

ORDINANCE NO. 94332-0618

AN ORDINANCE AMENDING TITLE 13, CHAPTER 5, SECTION 4 COLLECTION AND DRAINAGE AND TITLE 13, CHAPTER 5, SECTION 5, SUBSECTION A SEWERAGE RATE COMPONENT TO SET COLLECTION AND DRAINAGE AND SEWER RATES AND PROVIDE THAT FUTURE RATE CHANGES BE DONE BY ORDINANCE OF CITY COUNCIL

WHEREAS, the City Council for the City of Muscatine, Iowa, has established a monthly fee for expenses incurred in the collection and conveyance of wastewater through the collection and drainage system; and

WHEREAS, the City of Muscatine, Iowa, has established a sewage rate component for the treatment of wastewater; and

WHEREAS, it is necessary for the City of Muscatine to periodically adjust the unit rates contained in Title 13, Chapter 5, Sections 4 and 5; and

WHEREAS, based on recent court cases and out of an abundance of caution, the City Attorney has advised that utility rate changes be adopted by ordinance;

NOW, THEREFORE, BE IT ORDAINED that the Sewer Rate System fee schedule in Appendix C to the City Code for fees and charges approved by Resolution be deleted with these fees to be set by Ordinance, and

NOW, THEREFORE, BE IT ORDAINED that Title 13, Chapter 5, Section 4 be amended to read as follows:

13-5-4 Collection and Drainage. To provide for the recovery of costs associated with the operation of the collection and drainage system, the following per bill charge shall be assessed to all users of the POTW, except for users provided by special agreement, on the following basis:

- A. From July 1, 2018 through June 30, 2019, \$12.40 per bill.
- B. From July 1, 2019 through June 30, 2020, \$12.65 per bill.
- C. From July 1, 2020 through June 30, 2021, \$12.90 per bill.
- D. From July 1, 2021 through June 30, 2022, \$13.15 per bill
- E. On and after July 1, 2022, \$13.40 per bill.

These unit rates may be reviewed and adjusted by Ordinance adopted by the City Council and published per Section 362.3 of the Iowa Code.

NOW, THEREFORE, BE IT FURTHER ORDAINED BY THE CITY COUNCIL OF MUSCATINE, IOWA, that Title 13, Chapter 5, Section 5, subsection A, parts 1 through 6 be amended to read as follows:

13-5-5 Sewage Rate Component.

A. The sewage rate system shall be determined on the basis of a monthly customer charge and a sewer user charge for a domestic strength wastewater customer (Class 1 customer). The sewage rate components shall be as follows:

1. From July 1, 2018 through June 30, 2019:
 - a. Customer charge, \$8.18 per bill
 - b. Volume, \$2.80 per 100 cubic feet
2. From July 1, 2019 through June 30, 2020:
 - a. Customer charge, \$8.42 per bill
 - b. Volume, \$2.88 per 100 cubic feet
3. From July 1, 2020 through June 30, 2021:
 - a. Customer charge, \$8.68 per bill
 - b. Volume, \$2.97 per 100 cubic feet
4. From July 1, 2021 through June 30, 2022:
 - a. Customer charge, \$8.94 per bill
 - b. Volume, \$3.06 per 100 cubic feet
5. On and after July 1, 2022:
 - a. Customer charge, \$9.21 per bill
 - b. Volume, \$3.15 per 100 cubic feet

These sewage rate components may be reviewed and adjusted by ordinance adopted by the City Council and published per Section 362.3 of the Iowa Code.

6. The minimum charge for service shall be determined based on the customer charge and the unit rate for up to a minimum quantity of three hundred (300) cubic feet per month of normal domestic strength wastewater. The minimum charge for service for each month or fraction thereof shall be:

- a. From July 1, 2018 through June 30, 2019, \$16.58
- b. From July 1, 2019 through June 30, 2020, \$17.06
- c. From July 1, 2020 through June 30, 2021, \$17.59
- d. From July 1, 2021 through June 30, 2022, \$18.12
- e. On and after July 1, 2022, \$18.66

The minimum charge for sewerage rates as set forth in this Section shall be in addition to the per bill charge for collection and drainage as set forth in Section 13-5-4.

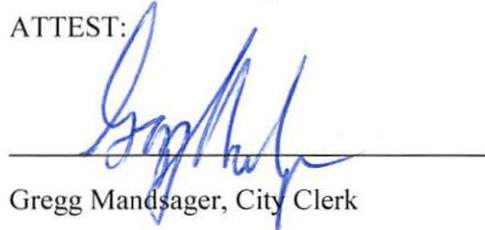
The minimum sewerage service charge shall apply to any individual, firm, institution or private corporation discharging by conveyance of the collection system, waste water or other liquid into the water pollution control facilities of the city, even though no water meter is installed upon his, her, or its premises.

