

# **LA CROSSE SANITARY SEWER UTILITY**

**LA CROSSE, WISCONSIN**

**PROPOSED SEWER “USER CHARGE” RATES**

## **EXECUTIVE REPORT**

**AUGUST 14, 2014**

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Thursday, August 14, 2014

Mr. Mark E. Johnson  
Utilities Director  
CITY OF LA CROSSE  
400 La Crosse Street  
La Crosse, WI 54601

Dear Mr. Johnson:

Accompanying this letter is our report titled **Proposed Sewer “User Charge” Rates**. This report contains our “Findings & Recommendations” for the sanitary sewer utility. Essentially the proposed increase adjusts sanitary sewer revenues for 5 years of normal and ordinary inflation as measured by the Consumer Price Index (CPI-U).

This increase is a conservative increase, and if actual capital improvements follow the level as projected by the utility in their 5-Year CIP, the utility will be pretty much out of cash by the end of 2019. This increase will provide an estimated \$1,117,000 for capital projects. This dollar amount will decrease over time as labor and non-labor costs increase. This \$1,117,000 is approximately equal to the historical actual 8-year inflation adjusted construction average. However, the utility’s 5-year CIP is projecting an average capital project expenditure of \$1,500,000 per year. Given the following: a) the inherent uncertainty of 5-year construction projections, b) the desire to limit rate increases to the absolute minimum necessary, c) the level of existing cash reserves, and d) the ability to increase rates again in 2 or 3 years if capital needs dictate; a more measured and conservative increase was considered a reasonable approach.

A separate document has been provided to you containing this **Executive Report** plus approximately 105 pages of “schedules-only” which show detailed financial information, cost-of-service and rate design calculations, customer usage, revenue reconciliation and development of billable units, and numerous other schedules relating to the cost-of-service allocations and rate design for the sewer utility. These schedules provide all of the supporting information for our rate recommendation and are included to fulfill DNR sewer “user charge” review requirements should that need arise in the near future.

As always it was a pleasure working with you, Jared, and Tina. I thank you all for your prompt response to my many questions and requests for data.

Respectfully submitted,

*/s/ John A. Mayer*

John A. Mayer  
Utility Rate Consultant

JAM/cb3

# LA CROSSE SANITARY SEWER UTILITY

## LA CROSSE, WISCONSIN

### RESULTS OF CONTRACTUALLY REQUIRED 5-YEAR RATE REVIEW & PROPOSED SEWER “USER CHARGE” RATES

AUGUST 14, 2014

#### EXECUTIVE REPORT

##### Preface

The purpose of periodic sewer rate reviews is to perform a comprehensive evaluation of the financial condition of the Utility, considering historical data and, as much as possible, anticipated changes that can affect the financial health of the Utility. In addition, the La Crosse Sanitary Sewer Utility is required by contract with the City of Onalaska to conduct a rate re-determination “...not less than once in five years.”

The current rate review considers not only operating and capital expenses over the past 13 years, but also incorporates expected changes to operating expenses as well as anticipated capital projects proposed through the City’s Capital Improvement Program. Recommendations for rate changes apply to the full rate structure, including:

- Fixed and sewer use charges for City of La Crosse customers;
- Wholesale rates charged to other entities that current receive sewer and wastewater treatment service from La Crosse. Currently, the City provides these services to:
  - The City of Onalaska;
  - The City of La Crescent, MN;
  - The Town of Campbell Utility District;
  - The Town of Shelby Sanitary District #1; and
  - The Town of Shelby Sanitary District #2.
- High-strength charges for customers discharging higher than domestic strength waste;
- Charges for waste that delivered and discharged at the wastewater plant by waste haulers.

Any changes to rates must be applied to all categories of customers.

**Findings & Recommendations**

1. The current sewer rates in effect for the City of La Crosse were based on a rate study dated September 2009. That report contained rate recommendations for the years 2010, 2011, and 2012 consisting of 3 approximately equal percentage increases. The recommended rate increase for 2010 was 8.83%. The rates for 2011 and 2012 were never implemented.
2. For the 10 year period from 1/1/2003 through 12/31/2012 (2013 data not yet available) the utility has funded \$12.8 million of construction, of which \$7.1 million was for treatment plant upgrades to the aeration system sludge storage, headworks improvements, SCADA upgrades, UV system replacement, rebuilding primary clarifiers and final clarifiers, and other projects. The Sanitary Sewer Utility (SSU) has accomplished this using existing cash reserves coupled with cash generated through user charge rates. The fact that this construction was done without borrowing is a major factor in explaining why SSU rates in La Crosse (LAX) are one of the lowest, if not **the** lowest, in the State of Wisconsin.
3. A “financially prudent” level of utility rates suggests that revenues need to be great enough for the utility to pay all operating expenses, pay debt service principal and interest, and have enough cash remaining to pay for “ordinary and typical capital expenditures” for an average year. Ordinary and typical capital projects include such things as replacing sewer mains in conjunction with road rehabilitation, rebuilding lift stations, replacing treatment plant mechanical items that wear out, replacing utility trucks, etc. If the utility needs to spend \$x,xxx,xxx for capital projects each and every year for the foreseeable future, borrowing for that level of expenditure on an annual basis does not make a lot of financial sense.
4. This is why it does not make financial sense. If the utility needed \$1,000,000 each year for “normal capital construction” the utility could raise rates to generate \$1,000,000 to cash finance the construction, or it could borrow the \$1,000,000 and raise rates to only pay for debt service. Each year the utility would have to borrow another \$1,000,000 and raise rates to cover the additional debt service. Each year the total debt service would increase because each year another \$1,000,000 was borrowed. Given a normal level of interest rates (not the artificially low rates set by the current Federal Reserve policy) and a maturity schedule of 14 – 18 years, there is a point of equilibrium when the oldest debt issue is paid off but another new debt issue is added. At that point total debt service is approximately 150% of the original borrowing. Ultimately the utility will have raised rates \$1,500,000 to pay for debt service, basically forever, versus originally raising rates by \$1,000,000 to fund “normal capital construction” with cash.

