	(a)	43,500
17	Vicksburg	1	353,100	(a)	(a)	(a)	202,800
18	Gull Lake	1	1,213,400	(a)	(a)	(a)	696,900
19	Augusta	1	84,400	(a)	(a)	(a)	48,600
20	Mattawan	1	538,900	(a)	(a)	(a)	309,600
21	South County	1	164,400	(a)	(a)	(a)	94,600
22	Total	8	8,276,300	0	0	0	4,765,800
Dewatering							
23	Inside City	4	178,800	(a)	(a)	(a)	83,300
24	Outside City	4	27,100	(a)	(a)	(a)	23,900
25	Total	8	205,900	0	0	0	107,200
26	TOTAL	33,432	29,448,900	6,969,500	3,582,200	48,600	23,484,900
27	Inside City Subtotal	19,780	11,015,600	3,132,700	398,900	1,300	6,932,600
28	Outside City Subtotal	13,652	18,433,300	3,836,800	3,183,300	47,300	16,552,300

(a) Loadings not monitored, but assigned via application of "domestic strength" assumptions.

Table 2
Wastewater Utility
Estimated and Projected Operation and Maintenance Expenses
Forecast Period 2020-2024

Line No.		(1)	(2)	(3)	(4)	(5)
		<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
		\$	\$	\$	\$	\$
1	Payroll	6,731,200	6,899,500	7,072,000	7,248,800	7,430,100
	Supplies					
2	Chemicals	1,983,200	2,042,700	2,104,000	2,167,100	2,232,100
3	Other	1,210,300	1,246,600	1,284,000	1,322,500	1,362,200
4	Total	3,193,500	3,289,300	3,388,000	3,489,600	3,594,300
	Services					
5	Power	1,881,000	1,937,400	1,995,500	2,055,400	2,117,100
6	Gas	65,800	67,800	69,800	71,900	74,100
7	Other	9,949,900	9,949,900	9,949,900	9,949,900	9,949,900
8	Total	11,896,700	11,955,100	12,015,200	12,077,200	12,141,100
9	Subtotal "Normal" O&M	21,821,400	22,143,900	22,475,200	22,815,600	23,165,500
10	OPEB Amortization	601,900	601,900	601,900	601,900	601,900
11	OPEB Fund Deposit	377,400	377,400	377,400	377,400	377,400
12	Total O&M	22,800,700	23,123,200	23,454,500	23,794,900	24,144,800
13	Payment in Lieu of Taxes	757,100	779,800	803,200	827,300	852,100
14	Total O&M and Taxes	22,578,500	22,923,700	23,278,400	23,642,900	24,017,600

Table 3
Wastewater Utility
Estimated and Projected Capital Improvement Program Flow of Funds
Forecast Period 2020-2024

Line No.	0 Estimated 2019 \$	(1) 2020 \$	(2) 2021 \$	(3) Projected 2022 \$	(4) 2023 \$	(5) 2024 \$
<u>CIP Financing Requirements</u>						
1 Collection System	840,000	3,560,000	8,330,000	9,805,000	3,780,000	1,830,000
Treatment:						
2 Prelim and Primary Trtmnt	1,150,000	500,000	0	0	0	75,000
3 Secondary Treatment	0	0	0	0	5,250,000	5,250,000
4 Tertiary Treatment	1,000,000	1,000,000	0	0	0	0
5 Sludge Treatment	0	4,500,000	1,500,000	0	0	1,300,000
6 WWTP General	7,000,000	2,400,000	2,000,000	1,900,000	2,100,000	2,700,000
7 Subtotal Treatment	9,150,000	8,400,000	3,500,000	1,900,000	7,350,000	9,325,000
8 Subtotal Specific	9,990,000	11,960,000	11,830,000	11,705,000	11,130,000	11,155,000
9 Total Wastewater General	0	0	0	50,000	500,000	500,000
10 Total Requirements	9,990,000	11,960,000	11,830,000	11,755,000	11,630,000	11,655,000
<u>CIP Financing Sources</u>						
11 Beginning Balance	16,490,100	7,938,800	2,363,800	1,500,000	1,500,000	1,500,000
12 Operating Fund Transfers	1,000,000	1,500,000	2,141,200	1,945,000	1,820,000	1,845,000
13 Projected Bond Issues	0	5,000,000	9,000,000	10,000,000	10,000,000	10,000,000
14 less: Issuance Expenses	0	(145,000)	(205,000)	(220,000)	(220,000)	(220,000)
15 Net Bond Proceeds	0	4,855,000	8,795,000	9,780,000	9,780,000	9,780,000
16 Contributions in Aid of Construc	30,000	30,000	30,000	30,000	30,000	30,000
17 Transfer from Emergency Capital	408,700	0	0	0	0	0
18 Total Sources	17,928,800	14,323,800	13,330,000	13,255,000	13,130,000	13,155,000
19 Ending Balance	7,938,800	2,363,800	1,500,000	1,500,000	1,500,000	1,500,000

Table 4
Wastewater Utility

Estimated and Projected Operating Fund Financing Plan (Revenues and Revenue Requirements)
Forecast Period 2020-2024

Line No.	0 Estimated 2019 \$	(1) 2020 \$	(2) 2021 \$	(3) 2022 \$	(4) 2023 \$	(5) 2024 \$
Revenue						
Operating Revenue						
1 Revenue @ Existing Rates	23,250,600	23,484,900	23,484,900	23,484,900	23,484,900	23,484,900
Projected Rate Increases						
2 2020 Rate Increase 10.0%		2,348,500	2,348,500	2,348,500	2,348,500	2,348,500
3 2021 Rate Increase 7.0%			2,583,300	2,583,300	2,583,300	2,583,300
4 2022 Rate Increase 7.0%				1,989,200	1,989,200	1,989,200
5 2023 Rate Increase 5.0%					2,128,400	2,128,400
6 2024 Rate Increase 5.0%						1,626,700
7 Total Rate Revenue	23,250,600	25,833,400	28,416,700	30,405,900	32,534,300	34,161,000
8 Other	73,700	87,700	126,600	126,600	128,500	130,400
Non-Operating Revenue						
Interest Income						
9 Operating Fund	110,900	96,000	88,300	89,900	103,900	129,200
10 Other Funds	255,100	185,600	164,300	174,800	185,400	192,500
11 Other	33,000	33,000	33,000	33,000	33,000	33,000
12 Total Revenue	23,723,300	26,235,700	28,828,900	30,830,200	32,985,100	34,646,100
Revenue Requirements						
13 Operation and Maintenance	21,355,900	22,800,700	23,421,700	24,060,400	24,717,400	25,393,500
14 Payment In Lieu of Taxes	747,300	757,100	779,800	803,200	827,300	852,100
Debt Service						
15 Existing Revenue Bonds	1,557,900	1,799,400	1,525,800	1,517,100	1,515,200	1,516,600
16 Proposed Bonds	0	337,200	944,200	1,618,600	2,293,000	2,967,400
17 Total Debt Service	1,557,900	2,136,600	2,470,000	3,135,700	3,808,200	4,484,000
Transfers to the Improvement Fund						
18 Revenue Designated CIP	1,000,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
19 Other Major CIP	0	0	641,200	445,000	320,000	345,000
20 Total Revenue Funded Improvements	1,000,000	1,500,000	2,141,200	1,945,000	1,820,000	1,845,000
21 Req'd Transfer to Operating Reserves	0	0	0	0	0	0
22 Req'd Transfer to Emerg Cap Fund	0	107,600	48,500	571,500	244,300	235,400
23 Total Revenue Requirements	24,661,100	27,302,000	28,861,200	30,515,800	31,417,200	32,810,000
24 Annual Balance/(Deficit)	(937,800)	(1,066,300)	(32,300)	314,400	1,567,900	1,836,100
25 Use of Reserves	937,800	1,692,800	32,300	0	0	0
26 Rate Covenant Debt Svc Coverage	152%	161%	219%	216%	217%	206%
27 Beginning Balance	7,917,000	6,979,200	5,286,400	5,254,100	5,568,500	7,136,400
28 Net Operations	0	0	0	314,400	1,567,900	1,836,100
29 Use of Reserves	(937,800)	(1,692,800)	(32,300)	0	0	0
30 Operating Reserve Balance	6,979,200	5,286,400	5,254,100	5,568,500	7,136,400	8,972,500

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Table 5
Wastewater Utility

Estimated and Projected Fund Balances Under Projected Rates (Excludes Bond Reserve Account)
Forecast Period 2020-2024

Line No.	0 Estimated 2019 \$	(1) 2020 \$	(2) 2021 \$	(3) Projected 2022 \$	(4) 2023 \$	(5) 2024 \$
<u>Improvement Fund</u>						
1	Beginning Balance	16,490,100	7,938,800	2,363,800	1,500,000	1,500,000
	Deposits					
2	Net Transfers & CIA	1,438,700	1,530,000	2,171,200	1,975,000	1,875,000
3	Bond Proceeds	0	4,855,000	8,795,000	9,780,000	9,780,000
	Withdrawals					
4	Capital Expenditures	(9,990,000)	(11,960,000)	(11,830,000)	(11,755,000)	(11,630,000)
5	Ending Balance	7,938,800	2,363,800	1,500,000	1,500,000	1,500,000
<u>Operating Reserve Fund (a)</u>						
6	Beginning Balance	7,917,000	6,979,200	5,286,400	5,254,100	5,568,500
	Deposits					
7	Net Operations	(937,800)	(1,692,800)	(32,300)	314,400	1,567,900
8	Ending Balance	6,979,200	5,286,400	5,254,100	5,568,500	7,136,400
<u>Emergency Capital Reserve Fund (a)</u>						
9	Beginning Balance	3,521,400	3,112,700	3,220,300	3,268,800	3,840,300
	Deposits					
10	Net Transfers	0	107,600	48,500	571,500	244,300
	Withdrawals					
11	Transfer to Imp. Fund	(408,700)	0	0	0	0
12	Ending Balance	3,112,700	3,220,300	3,268,800	3,840,300	4,084,600
13	Total Ending Balance	18,030,700	10,870,500	10,022,900	10,908,800	12,721,000
14	<i>(a) Subtotal "Reserves"</i>	10,091,900	8,506,700	8,522,900	9,408,800	11,221,000

Table 6
Wastewater Utility
Cost of Service to be Recovered from Rates
Test Year 2020

Line No.		(1) O&M <u>Expense</u> \$	(2) Capital <u>Costs</u> \$	(3) <u>Total</u> \$
	Revenue Requirements			
1	Operation and Maintenance Expense	21,821,400		21,821,400
2	OPEB Debt Service and Contribution	979,300		979,300
3	Debt Service		2,136,600	2,136,600
4	Payment in Lieu of Taxes		757,100	757,100
5	Other Cash Capital		1,607,600	1,607,600
6	Total Revenue Requirements	22,800,700	4,501,300	27,302,000
	Less Other Income Sources			
7	Interest Income	(220,200)	(94,400)	(314,600)
8	Other Income	(87,700)		(87,700)
9	Available Operating Reserves		(1,066,300)	(1,066,300)
10	Total Other Sources	(307,900)	(1,160,700)	(1,468,600)
11	Total Cost of Service to be Recovered From Rates	22,492,800	3,340,600	25,833,400
	<u>Total Cost of Service on a Utility Basis</u>			
12	Operation and Maintenance Expense	22,492,800		22,492,800
13	Payment in Lieu of Taxes		757,100	757,100
14	Depreciation Recovered		3,441,500	3,441,500
15	Return on Rate Base		(858,000)	(858,000)
16	Total Cost of Service to be Recovered from Rates	22,492,800	3,340,600	25,833,400

Table 7
Wastewater Utility
Users of Each Unit Process
Test Year 2020

		(1)	(2)	(3)	(4)
Line			Municipal		Common
<u>No.</u>	<u>Customer Class</u>	<u>Common</u>	<u>Collection</u>	<u>Municipal</u>	<u>Except</u>
		<u>to All</u>	<u>and Pump</u>	<u>Interceptor</u>	<u>Pfizer</u>
1	Inside City Retail	X	X	X	X
2	Outside City Retail	X	X	X	X
	Contract Industries				
3	Pfizer	X		X	
4	James River	X			X
5	Municipalities	X		X	X
	Dewatering				
6	Inside City	X	X	X	X
7	Outside City	X	X	X	X

Table 8
Wastewater Utility
Summary of Wastewater Treatment Allocation Factors
Test Year 2020

<u>No.</u>	<u>Component</u>	(1) <u>Volume</u>	(2) <u>BOD</u>	(3) <u>SS</u>	(4) <u>NH3</u>
<u>Operating Expenses</u>					
1	Primary Treatment	45%	0%	55%	0%
2	Secondary Treatment	5%	70%	5%	20%
3	Solids Handling and Removal	11%	35%	50%	4%
4	Tertiary Treatment	90%	0%	8%	3%
<u>Capital Revenue Requirements</u>					
5	Primary Treatment	100%	0%	0%	0%
6	Secondary Treatment	74%	20%	1%	5%
7	Solids Handling and Removal	3%	39%	54%	4%
8	Tertiary Treatment	100%	0%	0%	0%

Table 9
Wastewater Utility

Allocation of Operation and Maintenance Expense to Functional Cost Components
Test Year 2020

Line No.	Item	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		<u>Total</u>	<u>Volume</u>	<u>BOD</u>	<u>Suspended Solids</u>	<u>NH3</u>	<u>Customer</u>	Municipal Collection And Pump Station	Municipal Interceptor	Industrial Surveillance	Industrial Pretreatment Program
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	Administrative	4,105,000	529,000	928,100	913,300	185,100	935,600	470,700	45,000	73,700	24,500
2	Municipal Collection Treatment Process	2,720,700	0	0	0	0	0	2,483,200	237,500	0	0
3	Primary	663,300	298,500	0	364,800	0	0	0	0	0	0
4	Secondary	2,649,200	132,500	1,854,400	132,500	529,800	0	0	0	0	0
5	Solids Handling	5,128,800	564,200	1,795,100	2,564,400	205,100	0	0	0	0	0
6	Tertiary Treatment	825,600	743,100	0	61,900	20,600	0	0	0	0	0
7	General Plant	1,111,100	190,300	362,200	507,500	51,100	0	0	0	0	0
8	Plant Maintenance	1,719,500	487,200	465,100	675,900	91,300	0	0	0	0	0
9	Other	2,898,000	533,800	697,900	785,100	134,100	44,700	141,300	13,500	410,800	136,800
10	TOTAL	21,821,200	3,478,600	6,102,800	6,005,400	1,217,100	980,300	3,095,200	296,000	484,500	161,300
11	less: Other Income Credit	(307,900)	(49,100)	(86,100)	(84,700)	(17,200)	(13,800)	(43,700)	(4,200)	(6,800)	(2,300)
12	OPEB Reserve Contributio	979,300	168,700	295,900	291,200	59,000	0	150,100	14,400	0	0
13	IPP Cost Recovery	0		72,800	71,700	14,500					(159,000)
14	ISS Cost Recovery	0		218,800	215,300	43,600				(477,700)	
15	Net Allocated Total	22,492,600	3,598,200	6,604,200	6,498,900	1,317,000	966,500	3,201,600	306,200	0	0

Table 10
Wastewater Utility
Development of Capital Asset Values for Cost of Service
Test Year 2020

Line No.		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
		Original Cost			Accumulated Depreciation			Original Cost Less Depreciation			Annual Depreciation Expense		
		Funding			Funding			Funding			Funding		
		Total \$	CIAC \$	Local \$	Total \$	CIAC \$	Local \$	Total \$	CIAC \$	Local \$	Total \$	CIAC \$	Local \$
	COLLECTION SYSTEM												
1	Lift Stations	2,286,500	103,600	6,400	2,176,500	1,198,700	103,600	6,400	1,088,700	1,087,800	0	0	1,087,800
2	Sanitary Sewer Connection	5,779,100	0	0	5,779,100	1,505,800	0	0	1,505,800	4,273,300	0	0	4,273,300
	<u>Sewer Collectors</u>												
3	Municipal Interceptor	16,659,700	7,988,700	532,600	8,138,400	10,141,200	6,473,600	431,400	3,236,200	6,518,500	1,515,100	101,200	4,902,200
4	All Other	38,107,900	1,257,000	83,800	36,767,100	26,201,300	1,257,000	83,800	24,860,500	11,906,600	0	0	11,906,600
5	Total Collection System Investment	62,833,200	9,349,300	622,800	52,861,100	39,047,000	7,834,200	521,600	30,691,200	23,786,200	1,515,100	101,200	22,169,900
	TREATMENT												
6	Preliminary and Primary Treatment	10,952,100	2,761,800	183,800	8,006,500	6,089,800	1,636,200	109,100	4,344,500	4,862,300	1,125,600	74,700	3,662,000
	<u>Secondary Treatment</u>												
7	Aeration	8,181,700	4,738,000	292,300	3,151,400	6,125,400	3,596,000	219,700	2,309,700	2,056,300	1,142,000	72,600	841,700
8	Secondary Pumping/Clarif	19,836,500	7,746,700	497,600	11,592,200	11,645,500	5,503,800	357,200	5,784,500	8,191,000	2,242,900	140,400	5,807,700
9	Secondary Treatment 2013	7,500,300	0	1,250,000	6,250,300	3,900,700	0	612,800	3,287,900	3,599,600	0	637,200	2,962,400
10	Carbon Regeneration	7,403,700	5,684,100	335,300	1,384,300	5,112,800	4,122,800	243,300	746,700	2,290,900	1,561,300	92,000	637,600
11	Tertiary Filters	23,594,000	13,234,200	798,900	9,560,900	16,997,600	10,470,500	632,700	5,894,400	6,596,400	2,763,700	166,200	3,666,500
	<u>Sludge Treatment</u>												
12	Primary Sludge Thickeners	111,700	13,900	900	96,900	61,700	13,900	900	46,900	50,000	0	0	50,000
13	Primary Sludge Pumping	6,085,900	2,413,200	160,900	3,511,800	4,314,300	2,052,300	136,600	2,125,400	1,771,600	360,900	24,300	1,386,400
14	Incinerator	757,500	272,200	17,600	467,700	77,800	0	0	77,800	679,700	272,200	17,600	389,900
15	Spent Carbon Thickeners	115,400	51,900	2,400	61,100	12,400	5,000	300	7,100	103,000	46,900	2,100	54,000
16	Solids Handling Process	22,240,100	2,460,200	159,500	19,620,400	11,572,400	1,515,900	100,900	9,955,600	10,667,700	944,300	58,600	9,664,800
17	Septic Facility	570,300	0	0	570,300	482,800	0	0	482,800	87,500	0	0	87,500
18	WWTP General	31,561,700	5,935,400	737,900	24,888,400	14,782,800	4,326,600	524,900	9,931,300	16,778,900	1,608,800	213,000	14,957,100
19	Net Treatment	138,910,900	45,311,600	4,437,100	89,162,200	81,176,000	33,243,000	2,938,400	44,994,600	57,734,900	12,068,600	1,498,700	44,167,600
20	Subtotal	201,744,100	54,660,900	5,059,900	142,023,300	120,223,000	41,077,200	3,460,000	75,685,800	81,521,100	13,583,700	1,599,900	66,337,500
21	Total Wastewater General	22,823,200	8,262,200	546,000	14,015,000	16,755,300	6,335,600	422,000	9,997,700	6,067,900	1,926,600	124,000	4,017,300
22	TOTAL	224,567,300	62,923,100	5,605,900	156,038,300	136,978,300	47,412,800	3,882,000	85,683,500	87,589,000	15,510,300	1,723,900	70,354,800