PASSED, APPROVED, AND ADOPTED by the City Council for the City of Muscatine, Iowa, on this 5th day of July, 2018.

A handwritten signature in blue ink, appearing to read "D. Broderon", is written over a horizontal line.

Diana Broderon, Mayor

ATTEST:

A handwritten signature in blue ink, appearing to read "Gregg Mandsager", is written over a horizontal line.

Gregg Mandsager, City Clerk

1st Reading: June 21, 2018

2nd Reading: July 5, 2018

3rd Reading: July 5, 2018 (waived)

Publication: July 13, 2018



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WATER POLLUTION CONTROL

MEMORANDUM

To: Gregg Mandsager, City Administrator

From: Jon Koch, Director WPCP
Nancy A. Lueck, Finance Director

Date: June 18, 2018

Re: Ordinance Setting Sewer and Collection and Drainage Rates

INTRODUCTION:

A review of the 2018 Sewer Rate Study was presented to the City Council at the In Depth meeting on June 14, 2018 by the study writer Bob Veenstra of Veenstra and Kimm Engineering. This rate study was designed to determine revenue needs compared to projected costs of the Collection and Drainage Fund and Water Pollution Control Operations Fund. The study concluded that incremental increases in rates over the next 5 years will be necessary to maintain acceptable funding levels in the two funds studied. It is now time for Council to consider the implementation of the 2018 Sewer Rate Study recommendations.

BACKGROUND:

Since the City enacted the current rate structure approximately 15 years ago, the City Council has tried to avoid large rate increases. The City Council has focused on implementing smaller rate increases on an annual basis. City staff directed that the study be conducted with the same focus to minimize the impact on the rate payer. By forecasting what large capital expenses were expected over the next 10 years, city staff and Bob Veenstra used computer modeling to determine if current revenue levels would maintain acceptable funding levels in these funds. Based on future capital and operational cost projections in the computer model, the rate study recommendations include 3% annual increases in the sewer rates and 2% annual increases in the collection and drainage rate over the next five years.

In prior years the City of Muscatine set sewer and collection and drainage rates by resolution. Based on recent court cases and out of an abundance of caution, the City Attorney has now advised that utility rate changes be adopted by ordinance instead of resolution.

**"I remember Muscatine for its sunsets. I have never seen any
on either side of the ocean that equaled them" — Mark Twain**

RECOMMENDATION/RATIONALE: The Muscatine Water Pollution Control Plant is one of the most efficient plants in the area and continues to be a superior value to its customers. With one of the lowest rate structures compared to other communities in the state, it continues to exceed expectations at minimal expense. City staff recommends passage of the attached ordinance adjusting rates as stated to maintain acceptable funding levels in the two funds.

Please include the attached ordinance on the agenda for the June 21, 2018 meeting. It is proposed that the first reading of the ordinance be considered at that meeting and that City Council consider adopting the ordinance on 2nd and final reading at the July 5, 2018 meeting. Please contact either of us if you have any questions.



VEENSTRA & KIMM, INC.

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June 18, 2018

Nancy Lueck
City of Muscatine
215 Sycamore
Muscatine, Iowa 52761-3840

MUSCATINE, IOWA
SEWER RATE STUDY – 2018
WPCP FUND
OVERVIEW AND RECOMMENDATIONS

This letter presents an overview of the 2018 Sewer Rate Study related to the WPCP fund. The letter sets forth recommendations for rate adjustments for the five year period from FY 19 through FY 23.

The last sewer rate study for the City of Muscatine was completed in 2013. The 2013 rate study recommended the City continue the program of annual increases in both the monthly availability charge and the commodity charge. That rate study recommended a 3% annual increase in each of the two components of the rate structure. The City Council subsequently adopted the recommendation.

The first aspect of the rate study was to compare the projected revenues and expenses for FY 2014 through FY 2017 with the actual revenues and expenditures. Because the current fiscal year ending June 30, 2018 is not complete, the rate study did not compare the 2013 rate study projection to the current fiscal year.

The following table shows a comparison of the projection to actual for each of the four fiscal years.