5. Recent inflation adjusted capital expenditure averages are:

	<u>SSU Asset Addit.</u>	<u>SSU Asset Addit. w/o Major Proj.</u>
10-year:	\$1,440,300	\$430,000
8-year:	\$1,115,900	\$427,000
6-year:	\$ 981,600	\$521,800
4-year:	\$1,011,800	\$630,400

6. As is the case with most water and wastewater utilities in Wisconsin, usage has declined over time even though the number of customers has increased. It seems that this trend has slowed in La Crosse during the last 5-years. From the time of the last rate study in which rates were adjusted in September 2009 until now, residential usage is down 7.4%, however commercial usage is up slightly 0.3%; industrial usage is up 15.0%; public authority usage up 3.3%; and **combined total usage up 1.5%**. During this same period the overall number of customers increased 0.8%.
7. Periodic rate increases are inevitable when the following three conditions exist: 1) the volume of billable sales decreases each year, 2) labor and non-labor costs increase each year, and 3) every few years the EPA and/or DNR change regulations that require stricter discharge limits

and/or monitoring for some new element now determined to be a concern. More about this later, but the elephant in the closet is called “the coming DNR phosphorus discharge limits for LAX”.

8. There is one area in which there is some control. Utilities with the lowest amount of debt are generally the ones with the lowest rates. This is simply basic economics applied to rates. The converse is also true. LAX has roughly 15,900 SSU customers with sewer influent flow of 3,575 MG/yr (million gallons per year). In comparison, Fond du Lac has 15,400 customers with sewer influent flow of 3,046 MG/yr. FDL recently completed a \$59 million new treatment plant. The estimated median LAX residential customer using 1,600 cubic feet (12,000 gallons) per quarter currently pays \$31.74 every 3 months. At FDL's rates that bill would be \$100.06 per quarter. Thirty-seven cents (37¢) of every \$1 of FDL's sewer revenue is needed to pay debt service. Oshkosh also has made some \$37.5 million in treatment plant and collection system improvements in the past 10 year. At Oshkosh's rates the median LAX customer would pay \$80.90 per quarter. Thirty-six point three cents (36.2¢) of every revenue dollar is needed to pay debt service in Oshkosh. As of right now, LAX is totally debt free which is a phenomenal accomplishment, and indeed a major factor in the extraordinary low sanitary sewer rates in LAX.
9. The point to be made is that if a sewer utility like LAX can upgrade its existing treatment plant, maintain compliance with DNR discharge requirements, and consequently avoid building a new treatment plant, it will have the greatest potential to contain sewer rates to the absolutely lowest level possible. If it can perform these upgrades without the need to borrow money, it absolutely will have the lowest rates possible.
10. The SSU has a 5-year “Capital Improvement Projects” (5-Yr. CIP) currently totaling \$7.37 million, \$5.25 million of which have been approved in previous capital budgets. While the SSU could borrow to fund the construction of these projects, recent history suggest that the SSU would rather continue the more financially conservative course of “cash financing” this construction. The major criteria is that the rates generate the dollars needed to cash-finance the projects, should that be the City Council's desire.
11. The 5-Yr. CIP averages \$1,473,000 per year which is approximately the same as the 10-year inflation adjusted construction average in item 5 above. If the desire was to increase cash flow to that level, an increase in rates of 15.74% would be needed. However, capital project schedules frequently tend to “extend” in terms of times. The 8-year inflation adjusted construction average is \$1,115,900. Increasing rates to that level of cash flow would require an overall increase in sewer revenues of 9.86%.
12. ***Given the following: a) the inherent uncertainty of 5-year construction projections, b) the desire to limit rate increases to the absolute minimum necessary, c) the level of existing cash reserves, and d) the ability to increase rates again in 2 or 3 years if capital needs dictate; it is recommended that overall sanitary revenues be increased by approximately 9.80%.*** (This is slightly lower than the target of 9.86% due to rounding of the volume rate to the nearest 1¢ per 100 cubic feet.)
13. The CPI-U increase for the 5-year period from June 2009 – June 2014 was 10.50%. The increase in wages measured by the CPI-W for that same period was 11.25%. The increase in construction costs as measured by the Engineering News Record Construction Cost Index (ENR-CCI) was 14.81%. Consequently the recommended increase of 9.80% should be viewed as nothing more than a conservative adjustment for inflationary cost increases.
14. The rates were developed by first projecting a level of operating and maintenance expenses (O&M) for calendar year 2015. Labor costs were estimated by assuming a 2% per year labor increase over actual 2013 levels. Most non-labor costs were estimated by taking the 3-year