Table 11
Wastewater Utility

Allocation of Net Plant Investment, Rate Base, and PILOT to Functional Cost Components
Test Year 2020

Line No.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Common to All						Municipal Collection And Pump Station	Common Except Pfizer				
	Total	Volume	BOD	Suspended Solids	NH3	Customer		Municipal Interceptor	Volume	BOD	Suspended Solids	NH3
COLLECTION SYSTEM												
1 Lift Stations	1,087,800	0	0	0	0	0	1,087,800	0	0	0	0	0
2 Sanitary Sewer Connection	4,273,300	0	0	0	0	0	4,273,300	0	0	0	0	0
Sewer Collectors												
3 Municipal Interceptor	4,902,200	0	0	0	0	0	0	4,902,200	0	0	0	0
4 All Other	11,906,600	0	0	0	0	0	11,906,600	0	0	0	0	0
5 Total Collection System Inves	22,169,900	0	0	0	0	0	17,267,700	4,902,200	0	0	0	0
TREATMENT												
6 Preliminary and Primary Treat	3,662,000	3,662,000	0	0	0	0	0	0	0	0	0	0
Secondary Treatment												
7 Aeration	841,700	622,900	168,300	8,400	42,100	0	0	0	0	0	0	0
8 Secondary Pumping/Clarif	5,807,700	4,297,700	1,161,500	58,100	290,400	0	0	0	0	0	0	0
9 Secondary Treatment 2013	2,962,400	0	0	0	0	0	0	0	2,192,200	592,500	29,600	148,100
10 Carbon Regeneration	637,600	471,800	127,500	6,400	31,900	0	0	0	0	0	0	0
11 Tertiary & Outfall	3,666,500	3,666,500	0	0	0	0	0	0	0	0	0	0
Sludge Treatment												
12 Primary Sludge Thickeners	50,000	1,500	19,500	27,000	2,000	0	0	0	0	0	0	0
13 Primary Sludge Pumping	1,386,500	41,600	540,700	748,700	55,500	0	0	0	0	0	0	0
14 Incinerator	389,900	11,700	152,100	210,500	15,600	0	0	0	0	0	0	0
15 Spent Carbon Thickeners	54,100	1,600	21,100	29,200	2,200	0	0	0	0	0	0	0
16 Solids Handling Process	9,664,800	289,900	3,769,300	5,219,000	386,600	0	0	0	0	0	0	0
17 Septage Facility	87,500	87,500	0	0	0	0	0	0	0	0	0	0
18 WWTP General	14,957,200	7,496,000	3,396,200	3,594,100	470,900	0	0	0	0	0	0	0
19 Net Treatment	44,167,900	20,650,700	9,356,200	9,901,400	1,297,200	0	0	0	2,192,200	592,500	29,600	148,100
20 Subtotal	66,337,800	20,650,700	9,356,200	9,901,400	1,297,200	0	17,267,700	4,902,200	2,192,200	592,500	29,600	148,100
21 Wastewater General	4,017,300	1,309,100	593,100	627,600	82,200	0	1,094,600	310,700	0	0	0	0
22 Net Plant Investment	70,355,100	21,959,800	9,949,300	10,529,000	1,379,400	0	18,362,300	5,212,900	2,192,200	592,500	29,600	148,100
23 Working Capital	4,049,000	1,319,300	597,800	632,600	82,900	0	1,103,200	313,200	0	0	0	0
24 Inventories	137,300	44,700	20,300	21,500	2,800	0	37,400	10,600	0	0	0	0
25 Rate Base	74,541,400	23,323,800	10,567,400	11,183,100	1,465,100	0	19,502,900	5,536,700	2,192,200	592,500	29,600	148,100
26 Payment in Lieu of Taxes	757,100	246,600	111,800	118,300	15,500	0	206,300	58,600	0	0	0	0

Table 12
Wastewater Utility

Allocation of Depreciation Expense to Functional Cost Components
Test Year 2020

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
		Common to All						Municipal Collection And Pump Station	Municipal Interceptor	Common Except Pfizer			
		Suspended								Suspended			
Line No.	Annual Local Depreciation Expense - \$	Total	Volume	BOD	Solids	NH3	Customer			Volume	BOD	Solids	NH3
COLLECTION SYSTEM													
1	Lift Stations	58,100	0	0	0	0	0	58,100	0	0	0	0	0
2	Sanitary Sewer Connection	94,300	0	0	0	0	0	94,300	0	0	0	0	0
Sewer Collectors													
3	Municipal Interceptor	116,400	0	0	0	0	0	0	116,400	0	0	0	0
4	All Other	713,800	0	0	0	0	0	713,800	0	0	0	0	0
5	Total Collection System Investment	982,600	0	0	0	0	0	866,200	116,400	0	0	0	0
TREATMENT													
6	Preliminary and Primary Treatment	298,500	298,500	0	0	0	0	0	0	0	0	0	0
Secondary Treatment													
7	Aeration	47,200	34,900	9,400	500	2,400	0	0	0	0	0	0	0
8	Secondary Pumping/Clarif	206,000	152,400	41,200	2,100	10,300	0	0	0	0	0	0	0
9	Secondary Treatment 2013	408,600	0	0	0	0	0	0	0	302,400	81,700	4,100	20,400
10	Carbon Regeneration	12,800	9,500	2,600	100	600	0	0	0	0	0	0	0
11	Tertiary & Outfall	235,400	235,400	0	0	0	0	0	0	0	0	0	0
Sludge Treatment													
12	Primary Sludge Thickeners	1,300	0	500	700	100	0	0	0	0	0	0	0
13	Primary Sludge Pumping	97,200	2,900	37,900	52,500	3,900	0	0	0	0	0	0	0
14	Incinerator	5,400	200	2,100	2,900	200	0	0	0	0	0	0	0
15	Spent Carbon Thickeners	0	0	0	0	0	0	0	0	0	0	0	0
16	Solids Handling Process	537,700	16,100	209,700	290,400	21,500	0	0	0	0	0	0	0
17	Septage Facility	20,600	20,600	0	0	0	0	0	0	0	0	0	0
18	WWTP General	399,100	210,400	82,800	95,300	10,600	0	0	0	0	0	0	0
19	Net Treatment	2,269,800	980,900	386,200	444,500	49,600	0	0	0	302,400	81,700	4,100	20,400
20	Subtotal	3,252,400	980,900	386,200	444,500	49,600	0	866,200	116,400	302,400	81,700	4,100	20,400
21	Wastewater General	189,100	65,200	25,700	29,600	3,300	0	57,600	7,700	0	0	0	0
22	TOTAL	3,441,500	1,046,100	411,900	474,100	52,900	0	923,800	124,100	302,400	81,700	4,100	20,400

Table 13
Wastewater Utility
Units of Service
Test Years 2018 - 2020

Line No.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Infiltration & Inflow				Total Treated	Strength			Number of Bills
	Contributed Volume cu mtr	Interceptor Related cu mtr	Customer Related cu mtr	Volume Related cu mtr	Volume cu mtr	BOD kg	Suspended Solids kg	NH3 kg	
Inside City									
1 Residential	3,005,800	672,600	1,634,000	311,400	5,623,800	720,200	780,000	55,200	68,912
2 Commercial	4,998,500	1,118,500	638,900	517,800	7,273,700	1,197,600	1,297,100	91,800	25,040
3 Industrial	934,900	209,200	55,200	96,800	1,296,100	224,000	242,600	17,200	1,236
4 Industrial Monitored	649,900	145,400	3,200	67,300	865,800	413,100	132,300	1,300	72
5 Total	9,589,100	2,145,700	2,331,300	993,300	15,059,400	2,554,900	2,452,000	165,500	95,260
Outside City									
6 Residential	2,643,700	591,600	1,407,300	273,800	4,916,400	633,400	686,000	48,600	54,800
7 Commercial	3,054,600	683,500	408,600	316,400	4,463,100	731,800	792,700	56,100	17,508
8 Industrial	269,700	60,300	15,400	27,900	373,300	64,600	70,000	5,000	324
9 Industrial Monitored	488,200	109,200	4,600	50,600	652,600	1,153,000	488,500	6,600	96
10 Total	6,456,200	1,444,600	1,835,900	668,700	10,405,400	2,582,800	2,037,200	116,300	72,728
Contract									
11 Pfizer	3,673,700	822,100	1,900	380,500	4,878,200	2,683,800	2,694,800	40,700	12
12 Graphic Packaging	1,247,700	0	0	0	1,247,700	2,719,600	266,600	0	12
13 Total	4,921,400	822,100	1,900	380,500	6,125,900	5,403,400	2,961,400	40,700	24
Municipalities									
14 Portage	5,666,900	1,268,100	0	0	6,935,000	1,357,700	1,470,500	104,100	12
15 Galesburg	179,700	40,200	51,200	18,600	289,700	43,100	46,600	3,300	4
16 Parchment	75,500	16,900	0	0	92,400	18,100	19,600	1,400	12
17 Vicksburg	353,100	79,000	0	0	432,100	84,600	91,600	6,500	12
18 Gull Lake	1,213,400	271,500	0	0	1,484,900	290,700	314,900	22,300	12
19 Augusta	84,400	18,900	0	0	103,300	20,200	21,900	1,600	12
20 Mattawan	538,900	120,600	0	0	659,500	129,100	139,800	9,900	12
21 South County	164,400	36,800	0	0	201,200	39,400	42,700	3,000	12
22 Total	8,276,300	1,852,000	51,200	18,600	10,198,100	1,982,900	2,147,600	152,100	88
Dewatering									
23 Inside City	178,800	40,000	5,700	18,500	243,000	42,800	46,400	3,300	36
24 Outside City	27,100	6,100	1,900	2,800	37,900	6,500	7,000	500	12
25 Total	205,900	46,100	7,600	21,300	280,900	49,300	53,400	3,800	48
26 TOTAL	29,448,900	6,310,500	4,227,900	2,082,400	42,069,700	12,573,300	9,651,600	478,400	168,148
27 Inside City Subtotal	11,015,600	2,185,700	2,337,000	1,011,800	16,550,100	5,317,300	2,765,000	168,800	95,308
28 Outside City Subtotal	18,433,300	4,124,800	1,890,900	1,070,600	25,519,600	7,256,000	6,886,600	309,600	72,840

Table 14
Wastewater Utility
Rate of Return on Rate Base
Test Year 2020

Line No.	Description	(1) Owner's Equity \$	(2) Long Term Debt \$	(3) Total \$
1	Capital Structure	50,916,800	23,624,600	74,541,400
2	Percent Capital Structure	68.31%	31.69%	100.00%
	Rates of Return			
3	30-Year Treasury Bond (a)	2.52%		
4	Allowable Markup (b)	3.00%		
5	Return on Equity	5.52%		
6	Imbedded Cost of Debt		4.49%	
		(Ln 2 * Ln 5)	(Ln 2 * Ln 6)	
7	Outside City Rate of Return	3.77%	1.42%	5.19%

(a) As of 6/30/2019 per 1998 Rate Settlement Agreement

(b) Per 1998 Rate Settlement Agreement

Table 15
Wastewater Utility
Unit Costs of Service
Test Year 2020

Line No.	Description	(1) Total	(2) Volume	(3) BOD	(4) Suspended Solids	(5) NH3	(6) Customer	(7) Municipal Collection And Pump Station	(8) Municipal Interceptor	(9) Volume	(10) BOD	(11) Suspended Solids	(12) NH3
Common to All							Common Except Pfizer						
	Total Units of Service												
1	Inside City		16,550,100	5,317,300	2,765,000	168,800	95,308	15,302,400	15,302,400	16,550,100	5,317,300	2,765,000	168,800
2	Outside City		25,519,600	7,256,000	6,886,600	309,600	72,840	10,443,300	25,519,600	20,641,400	4,572,200	4,191,800	268,900
3	Total System Units		42,069,700	12,573,300	9,651,600	478,400	168,148	25,745,700	40,822,000	37,191,500	9,889,500	6,956,800	437,700
			<i>cu mtr</i>	<i>kg</i>	<i>kg</i>	<i>kg</i>	<i>Bills</i>	<i>cu mtr</i>	<i>cu mtr</i>	<i>direct</i>	<i>cu mtr</i>	<i>kg</i>	<i>kg</i>
4	Net Operating Expense	22,492,600	3,598,200	6,604,200	6,498,900	1,317,000	966,500	3,201,600	306,200	0	0	0	0
5	Unit Cost, \$/Unit		0.0855	0.5253	0.6733	2.7529	5.7479	0.1244	0.0075	0.0000	0.0000	0.0000	0.0000
6	Payment in Lieu of Taxes	757,100	246,600	111,800	118,300	15,500	0	206,300	58,600	0	0	0	0
7	Unit Cost, \$/Unit		0.0059	0.0089	0.0123	0.0324	0.0000	0.0080	0.0014	0.0000	0.0000	0.0000	0.0000
8	Depreciation Expense	3,441,500	1,046,100	411,900	474,100	52,900	0	923,800	124,100	302,400	81,700	4,100	20,400
9	Unit Cost, \$/Unit		0.0249	0.0328	0.0491	0.1106	0.0000	0.0359	0.0030	0.0081	0.0083	0.0006	0.0466
	Rate Base												
10	Inside City	32,395,500	9,175,500	4,469,000	3,203,700	516,900	0	11,591,900	2,075,500	975,500	318,600	11,800	57,100
11	Outside City	42,145,900	14,148,300	6,098,400	7,979,400	948,200	0	7,911,000	3,461,200	1,216,700	273,900	17,800	91,000
12	Total	74,541,400	23,323,800	10,567,400	11,183,100	1,465,100	0	19,502,900	5,536,700	2,192,200	592,500	29,600	148,100
	Return on Rate Base												
	Inside City @ -9.40%	-9.40%											
13	Total Cost - \$	(3,046,700)	(862,900)	(420,300)	(301,300)	(48,600)	0	(1,090,200)	(195,200)	(91,700)	(30,000)	(1,100)	(5,400)
14	Inside City Units		16,550,100	5,317,300	2,765,000	168,800	95,308	15,302,400	15,302,400	16,550,100	5,317,300	2,765,000	168,800
15	Unit Cost - \$/unit		-0.0521	-0.0790	-0.1090	-0.2879	0.0000	-0.0712	-0.0128	-0.0055	-0.0056	-0.0004	-0.0320
	Outside City @ 5.19%												
16	Total Cost - \$	2,188,700	734,900	316,700	414,400	49,200	0	410,800	179,700	63,200	14,200	900	4,700
17	Outside City Units		25,519,600	7,256,000	6,886,600	309,600	72,840	10,443,300	25,519,600	20,641,400	4,572,200	4,191,800	268,900
18	Unit Cost - \$/unit		0.0288	0.0436	0.0602	0.1589	0.0000	0.0393	0.0070	0.0031	0.0031	0.0002	0.0175
	Total Unit Cost of Service												
19	Total Cost - \$	25,833,200	4,762,900	7,024,300	7,204,400	1,386,000	966,500	3,652,300	473,400	273,900	65,900	3,900	19,700
	Unit Cost - \$/unit												
20	Inside City		0.0641	0.4879	0.6258	2.6080	5.7479	0.0970	-0.0008	0.0026	0.0026	0.0002	0.0146
21	Outside City		0.1451	0.6106	0.7949	3.0548	5.7479	0.2076	0.0190	0.0112	0.0114	0.0008	0.0641

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Table 16
Wastewater Utility
Allocation of Cost of Service to Customer Classes
Test Year 2020