<u>Category</u>	<u>Projected</u>	<u>Actual</u>
<u>FY2014</u>		
Total Revenue	\$4,226,735	\$4,236,165
Total Expenditures	\$4,337,344	\$4,137,007
Gain/Loss	-\$110,609	\$99,158
Year End Fund Balance	\$1,584,484	\$1,842,586
<u>FY2015</u>		
Total Revenue	\$4,284,658	\$4,388,331
Total Expenditures	\$4,383,300	\$4,349,189
Gain/Loss	-\$101,642	\$39,142
Year End Fund Balance	\$1,482,842	\$1,881,998
<u>FY2016</u>		
Total Revenue	\$4,405,178	\$4,412,695
Total Expenditures	\$4,438,193	\$4,359,615
Gain/Loss	-\$33,015	\$53,080
Year End Fund Balance	\$1,449,827	\$1,940,307
<u>FY2017</u>		
Total Revenue	\$4,532,404	\$4,595,572
Total Expenditures	\$4,494,575	\$4,804,102
Gain/Loss	\$37,829	-\$208,530
Year End Fund Balance	\$1,487,656	\$1,731,777

The projected year end for the fiscal year ending June 30, 2018, based on the updated projections provided by the City, is as follows:

<u>Category</u>	<u>Projected</u>
<u>FY2018</u>	
Total Revenue	\$4,750,900
Total Expenditures	\$4,971,603
Gain/Loss	-\$220,703
Year End Fund Balance	\$1,511,074

During the first three years of the five year period the actual performance of the WPCP fund was better than anticipated. At the end of FY 2017 the fund balance of \$1,731,777 was approximately \$250,000 higher than projected in the 2013 rate study. During the first three fiscal years the total expenditures were generally less than projected in the rate study. The actual revenues were slightly higher than projected in the rate study.

For FY 2017 and FY 2018 the performance of the fund showed a loss and a decrease in the fund balance at a rate greater than projected in the rate study. For both fiscal years revenues exceeded the 2013 rate projection. However, expenditures were noticeably greater than projected in the rate study.

The largest difference was the increase in the Plant Replacement Reserve from its historical level of \$200,000 per year to \$700,000 per year for each of these two fiscal years.

When the additional \$1,000,000 in Plant Replacement Reserve Transfers is taken into account the fund performed noticeably better than projected in 2013. Overall revenues were stronger than projected. A significant portion of the additional revenue was related to the increased loading from Heinz. The revenue from other users was generally at or slightly below the projection.

Overall, expenditures were below the 2013 projection. A significant portion of the savings in expenditures related to operational expenditures.

The projected fund balance at the end of the current fiscal year of approximately \$1,511,074 translates to about 30% of the annual revenue. It is generally recommended a sewer enterprise operating fund have a reserve level in the range of 30% of annual revenue.

With a 30% reserve the City can consider some modest decrease in the fund balance for a few years provided the rate structure projects an increase in the fund balance that would return the fund balance to the approximate 30% level within the next five to seven years.

One of the significant factors affecting the revenue projection is the number of monthly minimums paid and the number of commodity units billed on an annual basis. Periodically it is appropriate to reassess both the number of bills as well as the commodity volume for each of the class users. An assessment of billing units was not completed as part of the 2013 rate study as there did not appear to be significant deviations from the levels projected in the rate study.

A review of the units billed for the last three fiscal years indicate there have been changes in the usage levels since the last adjustment. The 2018 rate study reviewed the actual number of monthly minimums and commodity units to adjust the levels for the Class 1, Class 1 - Senior, Class 2, Class 3, Class 5 and City billed industrial users.

The following table shows the utilization levels used for the previous two rate studies compared to the 2018 adjustment of the number of units.

<u>User/Classification</u>	<u>Previous Annual Units</u>	<u>Previous Annual Minimums</u>	<u>2018 Annual Units</u>	<u>2018 Annual Minimums</u>
Class 1	700,000	90,200	650,000	95,000
Class 1 - Senior	64,000	16,400	46,000	13,000
Class 2	107,000	295	79,000	268
Class 3	6,000	175	6,000	168
Class 5	30,000	610	33,000	802
GPC	68,733	12	60,000	12
Lutheran Homes	8,000	12	7,800	12
Linde	18,613	12	22,000	12
Union Tank Car	10,933	12	11,000	12
Phelps	15,000	12	15,000	12
Trinity Muscatine	N/A	N/A	1,000	12
Ripley's	N/A	N/A	34,176	12

The following table shows a comparison of the revenues projected for Heinz for the four fiscal years FY 2014 through FY 2017 compared to the actual revenue.

<u>Fiscal Year</u>	<u>Rate 2013 Study Projection</u>	<u>Actual Revenue</u>
FY2014	\$310,777.00	\$326,588.94
FY2015	\$320,100.31	\$415,422.22
FY2016	\$329,703.32	\$481,427.30
FY2017	\$339,594.52	\$517,828.43
FY2018	\$349,782.25	\$509,535.00 (Projected)

As discussed earlier, the major source of increased revenue over the five year period was the Heinz billings that are now in the range of \$180,000 per year higher than projected in 2013.

The rate study utilized the same basic concept for projecting revenues and expenses based on prior years. Sewer user charge revenue from the various users are projected based on the annual number of units and the rate established by the rate ordinance. Charges for miscellaneous income sources remain relatively stable and are based on the prior two years level of revenue.

For the current rate study a new revenue source was added to the analysis. This revenue source is based on the projected revenue from the charges for fat, oil and grease and high strength waste. For FY 2019 the fat, oil and grease revenue is projected to be \$100,000 per year. For FY 2019 the revenue from high strength waste is projected to be \$200,000 per year. In future years the fat, oil and grease revenue is project to increase at a rate of 3% per year. The high strength waste revenue is projected to increase at 2% per year. Overall, the addition of these two categories generates close to an additional \$300,000 of revenue not factored into the previous rate studies.

The expenditures for the WPCP fund consist of the operating and administrative expenditures, the transfers to reserve funds and the debt service from the previous WPCP capital improvement project. Operating expenditures and the administrative fee is projected to increase at 2% per year. The operating expenditures consist of plant operations, pump stations, laboratory operations, sludge operations, other administrative expenditures and other operational expenditures. The total of these six categories constitute the operating expenditures.

The administrative transfer is an annual transfer to fund select administrative service of the City that support the overall operation of the WPCP.

The projected total operating expenses and administrative transfer for the current fiscal year and the next five fiscal years is as follows:

<u>Fiscal Year</u>	<u>Operating Expenditures</u>	<u>Administrative Transfer</u>
FY2018	\$2,811,908	\$188,200
FY2019	\$3,653,000	\$195,400
FY2020	\$3,073,260	\$201,262
FY2021	\$3,134,725	\$207,300
FY2022	\$3,197,420	\$213,519
FY2023	\$3,261,368	\$219,925

The debt service on the previous WPCP project continues until it is retired on June 1, 2032. The annual debt service is in a very tight range of between \$1,061,000 per year and \$1,062,000 per year. The debt service for the current fiscal year and the next five fiscal years is as follows:

<u>Fiscal Year</u>	<u>Debt Service</u>
FY2018	\$1,061,495
FY2019	\$1,061,143
FY2020	\$1,061,108
FY2021	\$1,061,358
FY2022	\$1,061,860
FY2023	\$1,061,583

The final component of the expenditures is the transfers associated with Capital Improvement Projects. The City has been transferring \$200,000 per year from the WPCP fund to the West Hill Project Reserve Fund since FY 2012. This projection will continue through FY 2023 and beyond.

In FY 2019 the City will establish a debt service reserve transfer associated with the biogas project. The transfer in FY 2019 will be \$22,000 per year. Starting in FY 2020, and continuing through FY 2023, the transfer to the debt service reserve is scheduled to be \$85,000 per year.

The final expenditure from the WPCP fund is annual transfer to the Plant Replacement Fund. As discussed earlier, starting in FY 2017 this transfer was increased to \$700,000 per year. The City has budgeted the \$700,000 per year transfer for FY 2019.

The rate study analysis indicated the City could not sustain a \$700,000 per year transfer to the Plant Replacement Fund without depleting the fund balance or requiring a rate increase greater than the target rate increase of 3% per year. To balance the revenues and expenditures the transfer to the Plant Replacement Reserve decreases from \$700,000 per year to \$400,000 per year in FY 2020. The transfer continues at \$400,000 per year through FY 2023.

After establishing the basic parameters for the five year rate projection, the rate study evaluated a longer term projection of revenues and expenses. The long term projection of revenues and expenses looked at the fund through FY 2035.