Line No.	Description	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
		Common to All						Municipal Collection And Pump Station	Municipal Interceptor	Common Except Pfizer			
		Total \$	Volume \$	BOD \$	Solids \$	NH3 \$	Customer \$	\$	\$	Volume \$	BOD \$	Solids \$	NH3 \$
1	Total Cost of Service	25,833,200	4,762,900	7,024,300	7,204,400	1,386,000	966,500	3,652,300	473,400	273,900	65,900	3,900	19,700
	Unit Costs of Service												
2	Inside City		0.0641	0.4879	0.6258	2.6080	5.7479	0.0970	-0.0008	0.0026	0.0026	0.0002	0.0146
3	Outside City		0.1451	0.6106	0.7949	3.0548	5.7479	0.2076	0.0190	0.0112	0.0114	0.0008	0.0641
	Inside City Retail												
4	Residential	2,298,700	360,600	351,400	488,100	144,000	396,100	545,500	(4,400)	14,600	1,900	100	800
5	Commercial	2,969,000	466,400	584,300	811,700	239,400	143,900	705,600	(5,700)	18,800	3,100	200	1,300
6	Industrial	525,200	83,100	109,300	151,800	44,900	7,100	125,700	(1,000)	3,400	600	0	300
7	Industrial Monitored	430,200	55,500	201,500	82,800	3,400	400	84,000	(700)	2,200	1,100	0	0
8	Total	6,223,100	965,600	1,246,500	1,534,400	431,700	547,500	1,460,800	(11,800)	39,000	6,700	300	2,400
	Outside City Retail												
9	Residential	3,288,600	713,100	386,700	545,300	148,500	315,000	1,020,600	93,500	55,000	7,200	600	3,100
10	Commercial	3,070,200	647,400	446,800	630,100	171,400	100,600	926,500	84,900	50,000	8,300	600	3,600
11	Industrial	256,200	54,100	39,400	55,600	15,300	1,900	77,500	7,100	4,200	700	100	300
12	Industrial Monitored	1,376,900	94,700	704,000	388,300	20,200	600	135,500	12,400	7,300	13,100	400	400
13	Total	7,991,900	1,509,300	1,576,900	1,619,300	355,400	418,100	2,160,100	197,900	116,500	29,300	1,700	7,400
	Contract Industries												
14	Pfizer	4,705,500	707,600	1,638,600	2,142,100	124,300	100		92,800				
15	Graphic Packaging	1,584,100	80,000	1,326,800	166,800	0	100			3,200	7,100	100	0
16	Total	6,289,600	787,600	2,965,400	2,308,900	124,300	200	0	92,800	3,200	7,100	100	0
	Municipalities												
17	Portage	3,554,700	1,006,000	828,900	1,168,900	318,000	100		131,900	77,600	15,400	1,200	6,700
18	Galesburg	124,800	42,000	26,300	37,000	10,100	0		5,500	3,200	500	0	200
19	Parchment	47,600	13,400	11,100	15,600	4,300	100		1,800	1,000	200	0	100
20	Vicksburg	221,700	62,700	51,700	72,800	19,900	100		8,200	4,800	1,000	100	400
21	Gull Lake	761,200	215,400	177,500	250,300	68,100	100		28,200	16,600	3,300	300	1,400
22	Augusta	53,200	15,000	12,300	17,400	4,900	100		2,000	1,200	200	0	100
23	Mattawan	338,000	95,700	78,800	111,100	30,200	100		12,500	7,400	1,500	100	600
24	South County	103,200	29,200	24,100	33,900	9,200	100		3,800	2,300	400	0	200
25	Total	5,204,400	1,479,400	1,210,700	1,707,000	464,700	700	0	193,900	114,100	22,500	1,700	9,700
	Dewatering												
26	Inside City	98,400	15,600	20,900	29,000	8,600	200	23,600	(200)	600	100	0	0
27	Outside City	25,800	5,500	4,000	5,600	1,500	100	7,900	700	400	100	0	0
28	Total	124,200	21,100	24,900	34,600	10,100	300	31,500	500	1,000	200	0	0
29	Septage Haulers	0	0	0	0	0	0	0	0	0	0	0	0
30	GRAND TOTAL	25,833,200	4,763,000	7,024,400	7,204,200	1,386,200	966,800	3,652,400	473,300	273,800	65,800	3,800	19,500
31	Inside City Subtotal	7,905,600	1,061,200	2,594,200	1,730,200	440,300	547,800	1,484,400	(12,000)	42,800	13,900	400	2,400
32	Outside City Subtotal	17,927,600	3,701,800	4,430,200	5,474,000	945,900	419,000	2,168,000	485,300	231,000	51,900	3,400	17,100

Table 17
Wastewater Utility
Cost of Service Allocated to Customer Class
Test Year 2020

<u>No.</u>		(1)	(2)	(3)	(4)
		<u>Allocated Cost</u> <u>of Service</u>	<u>Revenue</u> <u>Existing</u> <u>Rates</u>	<u>Variance</u>	<u>% Variance</u>
	Inside City Retail				
1	Residential	2,298,700	1,973,500	325,200	16.5%
2	Commercial	2,969,000	2,537,700	431,300	17.0%
3	Industrial	525,200	447,100	78,100	17.5%
4	Industrial Monitored	430,200	389,400	40,800	10.5%
5	Total	6,223,100	5,347,700	875,400	16.4%
	Outside City Retail				
6	Residential	3,288,600	3,046,600	242,000	7.9%
7	Commercial	3,070,200	2,904,700	165,500	5.7%
8	Industrial	256,200	243,200	13,000	5.3%
9	Industrial Monitored	1,376,900	1,306,300	70,600	5.4%
10	Total	7,991,900	7,500,800	491,100	6.5%
	Contract Industries				
11	Pfizer	4,705,500	4,261,800	443,700	10.4%
12	Graphic Packaging	1,584,100	1,501,600	82,500	5.5%
13	Total	6,289,600	5,763,400	526,200	9.1%
	Municipalities				
14	Portage	3,554,700	3,254,600	300,100	9.2%
15	Galesburg	124,800	115,200	9,600	8.3%
16	Parchment	47,600	43,500	4,100	9.4%
17	Vicksburg	221,700	202,800	18,900	9.3%
18	Gull Lake	761,200	696,900	64,300	9.2%
19	Augusta	53,200	48,600	4,600	9.5%
20	Mattawan	338,000	309,600	28,400	9.2%
21	South County	103,200	94,600	8,600	9.1%
22	Total	5,204,400	4,765,800	438,600	9.2%
	Dewatering				
23	Inside City	98,400	83,300	15,100	18.1%
24	Outside City	25,800	23,900	1,900	7.9%
25	Total	124,200	107,200	17,000	15.9%
26	TOTAL	25,833,200	23,484,900	2,348,300	10.0%
27	Inside City Subtotal	7,905,600	6,932,600	973,000	14.0%
28	Outside City Subtotal	17,927,600	16,552,300	1,375,300	8.3%

Table 18
Wastewater Utility

Calculation of Wastewater Service Charges
Test Year 2020

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Inside City Retail				Outside City Retail			
	Common to All	Municipal Collection and Pump Station	Municipal Interceptor	Total	Common to All	Municipal Collection and Pump Station	Municipal Interceptor	Total
1 Volume Unit Cost - \$/cu mtr <u>Connection Related I/I volume - cu mtr</u>	0.0667	0.0970	-0.0008		0.1562	0.2076	0.0190	
2 Inside City	2,331,300	2,331,300	2,331,300					
3 Outside City					1,835,900	1,835,900	1,835,900	
4 Allocated I/I costs to be recovered in Service Charge	155,500	226,100	(1,800)	379,800	286,900	381,100	34,900	702,900
5 Equivalent Connections				25,958				20,443
6 Infiltration/Inflow Unit Cost recovered in Service Charge				14.63				34.38
7 Service Charge Schedule								
	Inside City Retail				Outside City Retail			
	Infiltration /Inflow Unit Cost \$/yr	Unit Billing Cost \$/bill	Inside City Service Charge		Infiltration /Inflow Unit Cost \$/yr	Unit Billing Cost \$/bill	Outside City Service Charge	
Meter Size inches			Monthly Bill \$/bill	Quarterly Bill \$/bill			Monthly Bill \$/bill	Quarterly Bill \$/bill
5/8	1.0	14.63	5.75	6.97	34.38	5.75	8.61	14.34
3/4	1.1	16.09	5.75	7.09	37.82	5.75	8.90	15.20
1	1.4	20.48	5.75	7.45	48.14	5.75	9.76	17.78
1 1/2	1.8	26.34	5.75	7.94	61.89	5.75	10.91	21.22
2	2.9	42.43	5.75	9.28	99.71	5.75	14.06	30.68
3	11.0	160.94	5.75	19.16	378.22	5.75	37.27	100.30
4	14.0	204.84	5.75	22.82	481.37	5.75	45.86	126.09
6	21.0	307.26	5.75	31.35	722.06	5.75	65.92	186.26

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THE FOSTER GROUP

1/5/20

Table 19
Wastewater Utility
Calculation of Wastewater Commodity Rates
Test Year 2020

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Line No.		Inside City Retail	Outside City Retail	Municipalities	Contract Industries		Dewatering	
					Pfizer	Graphic Packaging	Inside City	Outside City
VOLUME UNIT COSTS								
1	Common to All - \$/cu mtr	0.0667	0.1562	0.1562	0.1451	0.0667	0.0667	0.1562
2	Municipal Collection & PS - \$/cu mtr	0.0970	0.2076				0.0970	0.2076
3	Municipal Interceptor - \$/cu mtr	-0.0008	0.0190	0.0190	0.0190		-0.0008	0.0190
4	Direct Costs							
5	Subtotal - \$/cu mtr	0.1629	0.3829	0.1753	0.1641	0.0667	0.1629	0.3829
6	Volume Including Volume Related I/I	12,728,100	8,569,500	10,146,900	4,876,300	1,247,700	237,300	36,000
7	Billable Volume	9,589,100	6,456,200	8,276,300	3,673,700	1,247,700	178,800	27,100
8	Markup to Recover Volume Related I/I	32.74%	32.73%	22.60%	32.74%	0.00%	32.72%	32.84%
9	Total - \$/cu mtr	0.2163	0.5082	0.2149	0.2178	0.0667	0.2162	0.5086
BOD UNIT COST								
9	Common to All - \$/kg	0.4905	0.6219	0.6219	0.6106	0.4905	0.4905	0.6219
10	Non-Monitored Strength - mg/l	240	240	240			240	240
11	Total - \$/cu mtr	0.1175	0.1490	0.1490	0.0000	0.0000	0.1175	0.1490
SUSPENDED SOLIDS UNIT COST								
12	Common to All - \$/kg	0.6260	0.7957	0.7957	0.7949	0.6260	0.6260	0.7957
13	Non-Monitored Strength - mg/l	259	259	259			259	259
14	Total - \$/cu mtr	0.1624	0.2065	0.2065	0.0000	0.0000	0.1624	0.2065
NH3 UNIT COST								
15	Common to All - \$/kg	2.6226	3.1189	3.1189	3.0548	2.6226	2.6226	3.1189
16	Non-Monitored Strength - mg/l	18.4	18.4	18.4			18.4	18.4
17	Total - \$/cu mtr	0.0482	0.0573	0.0573	0.0000	0.0000	0.0482	0.0573
RECOVERY OF INFILTRATION								
18	Customer Related I/I				722.06	307.26		
19	Billable Volume				3,673,700	1,247,700		
20	Unit Cost - \$/cu mtr				0.0002	0.0002		
TOTAL UNIT COST								
21	Regular Strength Customers - \$/cu mtr	0.544	0.921	0.628			0.544	0.921
22	Galesburg Monitored Customers			0.759				
23	Volume - \$/cu mtr	0.216	0.508		0.218	0.067	0.216	0.509
24	BOD - \$/kg BOD	0.490	0.622		0.611	0.490	0.490	0.622
25	SS - \$/kg SS	0.626	0.796		0.795	0.626	0.626	0.796
26	NH3 - \$/kg NH3	2.623	3.119		3.055	2.623	2.623	3.119

Table 20
Wastewater Utility

Comparison of Existing and Proposed Wastewater Rates
Test Year 2020

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SERVICE CHARGES								
Meter	Existing Rates		Proposed Rates		Variance		% Variance	
Size	Inside City	Outside City	Inside City	Outside City	Inside City	Outside City	Inside City	Outside City
inches	\$/bill	\$/bill	\$/bill	\$/bill	\$/bill	\$/bill		
Quarterly								
5/8	8.29	12.32	9.41	14.34	1.12	2.02	13.51%	16.40%
3/4	8.45	12.92	9.77	15.20	1.32	2.28	15.62%	17.65%
1	8.98	14.70	10.87	17.78	1.89	3.08	21.05%	20.95%
1 1/2	9.68	17.09	12.33	21.22	2.65	4.13	27.38%	24.17%
2	11.56	23.65	16.36	30.68	4.80	7.03	41.52%	29.73%
3	25.52	71.97	45.98	100.30	20.46	28.33	80.17%	39.36%
4	30.70	89.88	56.96	126.09	26.26	36.21	85.54%	40.29%
6	42.77	131.65	82.56	186.26	39.79	54.61	93.03%	41.48%
Flat Rate	47.74	86.53	55.61	93.40	7.87	6.87	16.49%	7.94%
Meter	Existing Rates		Proposed Rates		Variance		% Variance	
Size	Inside City	Outside City	Inside City	Outside City	Inside City	Outside City	Inside City	Outside City
inches	\$/bill	\$/bill	\$/bill	\$/bill	\$/bill	\$/bill		
Monthly								
5/8	7.14	8.36	6.97	8.61	-0.17	0.25	-2.38%	2.99%
3/4	7.19	8.54	7.09	8.90	-0.10	0.36	-1.39%	4.22%
1	7.37	9.15	7.45	9.76	0.08	0.61	1.09%	6.67%
1 1/2	7.60	9.94	7.94	10.91	0.34	0.97	4.47%	9.76%
2	8.23	12.13	9.28	14.06	1.05	1.93	12.76%	15.91%
3	12.88	28.23	19.16	37.27	6.28	9.04	48.76%	32.02%
4	14.60	34.20	22.82	45.86	8.22	11.66	56.30%	34.09%
6	18.63	48.13	31.35	65.92	12.72	17.79	68.28%	36.96%
Municipalities		5.99		5.75		-0.24		-4.01%
Dewatering		6.37		5.75		-0.62		-9.73%
Septage Haulers		5.99		5.75		-0.24		-4.01%
COMMODITY CHARGES								
	Existing Rates		Proposed Rates		Variance		% Variance	
	Inside City	Outside City	Inside City	Outside City	Inside City	Outside City	Inside City	Outside City
	\$/cu mtr	\$/cu mtr	\$/cu mtr	\$/cu mtr	\$/cu mtr	\$/cu mtr		
Residential	0.465	0.880	0.544	0.921	0.079	0.041	16.99%	4.66%
Commercial	0.465	0.880	0.544	0.921	0.079	0.041	16.99%	4.66%
Industrial	0.465	0.880	0.544	0.921	0.079	0.041	16.99%	4.66%
Municipalities								
All Other		0.576		0.628		0.052		9.03%
Galesburg		0.643		0.759		0.116		18.04%
Dewatering	0.465	0.880	0.544	0.921	0.079	0.041	16.99%	4.66%

Table 20 (continued)
Wastewater Utility

Comparison of Existing and Proposed Wastewater Rates

Test Year 2020

QUANTITY / QUALITY CHARGES

Commodity Charge				
	<u>Existing</u>	<u>Proposed</u>	<u>Variance</u>	<u>% Variance</u>
Monitored Customers	\$/cu mtr	\$/cu mtr	\$/cu mtr	
Pfizer	0.199	0.218	0.019	9.55%
Graphic Packaging	0.070	0.067	-0.003	-4.29%
Dewatering				
Inside City	0.137	0.216	0.079	57.66%
Outside City	0.511	0.509	-0.002	-0.39%
Industrial - Inside City	0.148	0.216	0.068	45.95%
Industrial - Outside City	0.500	0.509	0.009	1.80%

BOD Charges				
	<u>Existing</u>	<u>Proposed</u>	<u>Variance</u>	<u>% Variance</u>
Monitored Customers	\$/kg	\$/kg	\$/kg	
Pfizer	0.599	0.611	0.012	2.00%
Graphic Packaging	0.470	0.490	0.020	4.26%
Dewatering				
Inside City	0.497	0.490	-0.007	-1.41%
Outside City	0.630	0.622	-0.008	-1.27%
Industrial - Inside City	0.518	0.490	-0.028	-5.41%
Industrial - Outside City	0.619	0.622	0.003	0.48%

TSS Charges				
	<u>Existing</u>	<u>Proposed</u>	<u>Variance</u>	<u>% Variance</u>
Monitored Customers	\$/kg	\$/kg	\$/kg	
Pfizer	0.669	0.795	0.126	18.83%
Graphic Packaging	0.510	0.626	0.116	22.75%
Dewatering				
Inside City	0.529	0.626	0.097	18.34%
Outside City	0.685	0.796	0.111	16.20%
Industrial - Inside City	0.571	0.626	0.055	9.63%
Industrial - Outside City	0.674	0.796	0.122	18.10%

NH3 Charges				
	<u>Existing</u>	<u>Proposed</u>	<u>Variance</u>	<u>% Variance</u>
Monitored Customers	\$/kg	\$/kg	\$/kg	
Pfizer	3.066	3.055	-0.011	-0.36%
Graphic Packaging	2.520	2.623	0.103	4.09%
Dewatering				
Inside City	2.644	2.623	-0.021	-0.79%
Outside City	3.205	3.119	-0.086	-2.68%
Industrial - Inside City	2.813	2.623	-0.190	-6.75%
Industrial - Outside City	3.173	3.119	-0.054	-1.70%

Table 21
Wastewater Utility

Comparison of "Typical" Wastewater Bills Under Existing and Proposed Rates
Test Year 2020