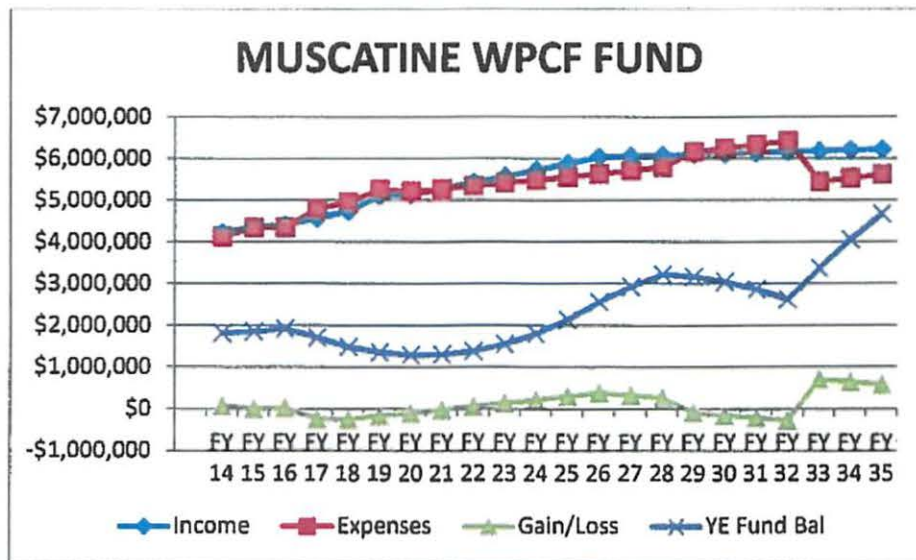
The reason for projecting beyond FY 2023 is there are two large changes between FY 2023 and FY 2033. First, the debt service on the WPCP project will be retired in FY 2032. Second, in FY 2029 it is anticipated the City will need to move forward with a nutrient reduction program. Although the scope and extent of that project has not been fully developed, the rate study included an annual debt service of \$300,000 per year starting in FY 2029. The \$300,000 per year debt service would overlap the final four years of the existing debt service and would continue for an additional 16 years beyond the end of the debt service.

Based on the projection of revenues and expenses the revenues and expenses for FY 2014 through FY 2035 are summarized as follows:

<u>Year</u>	<u>Income</u>	<u>Expenses</u>	<u>Gain/Loss</u>	<u>YE Fund Bal</u>
FY 14	\$4,236,165	\$4,137,007	\$99,158	\$1,842,856
FY 15	\$4,388,331	\$4,349,189	\$39,142	\$1,881,998
FY 16	\$4,412,695	\$4,359,615	\$53,080	\$1,940,307
FY 17	\$4,595,572	\$4,804,102	-\$208,530	\$1,731,777
FY 18	\$4,750,900	\$4,971,603	-\$220,703	\$1,511,074
FY 19	\$5,136,200	\$5,269,796	-\$133,596	\$1,377,478
FY 20	\$5,156,194	\$5,220,630	-\$64,436	\$1,313,042
FY 21	\$5,297,819	\$5,288,383	\$9,436	\$1,322,478
FY 22	\$5,443,530	\$5,357,799	\$85,731	\$1,408,208
FY 23	\$5,593,445	\$5,427,876	\$165,569	\$1,573,777
FY 24	\$5,747,687	\$5,499,643	\$248,044	\$1,821,821
FY 25	\$5,906,383	\$5,573,101	\$333,282	\$2,155,102

<u>Year</u>	<u>Income</u>	<u>Expenses</u>	<u>Gain/Loss</u>	<u>YE Fund Bal</u>
FY 26	\$6,069,663	\$5,648,249	\$421,414	\$2,576,517
FY 27	\$6,088,079	\$5,724,087	\$363,992	\$2,940,509
FY 28	\$6,106,862	\$5,812,647	\$294,216	\$3,234,724
FY 29	\$6,126,022	\$6,181,899	-\$55,877	\$3,178,847
FY 30	\$6,145,565	\$6,262,879	-\$117,314	\$3,061,532
FY 31	\$6,165,498	\$6,346,589	-\$181,091	\$2,880,441
FY 32	\$6,185,830	\$6,431,001	-\$245,171	\$2,635,270
FY 33	\$6,206,569	\$5,456,153	\$750,416	\$3,385,687
FY 34	\$6,227,723	\$5,544,531	\$683,191	\$4,068,878
FY 35	\$6,249,299	\$5,634,766	\$614,533	\$4,683,411

The information regarding the long term revenues and expenses is shown in the following chart.



The projection shows with a 3% increase the City would experience annual losses in both FY 2019 and FY 2020 before returning to an annual gain starting in FY 2021. The fund balance would decrease by about \$200,000, to the level of \$1,313,000, by the end of FY 2020. The projection shows starting in FY 2021 an annual gain. The annual gain reaches a maximum in FY 2026 and continuing through FY 2028. Over this period of time the fund balance is projected to increase by about \$1,900,000.

For the four years from FY 2029 through FY 2032 when the nutrient reduction project debt service overlaps the existing debt service an annual loss is projected. The annual loss would decrease the fund balance to about \$2,635,000 in FY 2032. The final three fiscal years of the projection there would be a relatively significant annual gain even with no rate increase.

The long term rate projection shows beyond FY 2023 the City should have the ability to replenish its fund balance and potentially consider rate increases slightly smaller than the historical trend of 3% per year. However, there are a number of factors that could come into consideration over the next five years that could increase either operating expenses, increase capital expenses, or decrease the revenue.

The long term projection shows that it would be very difficult to overlap the nutrient reduction project and existing debt service by significantly more than four years. Further overlapping the debt service would decrease the fund balance. If the nutrient reduction project can be delayed to FY 2028 it is likely the City will be able to consider smaller rate increases starting in the late 2020s. Again, there is a caution as there is uncertainty as to future capital improvements and other factors.

The long term projection would provide support for the concept of moving forward with 3% rate increases for the next five fiscal years with the anticipation the WPCP fund beyond FY 2023 should be able to recoup any planned decrease in the fund balance.

The rate study recommends the City adopt a 3% rate increase starting in FY 2019 and continuing through FY 2023. The rate study also recommends the City negotiate a comparable duration agreement with Heinz incorporating the 3% increase.

Based on this recommendation the Class 1 rates for each of the next five fiscal years would be as follows:

<u>WPCP Rates</u>	<u>Availability</u>	<u>Commodity</u>
FY 18	\$7.94	\$2.72
FY 19	\$8.18	\$2.80
FY 20	\$8.42	\$2.88
FY 21	\$8.68	\$2.97
FY 22	\$8.94	\$3.06
FY 23	\$9.21	\$3.15

In previous rate studies the City has also develop a projection of the annual sewer user charge bill based on typical usage of 7.5 CCF. Based on this usage the Class 1 sewer bill for the current fiscal year and the next five fiscal years would be as follows:

<u>Fiscal Year</u>	<u>Typical Class 1 Monthly Bill</u>
FY2018	\$28.37
FY2019	\$29.22
FY2020	\$30.10
FY2021	\$31.00
FY2022	\$31.93
FY2023	\$32.84

Under the recommended five year rate program a typical Class 1 user would see an increase in their sewer user charge rate in the range of \$0.80 per month, increasing the typical bill over the next five years from \$28.37 to \$32.84.

As discussed at the City Council in depth session on June 14, 2018 a residential average bills in the \$28 to \$33 range would be considered below the average for communities that have a compliant wastewater treatment plant. There are communities with lower sewer user bills. However, many of those communities will be facing major improvements over the next few years that will necessitate rate increases.

For a community in the 10,000 to 50,000 population range with a compliant wastewater treatment plant the typical user charge bill is currently in the mid-\$30 range to \$40 per month range. The City's sewer rates continue to remain below the typical range for comparable communities.

If you have any questions or comments concerning the project, please contact the writer at 800-241-8000.

VEENSTRA & KIMM, INC.



H. R. Veenstra Jr.

HRVJr:paj
20817

cc: Jon Koch



VEENSTRA & KIMM, INC.

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June 18, 2018

Nancy Lueck
City of Muscatine
215 Sycamore
Muscatine, Iowa 52761-3840

MUSCATINE, IOWA
SEWER RATE STUDY – 2018
COLLECTION AND DRAINAGE FUND
OVERVIEW AND RECOMMENDATIONS

This letter is to present an overview of the results of the Sewer Rate Study - 2018 relating to the Collection and Drainage Fund. This letter sets forth the recommendation for the Collection and Drainage Fund rate for the next five fiscal years from FY 19 through FY 23.

The Collection and Drainage Fund was last evaluated during the 2013 Sewer Rate Study. The 2013 Sewer Rate Study recommended the City increase the Collection and Drainage Fee 2% per year for the next five fiscal years through FY 18. The City Council subsequently adopted the recommendation and implemented the five year rate program. The current rate program will expire at the end of FY 18.

The first part of the rate study compared the revenues and expenses for the collection drainage fund between the projections from the 2013 rate study and the actual revenue and expenses. The projection extended through FY 17 as the final revenues and expenditures for FY 18 were not available before the completion of the study.

The following table shows a comparison of the projected revenues and expenses from the 2013 rate study with the actual revenue and expenses.