	(1)	(2)	(3)	(4)	(5)	(6)
<u>Customer Class</u>	<u>Meter Size</u>	<u>Water Use</u> cu mtr	<u>Bill Under Existing Rates</u> \$	<u>Bill Under Proposed Rates</u> \$	<u>Increase (Decrease)</u> \$	<u>Percent Increase (Decrease)</u> %
INSIDE CITY - QUARTERLY						
Residential	5/8"-3/4"	0	8.29	9.41	1.12	13.5%
Residential	5/8"-3/4"	51.3	32.14	37.32	5.17	16.1%
Residential	1"	100	55.48	65.27	9.79	17.6%
Residential	1"	300	148.48	174.07	25.59	17.2%
Commercial	1"	750	357.73	418.87	61.14	17.1%
Commercial	2"	2,250	1,057.81	1,240.36	182.55	17.3%
INSIDE CITY - MONTHLY						
Residential	1"	100	53.87	61.85	7.98	14.8%
Residential	2"	200	101.23	118.08	16.85	16.6%
Commercial	2"	500	240.73	281.28	40.55	16.8%
Industrial	4"	3,000	1,409.60	1,654.82	245.22	17.4%
Industrial	6"	20,000	9,318.63	10,911.35	1,592.72	17.1%
OUTSIDE CITY - QUARTERLY						
Residential	5/8"-3/4"	0	12.32	14.34	2.02	16.4%
Residential	5/8"-3/4"	51.3	57.46	61.59	4.12	7.2%
Residential	1"	100	102.70	109.88	7.18	7.0%
Multi-Family	1"	300	278.70	294.08	15.38	5.5%
Commercial	1"	750	674.70	708.53	33.83	5.0%
Commercial	2"	2,250	2,003.65	2,102.93	99.28	5.0%
OUTSIDE CITY - MONTHLY						
Residential	1"	100	97.15	101.86	4.71	4.8%
Residential	2"	200	188.13	198.26	10.13	5.4%
Commercial	2"	500	452.13	474.56	22.43	5.0%
Industrial	4"	3,000	2,674.20	2,808.86	134.66	5.0%
Industrial	6"	20,000	17,648.13	18,485.92	837.79	4.7%

Table 22
Wastewater Utility

Calculation of Gross and Net (of True Up) Outside City Wastewater Rates
Test Year 2020

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SERVICE CHARGES								
Meter Size inches	Existing Rates			Proposed Rates			Net Rate Variance	
	Gross Rate \$/bill	T/U Adj \$/bill	Net Rate \$/bill	Gross Rate \$/bill	T/U Adj \$/bill	Net Rate \$/bill	\$ \$/bill	% \$/bill
Quarterly								
5/8	12.32	(0.14)	12.18	14.34	(0.14)	14.20	2.02	16.6%
3/4	12.92	(0.15)	12.77	15.20	(0.15)	15.05	2.28	17.9%
1	14.70	(0.17)	14.53	17.78	(0.17)	17.61	3.08	21.2%
1 1/2	17.09	(0.20)	16.89	21.22	(0.20)	21.02	4.13	24.5%
2	23.65	(0.27)	23.38	30.68	(0.27)	30.41	7.03	30.1%
3	71.97	(0.83)	71.14	100.30	(0.83)	99.47	28.33	39.8%
4	89.88	(1.04)	88.84	126.09	(1.04)	125.05	36.21	40.8%
6	131.65	(1.52)	130.13	186.26	(1.52)	184.74	54.61	42.0%
Flat Rate	86.53	(1.00)	85.53	93.40	(1.00)	92.40	6.87	8.0%
Meter Size inches	Existing Rates			Proposed Rates			Variance	
	Gross Rate \$/bill	T/U Adj \$/bill	Net Rate \$/bill	Gross Rate \$/bill	T/U Adj \$/bill	Net Rate \$/bill	\$ \$/bill	% \$/bill
Monthly								
5/8	8.36	(0.10)	8.26	8.61	(0.10)	8.51	0.25	3.0%
3/4	8.54	(0.10)	8.44	8.90	(0.10)	8.80	0.36	4.3%
1	9.15	(0.11)	9.04	9.76	(0.11)	9.65	0.61	6.7%
1 1/2	9.94	(0.11)	9.83	10.91	(0.11)	10.80	0.97	9.9%
2	12.13	(0.14)	11.99	14.06	(0.14)	13.92	1.93	16.1%
3	28.23	(0.33)	27.90	37.27	(0.33)	36.94	9.04	32.4%
4	34.20	(0.39)	33.81	45.86	(0.39)	45.47	11.66	34.5%
6	48.13	(0.56)	47.57	65.92	(0.56)	65.36	17.79	37.4%
Municipalities	5.99	0.00	5.99	5.75	0.00	5.75	-0.24	-4.0%
Dewatering	6.37	0.00	6.37	5.75	0.00	5.75	-0.62	-9.7%
COMMODITY CHARGES								
	Existing Rates			Proposed Rates			Variance	
	Gross Rate \$/cu mtr	T/U Adj \$/cu mtr	Net Rate \$/cu mtr	Gross Rate \$/cu mtr	T/U Adj \$/cu mtr	Net Rate \$/cu mtr	\$ \$/cu mtr	% \$/cu mtr
Residential	0.880	(0.010)	0.870	0.921	(0.010)	0.911	0.041	4.7%
Commercial	0.880	(0.010)	0.870	0.921	(0.010)	0.911	0.041	4.7%
Industrial	0.880	(0.010)	0.870	0.921	(0.010)	0.911	0.041	4.7%
Municipalities								
All Other	0.576	(0.044)	0.532	0.628	(0.044)	0.584	0.052	9.8%
Galesburg	0.643	(0.049)	0.594	0.759	(0.049)	0.710	0.116	19.5%
Dewatering	0.880	(0.010)	0.870	0.921	(0.010)	0.911	0.041	4.7%

Table 22 (continued)
Wastewater Utility

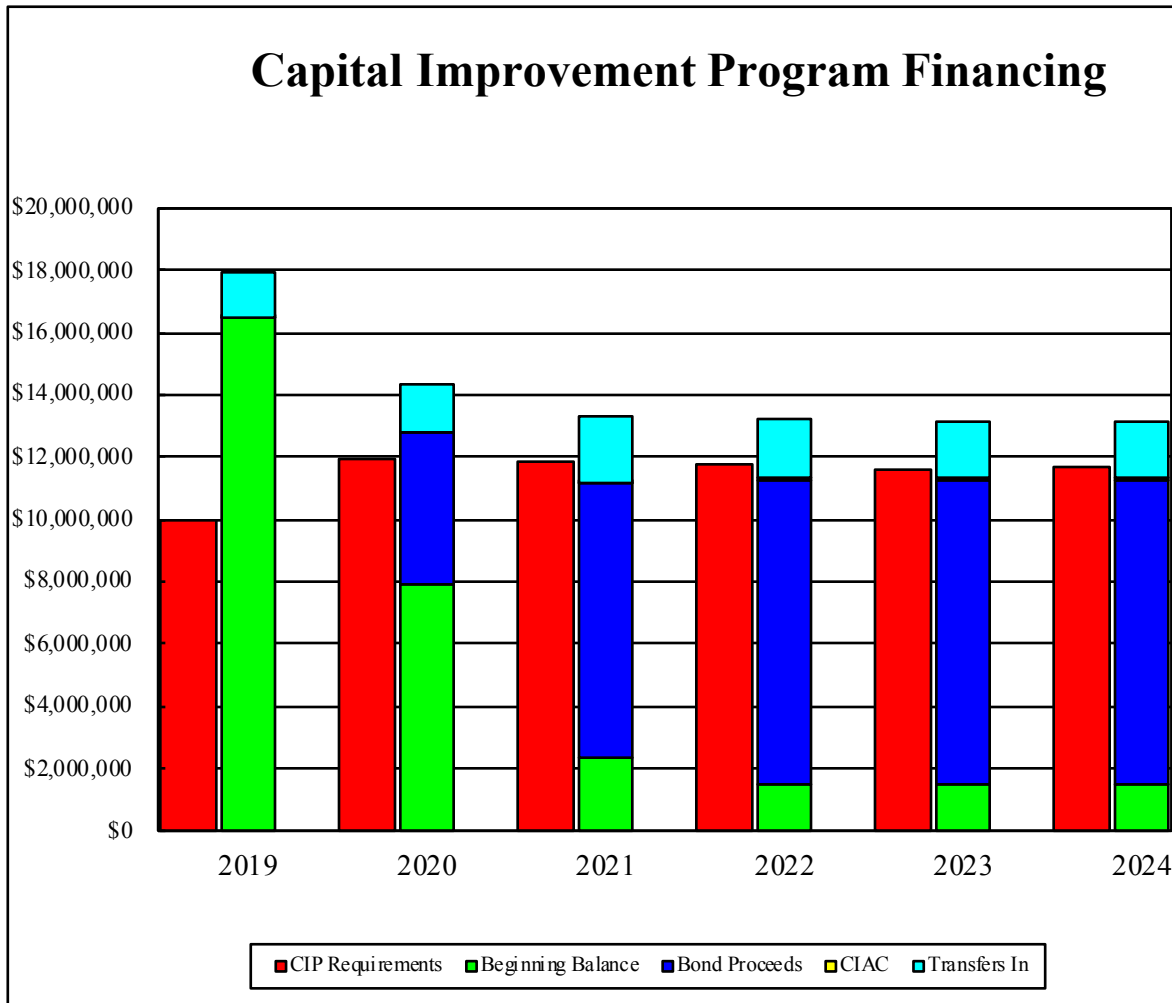
Calculation of Gross and Net (of True Up) Outside City Wastewater Rates
Test Year 2020

QUANTITY / QUALITY CHARGES

	Existing Rates			Proposed Rates			Variance	
	Gross Rate \$/cu mtr	T/U Adj \$/cu mtr	Net Rate \$/cu mtr	Gross Rate \$/cu mtr	T/U Adj \$/cu mtr	Net Rate \$/cu mtr	\$	%
Pfizer								
Commodity - %/cu mtr	0.199	(0.029)	0.170	0.218	(0.029)	0.189	0.019	11.2%
BOD - \$/kg	0.599	(0.089)	0.510	0.611	(0.089)	0.522	0.012	2.4%
TSS - \$/kg	0.669	(0.099)	0.570	0.795	(0.099)	0.696	0.126	22.1%
NH3 - \$/kg	3.066	(0.456)	2.610	3.055	(0.456)	2.599	(0.011)	-0.4%
Monthly Service Charge	6.37	0.00	6.37	5.75	0.00	5.75	(0.62)	-9.7%
Monitored Customers								
Commodity - %/cu mtr	0.500	(0.006)	0.494	0.509	(0.006)	0.503	0.009	1.8%
BOD - \$/kg	0.619	(0.007)	0.612	0.622	(0.007)	0.615	0.003	0.5%
TSS - \$/kg	0.674	(0.008)	0.666	0.796	(0.008)	0.788	0.122	18.3%
NH3 - \$/kg	3.173	(0.037)	3.136	3.119	(0.037)	3.082	(0.054)	-1.7%
Monthly Service Charge	6.37	0.00	6.37	5.75	0.00	5.75	(0.62)	-9.7%
Dewatering Customers								
Commodity - %/cu mtr	0.511	(0.006)	0.505	0.509	(0.006)	0.503	(0.002)	-0.4%
BOD - \$/kg	0.630	(0.007)	0.623	0.622	(0.007)	0.615	(0.008)	-1.3%
TSS - \$/kg	0.685	(0.008)	0.677	0.796	(0.008)	0.788	0.111	16.4%
NH3 - \$/kg	3.205	(0.037)	3.168	3.119	(0.037)	3.082	(0.086)	-2.7%
Monthly Service Charge	6.37	0.00	6.37	5.75	0.00	5.75	(0.62)	-9.7%

APPENDICES

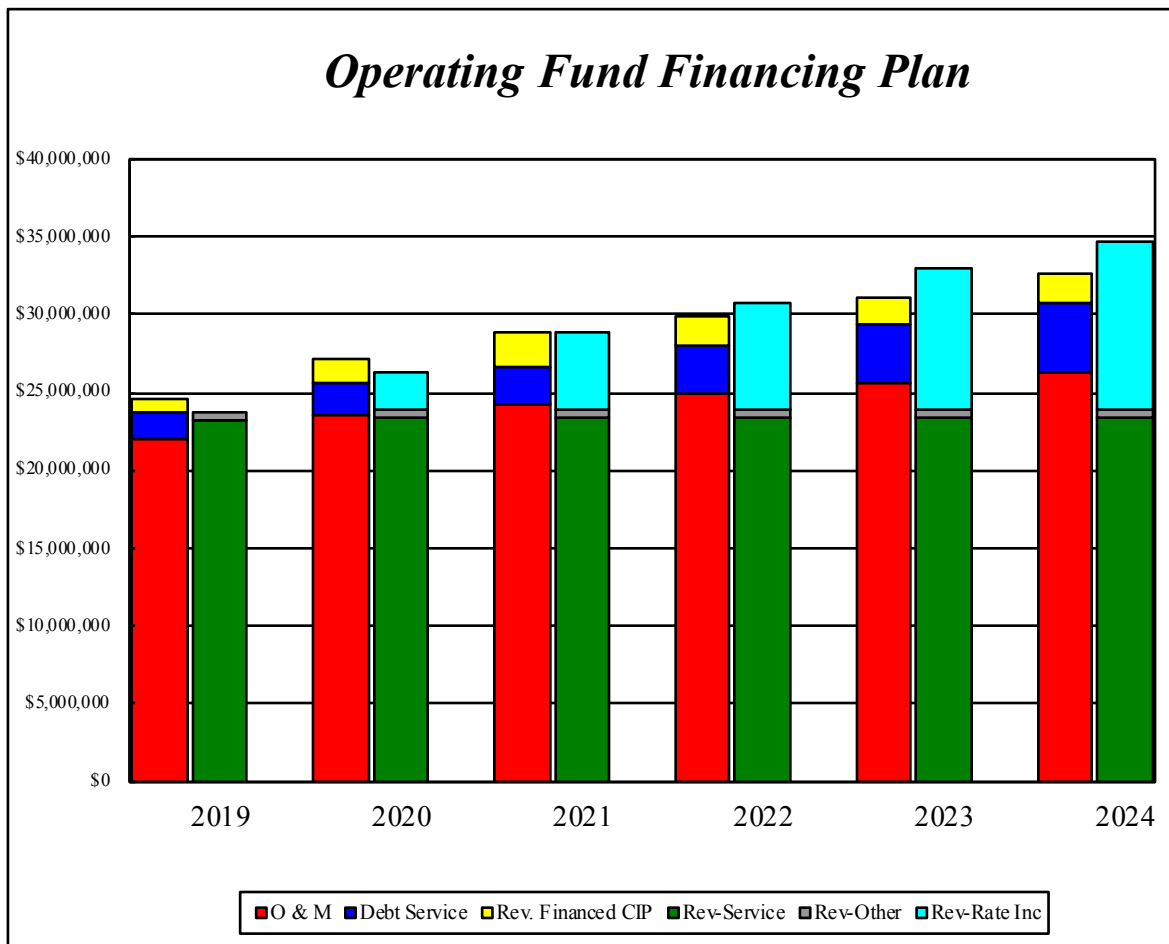
Wastewater Utility Financial Plan Summary



	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
CIP Req't	9,990,000	11,960,000	11,830,000	11,755,000	11,630,000	11,655,000
<u>Sources</u>						
Beg Balance	16,490,100	7,938,800	2,363,800	1,500,000	1,500,000	1,500,000
Bond Sale	0	5,000,000	9,000,000	10,000,000	10,000,000	10,000,000
less: Issue Exp	0	(145,000)	(205,000)	(220,000)	(220,000)	(220,000)
Revs / Op Fund:	1,408,700	1,500,000	2,141,200	1,945,000	1,820,000	1,845,000
CIAC	30,000	30,000	30,000	30,000	30,000	30,000
Total Sources	17,928,800	14,323,800	13,330,000	13,255,000	13,130,000	13,155,000
End Balance	7,938,800	2,363,800	1,500,000	1,500,000	1,500,000	1,500,000

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Wastewater Utility Financial Plan Summary

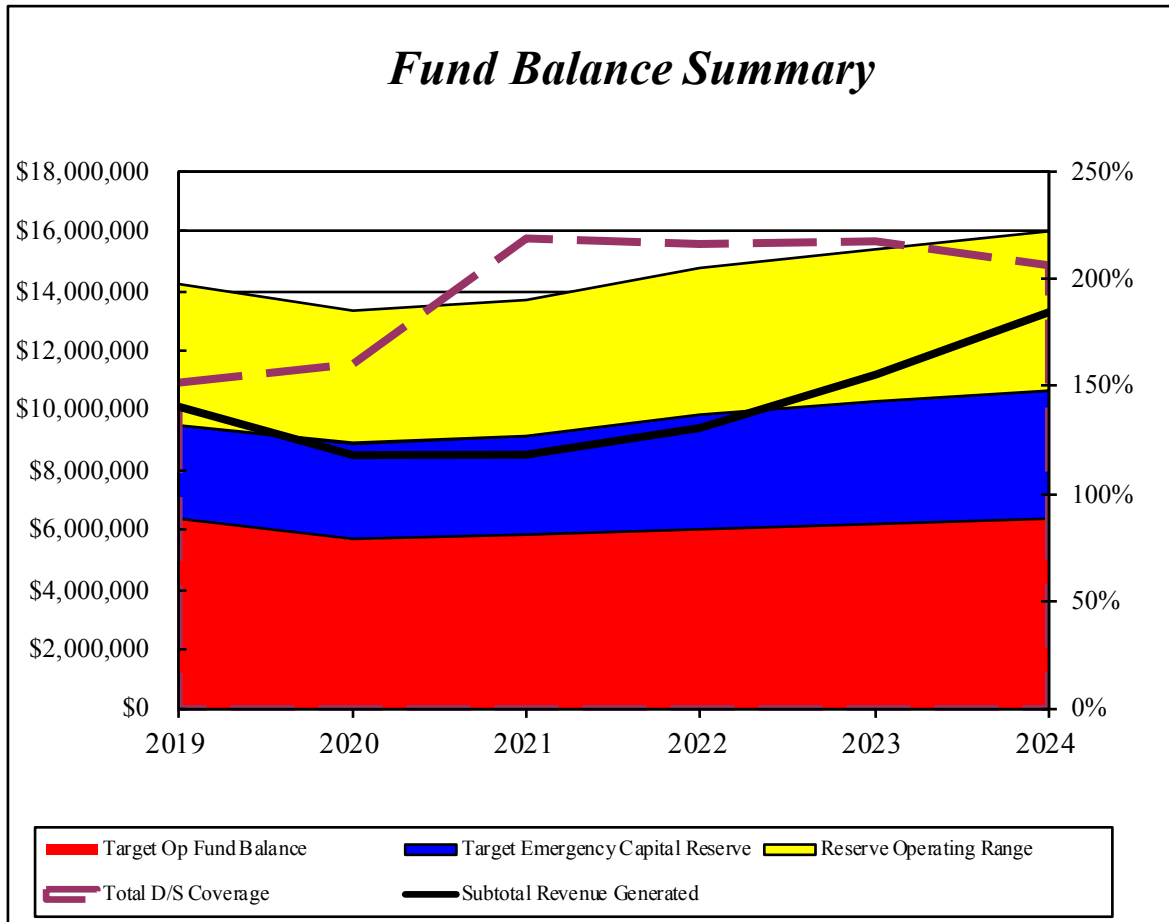


	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
<u>Revenue</u>						
Rates	23,250,600	23,484,900	23,484,900	23,484,900	23,484,900	23,484,900
Rate Increases	0.00%	10.00%	10.00%	7.00%	7.00%	5.00% 45.5%
Rate Increases	0	2,348,500	4,931,800	6,921,000	9,049,400	10,676,100
Other	472,700	402,300	412,200	424,300	450,800	485,100
Total Revenue	23,723,300	26,235,700	28,828,900	30,830,200	32,985,100	34,646,100
<u>Revenue Req'ts</u>						
O&M *	22,103,200	23,557,800	24,201,500	24,863,600	25,544,700	26,245,600
Debt Service	1,557,900	2,136,600	2,470,000	3,135,700	3,808,200	4,484,000
Rev. Financed C	1,000,000	1,500,000	2,141,200	1,945,000	1,820,000	1,845,000
Total Rev Req'ts	24,661,100	27,194,400	28,812,700	29,944,300	31,172,900	32,574,600
Balance - Rsrvs	(937,800)	(958,700)	16,200	885,900	1,812,200	2,071,500
True Up Recover	0	0	0	0	0	0
DS Covg	152%	161%	219%	216%	217%	206%

* Includes OPEB Debt Service and Contributions and PILOT

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Wastewater Utility Financial Plan Summary



	2019	2020	2021	2022	2023	2024
<u>Fund Balance Mins</u>						
Operating Fund	6,390,600	5,700,200	5,855,400	6,015,100	6,179,400	6,348,400
Emerg Cap	3,112,700	3,220,300	3,268,800	3,840,300	4,084,600	4,320,000
Subtotal	9,503,300	8,920,500	9,124,200	9,855,400	10,264,000	10,668,400
Range Max	14,255,000	13,380,800	13,686,300	14,783,100	15,396,000	16,002,600
<u>Projections</u>						
Operating Fund	6,979,200	5,286,400	5,254,100	5,568,500	7,136,400	8,972,500
Emerg Cap	3,112,700	3,220,300	3,268,800	3,840,300	4,084,600	4,320,000
Subtotal	10,091,900	8,506,700	8,522,900	9,408,800	11,221,000	13,292,500
DS Covg	152%	161%	219%	216%	217%	206%
Rate Increase	0.00%	10.00%	10.00%	7.00%	7.00%	5.00% 45.5%

TFG

CITY OF KALAMAZOO, MICHIGAN

ORDINANCE NO. _____

AN ORDINANCE TO AMEND SECTION 28-73 OF THE KALAMAZOO CITY CODE TO
CHANGE THE RATES CHARGED FOR WASTEWATER SERVICE

THE CITY OF KALAMAZOO ORDAINS:

1. **Section 1.** Sec. 28-73 of the Kalamazoo Code is hereby amended to read as follows:

“Sec. 28-73. **Rate schedules established.**

- (1) Each user of the treatment works shall pay charges equal to the sum of those set out in subsections (a) and (b) below, according to the service charge (meter reading, billing expense, and allocated infiltration/inflow costs) in (a) and the commodity charge (quantity of wastewater at average domestic strength and septic haulers at higher strengths as indicated) in (b). For nonmaster metered municipal (wholesale) customers (City of Galesburg and a portion of the City of Portage), the commodity charge has been increased above the master metered municipal (wholesale) customer class to account for infiltration and inflow.

Commercial or industrial users whose wastewater strengths are monitored and tested by city technical services staff shall pay quantity/quality charges (quantity, BOD, SS and NH3) in (c) below. Any commercial or industrial user who is not monitored by city technical services staff, and who believes that their wastewater strengths are below average domestic wastewater strengths (BOD – 239 mg/l, SS-259 mg/l, NH3 – 18.3 mg/l) may document their wastewater strengths to the satisfaction of the director (or pay the cost of sampling and testing by city technical services staff) and shall be allowed to pay quantity/quality rates in (c) below.

Septage haulers whose wastewater strengths are below the amounts in (2) below may document their wastewater strengths to the satisfaction of the director (or pay the cost of sampling and testing by city technical services staff) and shall be allowed to pay quantity/quality rates in (c) below.

- (a) **Service Charges.** The following service charges shall apply to all users connected or required to be connected regardless of quantity of wastewater discharged. The service charge is a user charge, and it contains billing and inflow and infiltration charges for retail customers. For municipal (wholesale) customers with a master meter, the service charge contains billing costs only since inflow and infiltration are included in their metered flow.

Service Charges (minimum charges per billing period):

Inside City Quarterly

Size of meter	OM&R	Capital	Total
(inches)	(\$/bill)	(\$/bill)	(\$/bill)
5/8	10.63	(1.22)	9.41
3/4	11.12	(1.35)	9.77
1	12.58	(1.71)	10.87
1 1/2	14.53	(2.20)	12.33
2	19.90	(3.54)	16.36
3	59.44	(13.46)	45.98
4	74.08	(17.12)	56.96
6	108.25	(25.69)	82.56
Flat Rate	64.96	(9.35)	55.61

Outside City Quarterly

Size of meter	OM&R	Capital	Total
(inches)	(\$/bill)	(\$/bill)	(\$/bill)
5/8	10.63	3.57	14.20
3/4	11.12	3.93	15.05
1	12.58	5.03	17.61
1 1/2	14.53	6.49	21.02
2	19.90	10.51	30.41
3	59.44	40.03	99.47
4	74.08	50.97	125.05
6	108.25	76.49	184.74
Flat Rate	64.96	27.44	92.40

Inside City Monthly

Size of meter	OM&R	Capital	Total
(inches)	(\$/bill)	(\$/bill)	(\$/bill)
5/8	7.37	(0.40)	6.97
3/4	7.54	(0.45)	7.09
1	8.03	(0.58)	7.45
1-1/2	8.68	(0.74)	7.94
2	10.47	(1.19)	9.28
3	23.64	(4.48)	19.16
4	28.53	(5.71)	22.82
6	39.91	(8.56)	31.35

Dewatering	6.57	(0.03)	6.54
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Outside City Monthly

Size of meter (inches)	OM&R (\$/bill)	Capital (\$/bill)	Total (\$/bill)
5/8	7.37	1.14	8.51
3/4	7.54	1.26	8.80
1	8.03	1.62	9.65
1-1/2	8.68	2.12	10.80
2	10.47	3.45	13.92
3	23.64	13.30	36.94
4	28.53	16.94	45.47
6	39.91	25.45	65.36
Municipalities	5.75	0.00	5.75
Dewatering	5.75	0.00	5.75
Septage Haulers	5.75	0.00	5.75

b) Commodity Charges

Inside City

	OM&R (\$/m3)	Capital (\$/m3)	Total (\$/m3)
Residential (*)	0.640	(0.096)	0.544
Commercial	0.640	(0.096)	0.544
Industrial	0.640	(0.096)	0.544
Dewatering	0.640	(0.096)	0.544

Outside City

	OM&R (\$/m3)	Capital (\$/m3)	Total (\$/m3)
Residential (*)	0.640	0.271	0.911
Commercial	0.640	0.271	0.911
Industrial	0.640	0.271	0.911
Dewatering	0.640	0.271	0.911
Municipalities: Mastered-Metered	0.465	0.119	0.584
Municipalities: Non-Master Metered	0.535	0.175	0.710

M3 = Cubic Meters

(*) Summer water consumption used in calculation of wastewater bills shall not exceed 120% of winter quarter consumption for quarterly users whose winter quarter water consumption is less than two hundred (200) cubic meters and monthly users whose winter quarter water does not exceed sixty-six (66) cubic meters per month.

c) Quality/Quantity Charges

Commodity Charge

	OM&R (\$/m3)	Capital (\$/m3)	Total (\$/m3)
<u>Monitored Customers</u>			
Pfizer	0.124	0.065	0.189
Graphic Packaging	0.086	(0.019)	0.067
Dewatering:			
Inside City	0.289	(0.073)	0.216
Outside City	0.289	0.214	0.503
Industrial-Inside City	0.289	(0.073)	0.216
Industrial–Outside City	0.289	0.214	0.503

BOD Strength Charge

	OM&R (\$/Kg)	Capital (\$/Kg)	Total (\$/Kg)
<u>Monitored Customers</u>			
Pfizer	0.525	(0.003)	0.522
Graphic Packaging	0.525	(0.035)	0.490
Dewatering:			
Inside City	0.525	(0.035)	0.490
Outside City	0.525	0.090	0.615
Industrial-Inside City	0.525	(0.035)	0.490
Industrial –Outside City	0.525	0.090	0.615

SS Strength Charge

	OM&R (\$/Kg)	Capital (\$/Kg)	Total (\$/Kg)
<u>Monitored Customers</u>			
Pfizer	0.673	0.023	0.696
Graphic Packaging	0.673	(0.047)	0.626

Dewatering:			
Inside City	0.673	(0.047)	0.626
Outside City	0.673	0.115	0.788
Industrial-Inside City	0.673	(0.047)	0.626
Industrial –Outside City	0.673	0.115	0.788

NH3-N Strength Charge

	OM&R (\$/Kg)	Capital (\$/Kg)	Total
<u>Monitored Customers</u>			
Pfizer	2.753	(0.154)	2.599
Graphic Packaging	2.753	(0.130)	2.623
Dewatering:			
Inside City	2.753	(0.130)	2.623
Outside City	2.753	0.329	3.082
Industrial-Inside City	2.753	(0.130)	2.623
Industrial –Outside City	2.753	0.329	3.082

Kg= Kilogram

- (2) In addition to the above charges, each user shall pay the charges for miscellaneous service and monitoring, as determined by the Director. The charges may be revised by the Director whenever, in her/his opinion, it is deemed appropriate. All charges shall be paid to the Department of Public Services, and all funds received as result of the miscellaneous charges will be credited to the wastewater system receiving account.
- (3) Any person or entity who is responsible for discharging prohibited material shall be charged the actual expense incurred by the city for handling, treatment and/or removal of said material in the wastewater system.
- (4) Any user who is responsible for damage to the wastewater system shall be charged the full cost of repair of damage to the wastewater system. The cost shall include, but is not limited to, labor, equipment, materials, and administrative expense, interest on borrowed funds, engineering, legal, or other professional fees or expenses charged to the city by other utilities or departments and any and all fines, costs, penalties, or damages imposed upon the city by the United States, the State of Michigan, or any court or administrative agency.
- (5) Users will be notified at least once per year how much they are being charged for their proportional operation, maintenance, and replacement costs, as required by United States Environmental Protection Agency regulations. (Ord. No. 1649, &1, 3-9-98).

The rates established by this ordinance amendment shall go into effect for wastewater bills rendered on or after **March 2, 2020**.

REPEALER

All former ordinances or parts of ordinances conflicting or inconsistent with the provisions of this ordinance are hereby repealed.

SEVERABILITY

If any section, subsection, sentence, clause, phrase or portion of this ordinance is for any reason held invalid or unconstitutional by any Court of competent jurisdiction, said portion shall be deemed a separate, distinct and independent provision and such holding shall not affect the validity of the remaining portions of this ordinance.

CERTIFICATE

The foregoing is a true and complete copy of an ordinance adopted by the City Commission of the City of Kalamazoo at a regular meeting held on [REDACTED]. Public notice was given and the meeting was conducted in full compliance with the Open Meetings Act, (PA 267,1976). Minutes of the meeting will be available as required by the Act, and the ordinance was duly recorded, posted, and authenticated by the Mayor and City Clerk as required by the Charter of said City.

David Anderson, Mayor

Scott A. Borling, City Clerk



City Commission Agenda Report

City of Kalamazoo

Date: **2/3/2020**

Item: **F.8.**

TO: Mayor Anderson, Vice Mayor Griffin, and City Commissioners

FROM: James K. Ritsema, City Manager
Reviewed by: Chief Karianne Thomas
Prepared by: Assistant Chief Jeff VanderWiere

DATE: February 3, 2020

SUBJECT: COK/WMU Affiliation Agreement for Internships at Public Safety

RECOMMENDATION:

It is recommended that the City Commission approve and authorize the City Manager to sign an affiliation agreement between Western Michigan University (WMU) and the Department of Public Safety allowing for WMU students to complete internships with KDPS.

BACKGROUND:

The Department of Public Safety has had a long standing relationship with Western Michigan University's Criminal Justice program. In 2019, WMU asked that an affiliation agreement be established to outline each entities role and also to protect WMU and the COK from any potential liability that arises from have student interns.

STRATEGIC VISION ALIGNMENT:

Relevant Priority Based Budgeting Program (program name and description):

Good Governance

Strategic Goal Impact:

COMMUNITY ENGAGEMENT:

Appropriate Depth of Engagement

Discussion: The agreement did not require an community engagement

Engagement/Communication Tools

FISCAL IMPACT:

This agreement has no fiscal impact as interns from WMU serve on a volunteer basis and work within departments of Public Safety learning about various roles of the organization that already exist.

**WESTERN MICHIGAN UNIVERSITY
COLLEGE OF ARTS AND SCIENCES
AFFILIATION AGREEMENT**

Effective this [date], the Board of Trustees of Western Michigan University (WMU), on behalf of its College of Arts and Sciences (Department of Sociology) (COLLEGE) and the City of Kalamazoo, a municipal corporation and political subdivision of the State of Michigan (HOST), enter this Agreement to work together to provide an internship experience for the COLLEGE'S registered students (Agreement).

WHEREAS, the purpose of this Agreement is to guide and direct the parties respecting their affiliation, working arrangements, and agreements to provide high-quality learning experiences for students in the COLLEGE.

WHEREAS, the Parties intend this Agreement to meet requirements of accreditation standards for programs in the COLLEGE related to Affiliation Agreements.

WHEREAS, neither party intends for this Agreement to alter in any way its respective legal rights or its legal obligations to any third party.

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained herein, the parties identified above agree as follows:

A. Responsibilities of the College

1. The COLLEGE will plan and determine the adequacy of the educational experience of the students in theoretical background, basic skill, professional ethics, attitude and behavior. COLLEGE shall assign to the HOST only those students who have satisfactorily completed the prerequisite portions of the COLLEGE's curriculum.

2. The COLLEGE will retain ultimate responsibility for the education and assessment of its students. The COLLEGE's representative for this Agreement shall be a faculty member appointed and assigned by the COLLEGE, who will be responsible for education, including assessment to determine the final grade for the internship course.

3. Where applicable, the COLLEGE will advise all students assigned to the HOST facilities regarding the confidentiality of client records and client information imparted during the educational experience. The COLLEGE will also advise all students that any confidentiality requirements extend beyond the termination or expiration of this Agreement.

4. The COLLEGE will inform the student of his/her responsibility to provide evidence to the HOST of any required criminal background checks when requested. The COLLEGE will also inform students that they may be required to undergo a drug test or other similar screening tests pursuant to the HOST'S policies and practices.

5. The COLLEGE will advise students that they are required to comply with HOST rules, regulations, and procedures.

6. The COLLEGE will provide instruction to the HOST'S staff with respect to the COLLEGE's expectations regarding assessment of the COLLEGE's students at the HOST.

7. The COLLEGE is a public entity entitled to governmental immunity protections under applicable state law. Therefore, the COLLEGE shall provide occurrence-based liability coverage with limits of at least \$1,000,000 per occurrence and \$3,000,000 annual aggregate in the event governmental immunity protections are determined by a court of competent jurisdiction to not apply. If requested by the HOST, the COLLEGE shall provide a certificate of insurance demonstrating coverage for students completing education at the HOST.

B. Responsibilities of the HOST

1. The HOST will maintain a positive, respectful, and adequately resourced learning environment so that sound educational experiences can occur. Therefore, the HOST will provide students and faculty with access to appropriate resources for student education including: a) clients at HOST facilities in an appropriately supervised environment, in which the students can complete the COLLEGE's curriculum; b) student security badges or other means of secure access when necessary; and c) any other agreed-upon resources necessary to the educational experience.

2. The HOST will retain full authority and responsibility for client or consumer care and quality standards, and will maintain a level of care that meets generally accepted standards conducive to satisfactory instruction. While in HOST's facilities, students will have the status of trainees, will not replace HOST staff and are not to render unsupervised client care and/or services. All services rendered by students must have educational value and meet the goals of the educational program. HOST and its staff will provide such supervision of the educational activities as is reasonable and appropriate to the circumstances and to the student's level of education.