<u>Category</u>	<u>Total Revenue</u>	<u>Total Expenditures</u>
<u>FY 14</u>		
Projection	\$1,237,500.00	\$1,185,200.00
Actual	\$1,226,111.00	\$1,143,856.00
<u>FY 15</u>		
Projection	\$1,256,760.00	\$1,623,306.00
Actual	\$1,258,062.00	\$1,150,516.00
<u>FY 16</u>		
Projection	\$1,281,505.20	\$1,343,488.18
Actual	\$1,294,939.00	\$1,457,989.00
<u>FY 17</u>		
Projection	\$1,306,745.30	\$1,249,263.83
Actual	\$1,344,237.00	\$1,400,793.00

The projected year revenues and expenses at the end of the current fiscal year on June 30, 2018 is as follows:

Total Revenues: \$1,355,600
Total Expenditures: \$1,314,200

Over the five year period the revenues have been almost identical to the revenue projection in the 2013 rate study. Only a small deviation in revenue is expected as the revenue is derived by the number of customers billed monthly. The customer count in Muscatine is relatively stable.

During the four year period ending on June 30, 2017 the variations between the projected expenditures and the actual expenditures were more significant. For most of the fiscal years the operating expenses, consisting of personnel services, commodities and contractual services, was greater than the projected levels.

The transfers to the reserve funds were similar to the 2013 projection. As expected, the capital outlay for sewer repair and maintenance on an annual basis varied significantly from the projection. The rate study projection was intended to achieve an average level of expenditure over time. There were capital improvements for equipment that were identified in the 2013 rate study that were not incurred during the fiscal year. However, there were other expenditures that were incurred for capital improvements that were not planned over the five year period.

The collection and drainage revenue is used to fund operational expenditures, transfers to reserves and capital improvements. The capital improvements and repairs are likely to vary from year to year as those projects tend to be difficult to project in advance and tend to be more volatile in nature.

For purposes of the rate study the operational expenditures are projected to increase at 3% per year from the FY 2019 budgetary baseline.

The budgetary allocation for Sewer Repair and Maintenance is set at \$120,000 in FY 19. Starting in FY 20 this repair line item is projected to decrease to an average of \$60,000 per year.

Since 2012 the City has transferred \$200,000 per year from the Collection and Drainage Fund to the West Hill Reserve. This \$200,000 per year transfer is projected to continue for at least the next five to six years.

Prior to the 2013 rate study the City was transferring \$180,000 per year from collection and drainage to the Sewer Extension and Improvement Reserve. The 2013 rate study projected this transfer would increase to \$200,000 per year starting in FY 15. Although the rate study projected a \$200,000 per year transfer, the City has continued its practice of a transfer of \$180,000 per year.

The 2013 rate study anticipated there would be capital equipment purchases from the Collection and Drainage Fund. The City elected not to purchase some of the equipment funded from the Collection and Drainage Fund.

In the current fiscal year the City incurred an expense of slightly less than \$700,000 for repairs to the force main from the Papoose Lift Station. This unplanned expenditure was funded from the Sewer Extension and Improvement Reserve. This expenditure decreased the fund balance in that reserve to about \$700,000 at the end of the current fiscal year.

In evaluating the Collection and Drainage Fund over the next five years one of the goals is to replenish that Sewer Extension and Improvement Reserve Fund. To replenish the fund the transfer to the reserve fund will increase to \$350,000 per year in FY 19 and continue at that rate through FY 23. The additional \$170,000 will replenish the fund over the next four fiscal years.

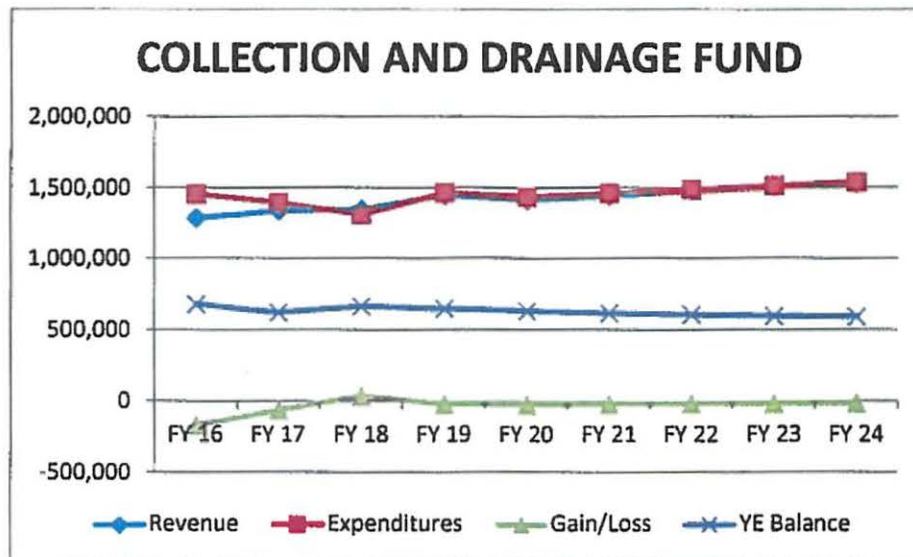
In recognition of the increased transfer to the Sewer Extension and Improvement Reserve the 2018 rate study does not show any expenditures for other capital improvements funded from the Collection and Drainage Fund for the next five years. For the next five year period the Collection and Drainage Fund will be limited to funding its operational expenditures, sewer repair and maintenance expenditures and the two transfers to the West Hill Reserve and Sewer Extension and Improvement Reserve.

Historically, the City has targeted increasing the Collection and Drainage Fee at a rate no greater than 2% per year. In developing the projection of fundable transfers and improvements the revenues projected were based on an increase at the rate of 2% per year. To maintain this level of rate increase and to replenish the Sewer Extension & Improvement Reserve adjustments to decrease the annual budget line item for sewer repair/maintenance to \$60,000 per year and all other capital improvements were eliminated from the five year program.

With these adjustments projected revenues and expenses based on a 2% annual increase starting in FY 19 and continuing through FY 23 is as follows:

	<u>Revenue</u>	<u>Expenditures</u>	<u>Gain/Loss</u>	<u>YE Balance</u>
FY 16	1,294,939	1,457,989	-163,050	686,325
FY 17	1,344,237	1,400,793	-56,556	629,769
FY 18	1,355,600	1,314,200	41,400	671,169
FY 19	1,455,600	1,469,900	-14,300	656,869
FY 20	1,423,100	1,440,527	-17,427	639,442
FY 21	1,451,150	1,465,366	-14,216	625,226
FY 22	1,479,761	1,490,938	-11,177	614,049
FY 23	1,508,944	1,517,265	-8,321	605,729
FY 24	1,538,711	1,544,370	-5,659	600,070

The following chart shows graphically the revenues, expenses, gain and loss and year end fund balance over the period FY 16 through FY 24.



In FY 16 and FY 17 the Collection and Drainage Fund experienced an annual loss. The annual loss in FY 16 was the result of a much larger than anticipated outlay for sewer repairs and maintenance. The loss in FY 17 was the result of additional capital improvement for participation in a trail project to provide sewer access. For the current fiscal year the Collection and Drainage Fund is projected to have a slight annual gain.

For the five year period FY 19 through FY 23 the Collection and Drainage Fund is projected to have a small annual loss ranging from about \$17,000 downward to \$8,000. Over this five year period the fund balance is projected to decrease from approximately \$671,000 to just under \$606,000.

The fund balance at the end of FY 18 is projected to be about 40% of the revenue of \$1,508,944. The projected reserve level for the Collection and Drainage Fund should be higher on a percentage basis than the WPCP fund primarily because of the smaller revenue stream. For smaller revenue stream utilities a higher percentage of the annual revenue should be held in reserve to offset unforeseen expenses. The 40% reserve level in FY 23 would be considered appropriate.

As indicated earlier, the primary increase in expenditures and collection and drainage over the next five years is the transfer to replenish the Sewer Extension & Improvement Fund. That fund should be replenished at the end of FY 22.

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June 18, 2018
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Unlike the WPCP fund that has a much higher percentage of fixed obligations the City has significant discretion in the transfers to replenish the Sewer Extension & Improvement Fund. The City would have the option to decrease the annual transfer if that appears appropriate to avoid unplanned decreases in the Collection and Drainage Fund balance.

The City's ability to control the transfers to replenish the Sewer Extension & Improvement Fund allows the City to maintain its target level of a 2% annual rate increase while still restoring the reserve fund within a reasonable period of time.

This rate study recommends the City continue its historical program of 2% annual increases in the Collection and Drainage Fee. The 2% annual increase would be effective starting in FY 19 and continuing through FY 23. Based on this recommendation the Collection and Drainage Fee on a per bill basis for the current fiscal year and the next five fiscal years would be as follows:

FY 18	\$12.15
FY 19	\$12.40
FY 20	\$12.65
FY 21	\$12.90
FY 22	\$13.15
FY 23	\$13.40

If you have any questions or comments concerning the project, please contact the writer at 800-241-8000.

VEENSTRA & KIMM, INC.



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cc: Jon Koch