3. The HOST staff will, upon request, assist the COLLEGE in the assessment of the learning and performance of participating students by completing assessment forms provided by the COLLEGE and returned to the COLLEGE in a timely fashion but in case no later than the last day of classes for the semester or session.

4. The HOST will provide orientation of COLLEGE's participating students as to the HOST'S rules, regulations, policies, and procedures, as well as provide copies of those rules, regulations, policies, and procedures as appropriate. The HOST shall notify the COLLEGE of its requirements of an acceptable criminal background check, required immunizations, and drug tests.

5. The HOST agrees to comply with applicable state and federal workplace safety laws and regulations. In the event a student is exposed to an infectious or environmental hazard or other occupational injury while at the HOST, the HOST, upon notice of such incident from the student, will provide the same emergency care as it provides to its employees.

6. The HOST will not create or maintain educational records and reports relating to individual students' participation in the educational program except for those agreed-upon reports from HOST supervisors that are necessary to the University's monitoring of student progress. The HOST will not release information contained in educational records and reports, but will, instead, refer all requests for information regarding such records to the University.

7. The HOST is a public entity entitled to governmental immunity protections under applicable state law. The HOST does have existing policies of insurance that provide occurrence-based liability coverage with limits of at least \$1,000,000 per occurrence and \$3,000,000 annual aggregate in the event governmental immunity protections are determined by a court of competent jurisdiction to not apply. If requested by the COLLEGE, the HOST shall provide a certificate of insurance coverage.

8. The HOST will provide written notification to the COLLEGE promptly if a claim arises involving a student. The HOST and COLLEGE agree to share such information in a manner that protects such disclosures from discovery to the extent possible under applicable federal and state joint defense laws.

9. The HOST shall identify a site coordinator from among its staff who will communicate and cooperate with the COLLEGE to ensure faculty and student access to appropriate resources for the educational experience.

C. Mutual Responsibilities

1. Each party will identify its Representative(s) on or before the execution of this Agreement.

2. The parties will work together to maintain an environment of high quality client care. At the request of either party, a meeting or conference will promptly be held between the COLLEGE and HOST representatives to resolve any problems or develop any improvements in the operation of the training program.

3. The HOST will provide qualified and competent staff members in adequate number for the instruction and supervision of students using the HOST facilities as required by the program.

4. The COLLEGE and the HOST will not discriminate against any employee, applicant or student enrolled in their respective programs because of age, creed, gender identity, national origin, race, sex, sexual orientation, disability or any other basis protected by law. With respect to disability, the disability must not be such as would, with or without reasonable accommodation, preclude the student's effective participation in the internship experience.

5. The COLLEGE, including its faculty, staff, and students, and HOST share

responsibility for creating an appropriate learning environment that includes both formal learning activities and the attitudes, values, and informal "lessons" conveyed by individuals who interact with the student. The parties will cooperate to evaluate the learning environment (which may include on-site visits) to identify positive and negative influences on the maintenance of professional standards, and to conduct and develop appropriate strategies to enhance the positive and mitigate the negative influences. HOST shall require its employees who interact with students to communicate student violations to the COLLEGE.

6. HOST may immediately remove from the premises any student who is a direct threat to the health or safety of the HOST, its employees, or its clients. HOST retains the right to suspend or terminate any student's participation at the HOST. The HOST will immediately notify the appropriate office of the COLLEGE if such an action is required and the reasons for such action. The COLLEGE may terminate a student's participation when, in its sole discretion, it determines that further participation by the student would no longer be appropriate. The COLLEGE will notify the HOST if such action is required.

7. In the event the COLLEGE does not agree with HOST'S refusal to accept a student or request for suspension or termination of a student's participation, it will promptly (no more than five working days after receipt of the written notice or request from the HOST) provide the HOST with a written statement setting forth the basis for any such disagreement

8. If a court or administrative agency of competent jurisdiction finds that the HOST acted unlawfully in refusing to accept, or requesting the withdrawal of, a student, the HOST will defend, indemnify, and hold the COLLEGE harmless from any and all claims and costs arising from the requested withdrawal or refusal to accept any student to which the COLLEGE provided its timely written statement of disagreement. The COLLEGE will promptly notify the HOST of any such claim, provide the HOST with an opportunity to defend, and provide the HOST with reasonable assistance, except financial, in making such defense. The COLLEGE will not settle any such claim without the consent of the HOST.

9. In no event is the HOST required to accept a prospective student if the HOST determines, in its sole judgment, that it does not have the capacity or opportunity to provide an appropriate high quality learning environment, or that a prospective student is not qualified for an internship with the HOST.

D. Intellectual Property Rights and Ownership

Any intellectual property rights owned by a Party before the date of this Agreement and during the term of this Agreement will remain the property of that Party. Nothing contained in this Agreement will affect the absolute ownership rights of any Party in such Party's intellectual property rights. Any intellectual property developed by a student while at the HOST shall remain the property of that student.

E. Term and Termination

This Agreement is effective upon execution by both parties to the covered training experience(s) and will continue for a period of five years, unless terminated by either party. Either Party may terminate this Agreement at any time and for any reason by providing at least ninety days' prior written notice to the other party. Should notice of termination be given under this Section, students already scheduled to train at HOST may at the HOST's unilateral discretion be permitted to complete any previously scheduled assignment at HOST.

F. Employment Disclaimer

The students participating in the program will not be considered employees or agents of the HOST or COLLEGE for any purpose. Students will not be entitled to receive any benefits of employment from HOST or COLLEGE, including but not limited to, health care or workers' compensation benefits, vacation, or sick time. HOST will not be required to purchase any form of insurance for the benefit or protection of any student of the COLLEGE.

G. No Agency Relationship Between the Parties.

Nothing in this Agreement is intended to or shall be construed to constitute or establish an agency, employer/employee, partnership, franchise, or fiduciary relationship between the parties. Neither party shall have the right or authority, nor shall it hold itself out to have the right or authority, to bind the other party; nor shall either party be responsible for the acts or omissions of the other except as provided specifically to the contrary herein.

H. Assignment

Neither Party will assign this Agreement without the prior written consent of the other.

I. Governmental Immunity

The COLLEGE and the HOST are public entities entitled to protections of governmental immunity under applicable law. It is specifically understood and agreed to that nothing contained in this paragraph or elsewhere in this Agreement will be construed as: an express or implied waiver by the COLLEGE or the HOST of its governmental immunity or of its state governmental immunity; an express or implied acceptance by COLLEGE or HOST of liabilities arising as a result of actions which lie in tort or could lie in tort in excess of the liabilities allowable under the applicable governmental immunity laws; a pledge of the full faith and credit of a debtor contract; or, as the assumption by one party of a debt, contract, or liability of the other party.

J. No Special Damages

In no event shall either party be liable hereunder (whether in an action in negligence, contract or tort or based on a warranty or otherwise) for any indirect, incidental, special or consequential damages incurred by the other party or any third party.

K. Notices

All notices or demands required or permitted by the terms of this Agreement will be given in writing and delivered to the parties at the following addresses. Electronic notification shall/shall not be sufficient.

To College: Carla Koretsky, Dean
College of Arts and Sciences
Western Michigan University
(269) 387-4350 carla.koretsky@wmich.edu

To Host: [Name]
[Address]
[Phone/e-mail]

L. Severability

The invalidity of any provision of this Agreement will not affect the validity of any other provisions.

M. Headings

Headings in this Agreement are for convenience only.

N. Entire Agreement

This Agreement contains the entire Agreement of the parties as it relates to this subject matter and may be modified only by additional written provisions contained in a properly executed amendment or agreement.

O. Certification of Authority to Sign Agreement

The persons signing this Agreement on behalf of the parties certify by their signatures that they are duly authorized to sign this Agreement on behalf of said parties and that this Agreement has been authorized by said parties.

The Board of Trustees of Western Michigan University	City of Kalamazoo
By: _____	By: _____

Carla Koretsky, Dean College of Arts and Sciences	[Printed Name and Title]
[Date]	[Date]
Christopher Cheatham Vice Provost Budget & Personnel	[Date]



City Commission Agenda Report

City of Kalamazoo

Date: **2/3/2020**

Item: **F.9.**

TO: Mayor Anderson, Vice Mayor Griffin, and City Commissioners

FROM: James K. Ritsema, City Manager
Reviewed by: James J. Baker, PE, Public Services Director & City Engineer
Prepared by: Stephen A. Skalski, PE, Assistant City Engineer – Water Resources

DATE: February 3, 2020

SUBJECT: Station 18 Public Utility Easement

RECOMMENDATION:

It is recommended that City Commission approve and accept an easement with Consumers Energy for Electrical Utility Equipment Installation, and authorize the City Manager to sign all related and necessary documents regarding the acquisition of the easement.

BACKGROUND:

Consumers Energy Electrical Division contacted Public Services as they would like to perform upgrades to their Electrical Substation located near the City of Kalamazoo's Station 18 Wellfield on Pennway Street. The upgrades require the extension of down guys onto the wellfield property.

All utility equipment is required to be located either on Consumers Energy owned property, public right-of-way, or an easement. As such, Consumers Energy requested an easement with the City of Kalamazoo for the extension of the down guys onto wellfield property. Public Services has reviewed the proposed project and determined that there will be no negative impact for the proposed work on any existing or future use of the wellfield, and with that, recommends this agreement for approval.

STRATEGIC VISION ALIGNMENT:

Relevant Priority Based Budgeting Program:

Program Name and Description

Records Management Tracking, review, and oversight of department records.

This program/project has a high degree of impact on the following Strategic Goal(s):
Safe Community – Creating a safe environment for living, working, and playing.

COMMUNITY ENGAGEMENT:

Appropriate Depth of Engagement
Internal

Discussion:

Engagement/Communication Tools

FISCAL IMPACT:

There is no fiscal impact to the City, as Consumers Energy will pay for the cost for recording the easement.

EASEMENT FOR GUY STUB ANCHOR POLE, GUY WIRES, AND ANCHORS

Master Tract# ROW000916058937
SAP# 1050220686
Design# 11082214
Agreement# MI00000046622

Parties: "Owner" is CITY OF KALAMAZOO PUBLIC SERVICES, a Michigan municipal corporation

Owner's mailing address is 241 West South Street, Kalamazoo, Michigan 49007

"Consumers" is CONSUMERS ENERGY COMPANY, a Michigan corporation. Consumers' address is One Energy Plaza, Jackson, Michigan 49201.

Grant of Easement: For good and valuable consideration [exempt from real estate transfer tax pursuant to MCLA 207.505(f) and from State real estate transfer tax pursuant to MCLA 207.526(f)], Owner grants Consumers a permanent easement to enter "Owner's Land" to construct, operate, inspect, maintain, replace, improve, and remove a guy stub anchor pole, guy wires, and anchors on, over, and across a portion of "Owner's Land," called "the Easement Area." Owner's Land is in the City of Kalamazoo, County of Kalamazoo, and State of Michigan and is described in attached Exhibit A. The Easement Area is within Owner's Land and is described in attached Exhibit B.

Trees and Other Vegetation: Consumers shall have the right from time to time hereafter to enter Owner's Land to trim, cut down, and otherwise remove and control any trees, brush, roots, and other vegetation, whether inside or outside the Easement Area, that Consumers believes may interfere with the construction, operation, or maintenance of the guy stub anchor pole, guy wires, and anchors.

Buildings/Structures: Owner shall not locate any buildings or other structures on the Easement Area. If Owner violates this provision, Owner shall reimburse Consumers for any expenses Consumers incurs correcting the violation. If Consumers corrects the violation by relocating the guy stub anchor pole, guy wires, and anchors on Owner's Land, this easement shall automatically apply to such relocated facilities.

Exercise of Easement: Consumers' nonuse or limited use of this Easement shall not preclude Consumers' later use of this Easement to its full extent.

Successors: This Easement shall bind and benefit Owner's and Consumers' respective heirs, successors, lessees, licensees, and assigns.

SIGNATURE PAGE TO FOLLOW

Date: _____

Owner: CITY OF KALAMAZOO PUBLIC SERVICES, a Michigan
municipal corporation

By: Jim Ritsema
Its: City Manager

Acknowledgment

The foregoing instrument was acknowledged before me in _____ County, Michigan,
on _____ by City Manager of the City of Kalamazoo
Date
, a Michigan municipal corporation, on behalf of the corporation.

Notary Public

County, Michigan
Acting in _____ County
My Commission expires: _____

PROPERTY OWNERS MAIL
SIGNED EASEMENT TO:

Adam Hillman #225-34
Consumers Energy Company
2500 E Cork Street
Kalamazoo MI 49001

Preparer's By:
Adam Hillman 01/02/2020
Consumers Energy Company
One Energy Plaza
Jackson, MI 49201

REGISTER OF DEEDS OFFICE USE
ONLY

Return recorded instrument to:
Carrie J. Main, EP7-287
Consumers Energy Company
One Energy Plaza
Jackson, MI 49201

EXHIBIT A

Owner's Land

Land situated in the City of Kalamazoo, County of Kalamazoo, State of Michigan:

Beginning in the north line of the South 1/2 of the Northwest 1/4 of the Southwest 1/4 of Section 36, Town 2 South Range 11 West, 33 feet East of the west line of Section 36; thence East 540 feet along said north line; thence South 343.87 feet parallel to said west line to the north line of Highway US 12 (Kalamazoo South Belt); thence Southwesterly thereon to the west line of Section 36; thence North along said west line to a point 33 feet West and 525.08 feet South of the place of beginning; thence East 33 feet; thence North 525.08 feet to the point of beginning.

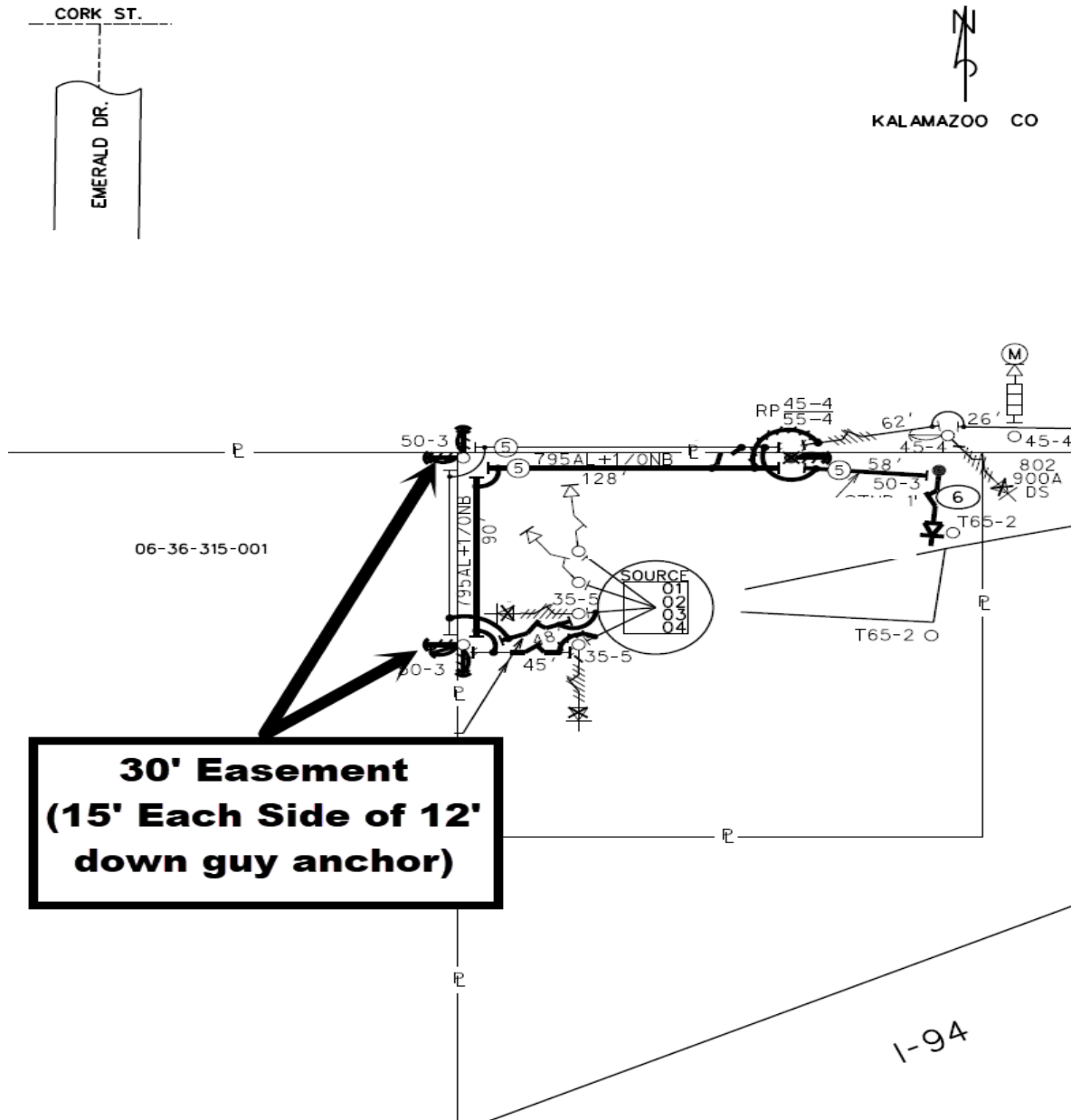
Parcel ID: 06-36-315-001

Also known as 4131 Pennway Street, Kalamazoo, Michigan 49001

EXHIBIT B

Easement Area

A 30.00 foot-wide strip of land, being 15.00 feet on each side of a 12.00 foot down guy anchor as seen in the attached drawing.





City Commission Agenda Report

City of Kalamazoo

Date: **2/3/2020**

Item: **F.10.**

TO: Mayor Anderson, Vice Mayor Griffin, and City Commissioners

FROM: James K. Ritsema, City Manager
Prepared by: Kevin Ford, Shared Prosperity Kalamazoo (SPK) Coordinator

DATE: February 3, 2020

SUBJECT: Approve Candidate for the Shared Prosperity Kalamazoo (SPK) Organizing Committee

RECOMMENDATION:

It is recommended that the City Commission appoint Alyssa Stewart to the Shared Prosperity Kalamazoo (SPK) Organizing Committee.

BACKGROUND:

Ms. Stewart is the Vice President of Impact & Engagement for United Way of the Battle Creek & Kalamazoo Region with years of experience actively engaging in systems-level change to better assist human service organizations that help SPK populations reach their goals. She has a deep and thorough understanding of community needs and what systems-level gaps need to be addressed to shift conditions for families and the community.

Shared Prosperity Kalamazoo (SPK) is an initiative that originated with the Kalamazoo City Commission's decision in February 2014 to make poverty reduction a key priority for the city. Under the leadership of Mayor Bobby Hopewell and the City Commission, Shared Prosperity Kalamazoo was established to place emphasis on what we want to achieve—more broadly shared prosperity, not just the alleviation of poverty. In an attempt to realize this objective, SPK identified three distinct but interrelated goals to carry out its work: 1) increase access to good jobs; 2) ensure the healthy growth, development, and learning of all our youth; and 3) create strong families.

As part of the SPK initiative the City sought to engage a consultant to provide technical assistance in establishing an action plan and an ongoing coalition structure recommendation.

The consultant-led planning process took place over a four-month period in fall 2017 to shape a collaborative vision for SPK and create a prioritized action plan of initiatives for the City and its SPK partners to explore. This process yielded a subsequent action plan that was unanimously approved by City Commissioners in March 2018.

The 2018 SPK Action Plan lays out an ongoing coalition governance structure consisting of an Organizing Committee and Goal Teams that will concentrate efforts on the three primary SPK focus areas—**children and youth, jobs, and families**. The primary responsibility of the Organizing Committee will be to convene stakeholders for conversations and accountability around SPK recommendations and core principles. In addition, SPK Organizing Committee members will track and encourage progress on SPK strategies as well as lead conversations about the deeper systemic changes that are needed to shift conditions for families and the community. The Organizing Committee will be supported by the City SPK staff team.

STRATEGIC VISION ALIGNMENT:

Relevant Priority Based Budgeting Program:

Program Name and Description

This program/project has a high degree of impact on the following Strategic Goal(s):



Shared Prosperity - Abundant opportunities for all people to prosper

COMMUNITY ENGAGEMENT:

Appropriate Depth of Engagement

Collaborate (two-way conversation) - the community will have a chance to shape the project by providing feedback.

FISCAL IMPACT:

There is no fiscal impact associated with this action.

Roll Call

A special work session of the Kalamazoo City Commission was held on Monday, January 13, 2020 at 6:00 p.m. in Conference Rooms A and B at the Kalamazoo Water Reclamation Plant, located at 1415 Harrison Street. The purpose of the meeting was to discuss utility rates.

COMMISSIONERS PRESENT:

Mayor David Anderson
Vice Mayor Patrese Griffin
Eric Cunningham*
Jeanne Hess
Erin Knott*
Chris Praedel

COMMISSIONERS ABSENT:

Jack Urban**

*Commissioners Cunningham and Knott participated in the meeting by phone.

Also present were City Manager Jim Ritsema, City Attorney Clyde Robinson, and City Clerk Scott Borling.

2020-0019
Presentation and
Discussion re: Utility
Rates

Deputy City Manager Jeff Chamberlain provided introductory remarks for a PowerPoint Presentation entitled *2020 Proposed Utility Rates*. Deputy City Manager Chamberlain reviewed the meeting agenda and introduced Public Services Director James Baker and Bart Foster of The Foster Group, the City's utility rate consultant. A copy of the PowerPoint slides was filed with the papers for this meeting.

*Commissioner Urban arrived at 6:07 p.m.

Public Services Director James Baker provided an overview of the water and wastewater systems and the documents and processes used to develop the Capital Improvement Plan (CIP) for the utilities. Director Baker presented the following major capital needs of the water system for the next five years:

- replacement of lead service lines
- replacement of cast iron water main
- replacement of aging elevated storage facilities (water towers)
- station, treatment, and process improvements
- PFAS response and prevention
- metering

In response to question from Commissioner Urban, Director Baker stated the timing of the Parkview Avenue street and water transmission line project had moved several times, but the delay did not affect the City's ability to use the new water tower near the intersection of US-131 and I-94. Director Baker explained the Parkview transmission line project needed to be coordinated with the 33rd Street transmission line installation.

In response to a question from Mayor Anderson, Director Baker explained only 2 of 16 pumping stations had iron removal capabilities, and it had been a challenge to manage the setpoint for treatment at these stations. Director Baker stated installing computer controls, adding new water towers, and replacing the current pumps with variable speed pumps would all help address the iron issue.

In response to questions from Commissioner Praedel about the prioritization of lead service line replacements and how water main breaks were detected, Director Baker stated anytime a customer's water tested above the limits for lead, the City replaced the service lines. Director Baker also indicated all lead service lines were replaced during road projects. Director Baker stated only big water main breaks could be detected with sensors; in most cases, water main breaks were reported by residents and Public Safety Officers.

In response to a question from Mayor Anderson, Director Baker stated the City provided free water filters and testing where its records indicated non-copper service lines.

In response to a question from Commissioner Hess, Director Baker confirmed that a drop in water pressure might indicated a water main break.

Director Baker reviewed cost drivers for the water and wastewater systems and introduced Bart Foster of The Foster Group, the City's utility rate consultant.

Mr. Foster discussed the process for setting utility rates, provided background information on regional water rates, reviewed principles for a future water rate agreement, and presented proposed water rate increases.

Next, Mr. Foster provided background information on regional wastewater rates; explained wastewater rate multipliers and rate classes; and provided statewide rate comparisons. Mr. Foster encouraged Commissioners to read the executive summaries of the detailed rate reports he had prepared for the City.

Deputy City Manager Chamberlain described the next steps and stated water and wastewater rate ordinances would be presented to the City Commission in February. and stated Commissioners would be given the utility rate reports.

Discussion followed.

In response to a question from Mayor Anderson, Director Baker described the work being done with Graphics Packaging to monitor and identify odor sources at their facilities and also at the Water Reclamation Plant. Director Baker indicated the Odor Task Force meeting minutes were shared with City Commissioners.

In response to questions from Commissioner Knott, Director Baker stated he would check with Graphic Packaging on their timeline to implement odor reduction technology. Director Baker noted Graphic Packaging had made many changes already, and there was a lot of positive movement.

In response to a question from Commissioner Urban, Director Baker explained the details of how the City's odor monitoring technology worked and stated Graphic Packaging was looking at implementing the same technology.

In response to a question from Commissioner Praedel, Director Baker reported the City had been considering water affordability and looking into programs to help customers facing financial hardships.

Commissioner Praedel asked if the aggressive CIP plan would reduce staffing in other areas to the point where there could be a breakdown in basic services.

2020-0019

Presentation and
Discussion re: Utility
Rates (cont'd)

2020-0019
Presentation and
Discussion re: Utility
Rates (cont'd)

Director Baker reported there were 170 Public Services staff members in 2015 compared to 220 staff members today. Director Baker stated he did not request any additional positions in the 2020 budget, but he would be presenting proposals to the City Commission in future years for additional staff to do lead service replacements.

Public Comments

Next, when an opportunity was given for general public comments, the following people addressed the City Commission:

Tim Hudson of the Kalamazoo Regional Water and Wastewater Commission requested copies of Mr. Foster's detailed rate reports.

Commissioner
Comments

Finally, an opportunity was given for miscellaneous comments of City Commissioners.

Commissioner Hess expressed gratitude for the work done at the water reclamation plant and asked that the City communicate with homeowners and educate them about rate increases.

Mayor Anderson referenced a recent New York Times article about water needs around the world, and especially in developing countries where growth was the highest, water shortages were common, and costs were high. Mayor Anderson thanked staff for their presentation and Director Baker for his work.

Adjournment

The meeting adjourned at 7:54 p.m.

Respectfully submitted,

Scott A. Borling
City Clerk

For City Commission approval on February 3, 2020

Approved by: _____
David F. Anderson, Mayor
Dated: February 3, 2020

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	A regular meeting of the Kalamazoo City Commission was held on Tuesday, January 21, 2020 at 7:00 p.m. in the City Commission Chambers at City Hall, 241 West South Street.
Roll Call	COMMISSIONERS PRESENT: Mayor David Anderson Vice Mayor Patrese Griffin Eric Cunningham Jeanne Hess Erin Knott Chris Praedel Jack Urban COMMISSIONERS ABSENT: None Also present were Deputy City Manager Laura Lam, City Attorney Clyde Robinson, and City Clerk Scott Borling.
Opening Ceremony	The invocation, given by Pastor Lenzy E. Bell, First United Baptist Church, was followed by the Pledge of Allegiance.
2020-0020 Presentation of the 2020 Social Justice Youth Awards	Mayor Anderson introduced the community sponsors and presenters of the 2020 Social Justice Youth Awards. Derek Nofz, Community Affairs Manager at Consumers Energy, presented the Consumer's Energy Social Justice Youth Award to Kearney Miller. Ron Foor, Community President of Fifth Third Bank, presented the Fifth Third Bank Social Justice Youth Award to Adonia Alexopoulos. Ron Kramer and Josh Gottlieb presented the Kalamazoo Nonviolent Opponents of War Social Justice Youth Award to Chloe Carlson. John Pinkster, Director of South Operations for Life EMS, presented the Life EMS Social Justice Youth Award to Derea McCoy. Dr. Betty Lodge-Dennis and Mr. Tony Dennis presented the Lodge-Dennis Social Justice Youth Award to Aaron C. Dickason, Jr. Judy Woolsey, Assistant to the CEO of Schupan & Sons, presented the Schupan & Sons Social Justice Youth Award to Chanel Wilson. Dr. Lewis Walker presented the Dr. Lewis Walker Social Justice Youth Award to Princess Mboup.
Proclamation 2020-0021	Vice Mayor Griffin proclaimed January 21, 2020 a <i>National Day of Racial Healing</i>. Sarah Lee, Communications Director for the Kalamazoo Community Foundation, received the proclamation.
Adoption of the Agenda	By unanimous consent the City Commission adopted its meeting agenda with the following change: Commissioner Praedel requested that the December 16, 2019 City Commission minutes be corrected to reflect that his comments regarding

outreach to stakeholder groups at the bottom of page 230 referred to the JAG award agenda items and not the refugee resettlement agenda item.

Adoption of the Agenda
(cont'd)

There were no objections to this request.

Consent Agenda items were presented as follows with a recommendation to approve the items and authorize the City Manager to sign all documents on behalf of the city:

Consent Agenda

- adoption of a **RESOLUTION** replacing Resolution 1165, assigning a Payment in Lieu of Taxes to Apple Ridge II/ MHT Limited Dividend Housing Association, LLC ("Apple Ridge II") for Apple Ridge Apartments at 2301 Flower Street, and extending the PILOT 14 years, pursuant to Section 354 of the Kalamazoo City Code.
- approval of the Mayor's appointments and reappointments to boards and commissions:
 - the appointment of **Jeremy Berg** to the Historic District Commission for a term expiring on January 1, 2023.
 - the appointment of **John Mitchell** to the Historic District Commission for a term expiring on January 1, 2023.
 - the reappointment of **Regina Gorham** to the Historic Preservation Commission for a term expiring on March 31, 2023.
 - the appointment of **Tim Hills** to the Historic Preservation Commission for a term expiring on March 31, 2022.
 - the reappointment of **Joshua Koenig** to the Historic Preservation Commission for a term expiring on March 31, 2023.
 - the appointment of **Lenee Powell-Wilson** to the Historic Preservation Commission for a term expiring on March 31, 2022.
 - the reappointment of **Beth Timmerman** to the Historic Preservation Commission for a term expiring on March 31, 2023.
- approval of the reappointment of **Donna Keller** to the Board of Review for Assessments for a term expiring on January 31, 2023. Included with this recommendation is a request to waive City Commission Rule 12e regarding term limits.
- approval of the minutes from the City Commission meetings on November 11, November 18, December 2, December 9, and December 16, 2019; and January 6, 2020.

2020-0022
Resolution 20-02

2020-0023

2020-0024

2020-0025

Commissioner Cunningham, seconded by Commissioner Urban, moved to approve the consent agenda request and authorize the City Manager to sign all documents on behalf of the City.

With a roll call vote this motion passed unanimously.

Consent Agenda (cont'd)	AYES: Commissioners Cunningham, Hess, Knott, Praedel, Urban, Vice Mayor Griffin, Mayor Anderson NAYS: None
Regular Agenda	Regular Agenda items were considered next.
2020-0026 FFE Aspirational Projects Grant	Foundation for Excellence (FFE) Coordinator Steve Brown provided an overview of a grant agreement between the Stryker Johnston Foundation and the City of Kalamazoo to fund aspirational projects through the FFE. An opportunity was given for public comments on a grant agreement between the Stryker Johnston Foundation and City of Kalamazoo for \$28,212,628 to support aspirational projects for the mission of the Foundation for Excellence, but no comments were offered. Commissioner Knott, seconded by Commissioner Cunningham, moved to approve a grant agreement between the Stryker Johnston Foundation and City of Kalamazoo for \$28,212,628 to support aspirational projects for the mission of the Foundation for Excellence from 2020 through the 2022 fiscal year, and authorize the City Manager to sign all related documents. Prior to a vote on the motion, Mayor Anderson remarked on the availability of the FFE 2019 Annual Report. With a roll call vote this motion passed unanimously. AYES: Commissioners Cunningham, Hess, Knott, Praedel, Urban, Vice Mayor Griffin, Mayor Anderson NAYS: None
2020-0027 Adoption of the FY2020 Budget, Component Unit Budgets, and Fee Resolutions	Andrew Haan, Executive Director of the Kalamazoo Downtown Partnership (KDP) and Jennifer Jelenek, Chief Operating Officer of KDP, distributed copies of the proposed KDP budget and delivered a presentation on the Fiscal Year 2020 (FY2020) budgets for the Downtown Development Authority and Downtown Economic Growth Authority. The presentation included highlights of the 2020 budgets and a review of planned initiatives for the downtown area. A copy of the KDP budget presentation slides were filed with the papers for this meeting. In response to a request from Commissioner Hess, Ms. Jelenek stated she did not have ridership data for the Holly Jolly Trolley, but she indicated KDP would be collecting this data in 2020. An opportunity was given for public comments on the Proposed FY2020 Budget for the City of Kalamazoo, including component unit budgets and fee schedules, but no comments were offered.
Resolution 20-03	Commissioner Hess, seconded by Commissioner Praedel, moved to adopt a RESOLUTION approving and adopting the annual appropriation for the year 2020, setting forth the number of mills to be levied, approving an interim appropriation for the year 2021, and establishing policies for the administration of the budget; and to approve the following component unit budgets and fee schedules:

- approval of the proposed FY 2020 Brownfield Redevelopment Authority (BRA) budget as submitted by the BRA Board.
- approval of the proposed FY 2020 Economic Development Corporation (EDC) budget as submitted by the EDC Board.
- approval of the FY 2020 Downtown Development Authority (DDA) Operating Budget, and the existing two-mill DDA Tax Levy.
- approval of the FY 2020 Downtown Economic Growth Authority (DEGA) Operating Budget.
- approval of the proposed 2020 fee schedule for the Kalamazoo Municipal Golf Association.
- adoption of a **RESOLUTION** approving the 2020 fees for various permits, hearings, etc. within the Community Planning & Economic Development department.
- adoption of a **RESOLUTION** to establish the Department of Parks and Recreation fees and charges for 2020.

2020-0027

Adoption of the FY2020 Budget, Component Unit Budgets, and Fee Resolutions (cont'd)

Resolution 20-04

Resolution 20-04

Prior to a vote on the motion, Commissioner Praedel noted the adopted budget contained an additional \$455,830 in FFE funding and an additional \$1 million for the Capital Improvement Program compared to the draft budget.

Mayor Anderson noted the budget increase from FY2019 to FY2020 (around \$20 million) was due to an increase in spending on utility infrastructure.

With a roll call vote this motion passed unanimously.

AYES: Commissioners Cunningham, Hess, Knott, Praedel, Urban, Vice Mayor Griffin, Mayor Anderson

NAYS: None

An opportunity was given for public comments on an ordinance amending Article IV, Mobile Food Vehicle Vendors, and a resolution setting the areas of operation and fee for mobile food vehicles, but no comments were offered.

Commissioner Knott, seconded by Commissioner Hess, moved to adopt an **ORDINANCE** amending Article IV, Mobile Food Vehicle Vendors, which includes renaming this section Mobile Food Businesses; and adoption of a **RESOLUTION** setting the areas of operation and the fee for mobile food vehicles.

Prior to a vote on the motion, Commissioner Praedel expressed support for the proposed ordinance and resolution.

With a roll call vote this motion passed unanimously.

AYES: Commissioners Cunningham, Hess, Knott, Praedel, Urban, Vice Mayor Griffin, Mayor Anderson

NAYS: None

2020-0028

Ordinance 2001 re: Mobile Food Businesses and Resolution 20-05 re: Fees for Mobile Food Businesses

Public Comments

Next, when an opportunity was given for general public comments, the following people addressed the City Commission:

Ray Sweeny, City resident, expressed concerns about City plows pushing snow onto sidewalks and speeding traffic. Mr. Sweeny suggested separate public rights-of-way for pedestrian/bus traffic and vehicular traffic.

Devin Loker, an attorney representing The Refinery, a medical marihuana provisioning center in the City, asked that the City Commission allow licensed medical marihuana facilities to obtain adult-use marihuana facility licenses.

Tom Farrell, Sr. and Tom Farrell, Jr., owners of the medical marihuana provisioning center Refine Michigan, asked that the City Commission allow licensed medical marihuana facilities to obtain adult-use marihuana facility licenses.

Remi Harrington, City resident, reported she was working with staff on an ordinance to allow urban agriculture on vacant properties. Ms. Harrington urged the City Commission to stay up-to-date on this issue.

Ryan Simpson, a representative of Cannamazoo, a licensed medical marihuana provisioning center, stated the City did a great job with its medical marihuana facility ordinance, and he was confident the adult use marihuana facility ordinance would be good too.

Rachel Reed, a City resident, expressed frustration that there were no adult use marihuana facilities in the City.

Jay Fleming, City resident, commended the City for taking a measured approach to adult use marihuana facilities and described the uncertainty being created by the lack of direction from the state in certain areas.

City Commissioner Comments

Finally, an opportunity was given for miscellaneous comments from City Commissioners.

Commissioner Knott expressed concern about students walking in the street near Crosstown Parkway and Howard Street after snowstorms because of sidewalks that were snow covered. Commissioner Knott stated businesses should pay to have their sidewalks cleared in the same way they pay to have their parking lots plowed. Commissioner Knott asked if it was possible to change the 48-hour timeframe for property owners to clear their sidewalks.

Commissioner Praedel expressed support for Commissioner Knott's comments and spoke about a resident named Jerry who lived on Cork Street and cleared the sidewalks for many of his neighbors. Commissioner Praedel encouraged people to help their neighbors in similar ways. Commissioner Praedel remarked that he had the opportunity to teach students at Western Michigan University (WMU) about the Commission/Manager form of government.

Commissioner Urban stated Kalamazoo had a "car culture," but the City Commission was hearing more and more about the need for pedestrian safety. Commissioner Urban thanked Mr. Sweeny for his remarks.

Commissioner Cunningham noted the City had delayed its opt-in for adult-use marihuana facilities, and the City Commission had expressed to staff the need for expediency in this matter. Commissioner Cunningham stated one of the questions was what the permitting of marihuana facilities would look like geographically, and he expressed great interest in a having a social equity program.

Commissioner Hess stated she was inspired by the young of the community. Commissioner Hess reported she had recently attended meetings of the Environmental Concerns Committee; the WMU climate change group; the Women's March; and the Truth, Racial Healing, and Transformation Circle event. Commissioner Hess spoke about the impact of her husband, who started a group for young men at King-Westwood Elementary School called Breakfast of Champions.

Vice Mayor Griffin acknowledged the City Commission may have been more reactive than proactive with adult use marihuana facilities, but equity was an important issue. Vice Mayor Griffin pointed out that people of color did not come to Commission meetings to talk about marihuana businesses, and that needed to change. Vice Mayor Griffin congratulated the Social Justice Youth Award recipients and spoke about the life of former City Commissioner Moses Walker.

Mayor Anderson remarked on Martin Luther King, Jr. Day and noted it was a National Day of Service, not just a holiday. Mayor Anderson commented on the life of former City Commissioner Moses Walker and offered condolences to his friends and family.

The meeting adjourned at 8:52 p.m.

Respectfully submitted,

Scott A. Borling
City Clerk

For City Commission approval on February 3, 2020

Approved by: _____

David F. Anderson, Mayor
Dated: February 3, 2020

City Commissioner
Comments (cont'd)

Adjournment



City Commission Agenda Report

City of Kalamazoo

Date: **2/3/2020**

Item: **F.12.**

TO: Mayor Anderson, Vice Mayor Griffin, and City Commissioners

FROM: James K. Ritsema, City Manager
Reviewed by:
Prepared by: Sean R. Fletcher, Parks and Recreation Director

DATE: February 3, 2020

SUBJECT: Purchase of a Portion of the Property Located at 1157 Bank Street for \$6,500.00.

RECOMMENDATION:

Approve the purchase of a portion of the property at 1157 Bank Street needed for the realignment of Bank Street that is part of the Farmers' Market Improvement Project in the amount of \$6,500.00.

BACKGROUND:

The parcel number 06-22-435-002 (See Exhibit A: Legal Description - Proposed Parcel) is part of the Bank Street Bingo Hall property located at 1157 Bank Street. The purchase of this parcel will allow the realignment of Bank Street which is part of the Farmers' Market Improvement Project.

STRATEGIC VISION ALIGNMENT:

Based Budgeting Program:

Access to Quality Recreational, Educational, and Cultural Opportunities.
Provides access to safe, clean and well-maintained parks, trails, green spaces, and open spaces and recreational facilities/areas that meet the diverse needs and expectations of the community.

This program/project has a high degree of impact on the following Strategic Goal(s): Inviting Public Places

This program/project has a high degree of impact on the following Strategic Goal(s):

COMMUNITY ENGAGEMENT:

The Parks and Recreation Department has worked closely with the People's Food Co-Op and Farmers' Market vendors to refine the plans for the market. A meeting with market vendors was held in November to obtain input about some of the finer details of the market based on the current plan. The meeting was attended by 26 vendors.

The concept rendering of the market site was on display at the final Farmers' Market held Saturday, November 23rd. Approximately forty people stopped to comment on the concept rendering and ask questions. Each person that stopped to view the rendering was very excited about the improvements. This direct form of engagement with Farmers' Market visitors was very beneficial for staff and the visitors themselves.

FISCAL IMPACT:

Funding for the purchase of the property is available in the Farmers' Market project #cip0300057 Farmers Market Redevelopment 2019 Capital Improvement budget.

REAL ESTATE PURCHASE AGREEMENT

This Agreement is entered between CITY OF KALAMAZOO a Michigan municipal corporation whose address is 241 West South Street, Kalamazoo, Michigan 49007 ("the City"), and John Joseph Mapes, LLC whose address is 64971 39th Street, Paw Paw, Michigan, 49079 ("Seller"), and
NOW, THEREFORE, the parties agree as follows:

Recitals:

- A. The City through its Parks and Recreational department is interested in purchasing a portion of the property located at 1157 Bank Street, Kalamazoo Michigan parcel number 06-22-435-002 (See Exhibit A: Legal Description-Proposed Parcel) for its Farmers' Market Project and Bank Street realignment plan to aid in the flow of traffic through the area and increase access to the Farmers' Market.
- B. The City and Seller desire to enter into this Purchase Agreement ("Agreement") for the mutual benefit of both parties, subject to the following terms and conditions.

1. Consideration

The Seller agrees to convey by warranty deed the portion of parcel number 06-22-435-002, which is more fully described in Exhibit A proposed parcel. In return, the City will pay to the Seller the amount of Six-Thousand Five-Hundred Dollars (\$6,500.00).

2. Release of Mortgage

At or before the closing, the Seller will obtain a release of mortgage, if any, security interest or lien of any kind from all banks or other parties that have such an interest in the parcel.

3. Reasonable Access

After this agreement has been signed but before the closing, the City will be entitled to have reasonable access to the portion of the parcel involved herein for the purpose of inspection, testing, etc.

4. Closing

The date of closing on this matter shall be on such date as is mutually agreeable by the parties, but in no event later than 90 days after the City Commission has approved this transaction. At closing, Seller agrees to execute a warranty deed for said

parcel in exchange for receipt of cash, bank check, or title company check in the amount of the purchase price.

All property taxes shall be prorated on a calendar year basis. Any unpaid special assessments shall be paid off by the Seller, as shall all transfer taxes.

The parties are responsible for their own closing cost.

5. Environmental

The Seller states that he is not aware of the existence of any environmental contaminants or pollutants on the parcel.

The City reserves the right, before closing, to conduct or cause to be conducted an environmental assessment of the property. If that assessment reveals a significant environmental problem, the City reserves the right to declare this agreement void, in which case the parties shall have no further obligation to each other or to cause the transfer of title to occur.

6. Authority

The approval by the City Commission for the City of Kalamazoo is required before this Agreement is effective and binding. If such approval is not made within 90 days after Seller has signed this Agreement, it shall be deemed null and void and of no force and effect.

7. Notices

Any notice or other communication under this Agreement by one party to the other shall be in writing, signed by an authorized representative and delivered in person or by certified mail, postage prepaid with return receipt requested to the following:

Seller: John Joseph Mapes, LLC
64971 39th Street
Paw Paw, MI 49079

City: City of Kalamazoo
ATTN: City Manager
241 West South Street
Kalamazoo, MI 49007

w/copies to the City Attorney at above address

Each party shall notify the other of any changes in the address for the receipt of notices.

8. Real Estate Brokers

Neither party has retained the services of a real estate broker regarding this transaction. If a broker makes a claim for remuneration in connection with the Purchase, the party against whom the claim is made is responsible for paying any commission or other compensation for which the broker is entitled to receive.

9. Miscellaneous

A. This Agreement shall bind and benefit the City, Seller and their respective successors or assigns.

B. This Agreement may not be amended, altered or modified unless done in writing and signed by representatives of the parties who are so authorized.

C. This Agreement may be signed in counterparts, which together shall comprise a single agreement.

D. This Agreement and the exhibits to this Agreement contain all of the representations and statements by the City and Seller to one another and express the entire understanding between them with respect to the Purchase. All prior and contemporaneous communications concerning the Purchase are merged in and replaced by this Agreement.

CITY OF KALAMAZOO

Date: _____, 2019

By: _____
James K Ritsema

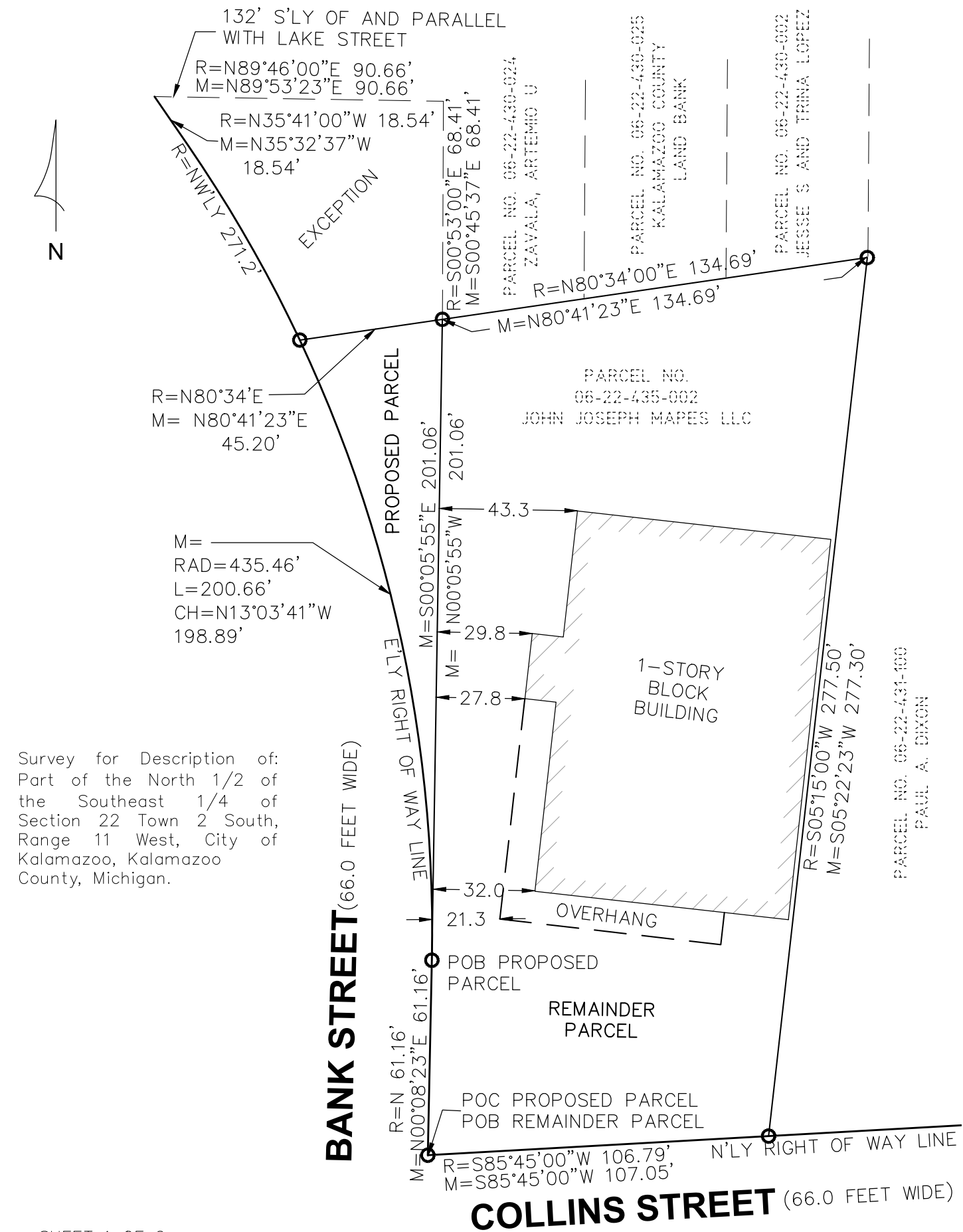
Its: City Manager

Date: _____, 2019

John Joseph Mapes, LLC
By: _____
John Joseph Mapes

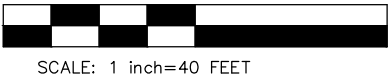
Its: _____

EXHIBIT A



Survey for Description of:
Part of the North 1/2 of
the Southeast 1/4 of
Section 22 Town 2 South,
Range 11 West, City of
Kalamazoo, Kalamazoo
County, Michigan.

SHEET 1 OF 2



I HEREBY CERTIFY THAT I HAVE SURVEYED AND MAPPED THE LAND ABOVE PLATTED AND/OR DESCRIBED ON 2/25/2019.
AND THAT THE RATIO OF CLOSURE ON THE UNADJUSTED FIELD OBSERVATIONS OF SUCH SURVEY EXCEEDS 1/5000. AND
THAT ALL OF THE REQUIREMENTS OF P.A. 132 1970, AS AMENDED, HAVE BEEN COMPLIED WITH.

LEGEND

- IRON STAKE
- ^{PK} PK NAIL
- x-x FENCE LINE
- R RECORDED DIMENSION
- D DEED DIMENSION
- M MEASURED DIMENSION
- ⊙ CENTER LINE
- WOOD STAKE

*This survey was made from
the above legal description
which was given to us as a
complete description of the
property. Both map and
description should be compared
with the abstract Title or
Title Policy for any exceptions,
easements or differences in
description.*

williams&works
engineers | surveyors | planners
616.224.1500 phone . 616.224.1501 facsimile
549 Ottawa Ave NW . Grand Rapids, MI 49503

PRELIMINARY

By LAWRENCE W. ALBAUGH P.S. 30073



KALAMAZOO FARMERS' MARKET



PRELIMINARY PLAN

November 2019



Survey for Description of: Part of the North 1/2 of the Southeast 1/4 of Section 22 Town 2 South, Range 11 West, City of Kalamazoo, Kalamazoo County, Michigan.

SHEET 2 OF 2

Parent Parcel:

Part of North 1/2 of the Southeast 1/4 of Section 22, Town 2 South Range 11 West Commencing at Northeast corner of Bank Street and Collins Street; Thence North along the east line of Bank Street 61.16 feet; thence Northwesterly along the easterly line of Bank Street 271.2 feet; thence North 35°41’ West along the easterly line of Bank Street 18.54 feet to a point 132 feet South of the south line of Lake Street; thence North 89°46’ East parallel to the south line of Lake Street 90.66 feet; thence south 0°53’ East 68.41 feet to the south line of Wells & Parkers Addition; thence North 80°34’ East 134.69 feet, thence South 5° 15’ West 277.5 feet to the north line of Collins Street, thence South 85°45’ West 106.79 feet to the place of beginning, EXCEPT that part lying North of the south line of Wells & Parkers Addition.

Proposed Parcel:

All that part of the North 1/2 of the Southeast 1/4 of Section 22 Town 2 South, Range 11 West, described as Commencing at the intersection of the northerly right of way line of Collins Street (66.0 feet wide) and the easterly right of way line of Banks Street (66.9 feet wide) thence North 00°08’23” East (formerly described as North) 61.16 feet, along said easterly right of way line TO THE PLACE OF BEGINNING OF THIS DESCRIPTION: Thence continuing along said easterly right of way line Northwesterly 200.66 feet along a 435.46 foot radius curve to the left having a central angle of _____ and a chord which bears North 13°03’41” West 198.89 feet, to the southerly line of the Wells & Parker Addition to the Village (now City) of Kalamazoo, Kalamazoo County, Michigan; thence North 80°41’23” East (formerly described as North 80°34’ East) 45.20 feet, along said southerly line; thence South 00°05’55” East 201.06 feet, to the place of beginning.
Containing 2,955.3 Square Feet, more or less

Remainder Parcel:

All that part of the North 1/2 of the Southeast 1/4 of Section 22 Town 2 South, Range 11 West, described as BEGINNING at the intersection of the northerly right of way line of Collins Street (66.0 feet wide) and the easterly right of way line of Banks Street (66.0 feet wide) thence North 00°08’23” East (formerly described as North) 61.16 feet, along said easterly right of way line; thence North 00°05’55” West 201.06 feet, to the southerly line of the Wells & Parker Addition to the Village (now City) of Kalamazoo, Kalamazoo County, Michigan; thence North 80°41’23” East (formerly described as North 80°34’ East) 134.69 feet; thence South 05°22’23” West 277.30 feet (formerly described as South 05°15’00” West 277.50 feet), to the northerly right of way line of Collins Street (66.00 feet wide); thence South 85°45’00” West 107.05 feet (formerly described as 106.79 feet) to the place of beginning.
Containing 32,036.1Square Feet, more or less