inflation adjusted historical average times 102% per year. A 3-year inflation-adjusted average for almost all expenses was used as the base for projections of 2014 and 2015 expenses. The inflation factor for each of the 3-years was calculated by taking the average CPI-U for the 2013 base year divided by the average CPI-U for each year included in the average. The actual expenses for each year times the calculated CPI-U "inflation factor" produces the inflation-adjusted expenses for that year. The mathematical average of those 3 years provides the "3-year inflation adjusted average" level of expense. This averaging process adjusts for year-to-year variations in non-labor expenses that frequently occur. Electric power, natural gas, chemicals, and pension & benefit costs were estimated to increase by 3% over the inflation adjusted average.

15. Accounting rules require the SSU to maintain a balance sheet which shows assets and liabilities. Using the asset list as of 12-31-2012 updated with several items from 2013, a new DNR mandated "Equipment Replacement Fund" (ERF) list was developed. Based on that list, the annual accrual to ERF for 2015 should be \$399,380.
16. Capital expenditures consist of "normal and ordinary" new equipment capital outlays of \$126,000 (which is the 12-year inflation adjusted actual new equipment capital outlay). A capital projects/reserve amount \$718,042 which together with the annual accrual to ERF brings the total cash for to \$1,117,422 which is the targeted 8-year inflation adjusted average actual construction by the SSU.
17. The sum of #14, #15, and #16 above comprise the **Revenue Requirement** or total amount of cash required to be generated by sewer "user charge" rates. Comparing projected revenues to the revenue requirement indicates the level that sewer rates need to be adjusted.
18. A comprehensive cost-of-service and rate design was performed to determine the actual recommended rates that would generate the targeted increase. The rate design portion of the study results in sewer "user charge" rates for domestic sewage customers, non-domestic high-strength sewage customers, and trucked-in sewage waste. The user charge rates were developed using methodology consistent with both EPA and DNR definitions of an approvable "user charge" system which is one that results in rates that are fair, equitable, and which collect for costs in proportion the each user's contribution to the total wastewater loading of the treatment works. These rates were developed with the intent of satisfying in-depth reviews by either the DNR or PSCW. These rates hold open LAX's options to pursue Federal or State grants or low interest loans should that be desired.
19. For **residential** customers, wastewater discharge in LAX is estimated using actual water meter readings for the 2 winter quarters (actual months for those 2 winter quarters vary due to meter reading cycles), and using the **lower of** "actual usage" or the "average of the Q4 and Q1" for the 2<sup>nd</sup> and 3<sup>rd</sup> quarters. This most likely underestimates the actual discharge into the sanitary sewer since during the summer children are home from school, college students return to live at home for the summer, people do more laundry, take more showers, entertain more guests, etc. Also people who take extended winter vacations have an unusually low "winter average" usage. **Examining actual billed volumes of water vs. sewer for the years 2011, 2012, and 2013, somewhere between 45% - 55% of summer water usage IS NOT billed as sewer usage.** That seems like an extraordinary large percentage. While it is reasonable to assume that some portion of the increase in water usage during the summer quarters versus the "winter average" is for watering lawns and gardens; it is also reasonable to assume that a significant portion of the increase is due to an actual increase in wastewater discharged into the sanitary sewer system. To better estimate actual usage during Q2 and Q3 it is recommended that LAX change the formula to the **lower of** "actual usage" or 130% of the winter average of Q4 and Q1.

20. The “elephant in the closet” referred to previously is the coming DNR mandate to reduce phosphorus discharge limits from the treatment plant. The timing and cost to meet these reduced phosphorus limits are, as yet, very much of an “educated engineering guess”. At the moment phosphorus reduction could result in a capital expenditure anywhere from \$10 million to \$60 million. That amount is not possible to “cash finance” and will require borrowing to finance the needed construction. Hopefully LAX would be able to secure a low interest loan from the State’s “Clean Water Fund” (CWF), but none the less such a massive amount of borrowing would translate to an “ADDITIONAL INCREASE” in the 14% to 86% range. That is why is so important to cash finance the construction indicated in the 5-year CIP. Limiting borrowing to only what is needed for the required phosphorus reduction will keep sanitary sewer rates as low as possible.

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### **Equipment Replacement Fund**

As a condition for any potential future grant funding (or low interest loans) for the construction of treatment plants and/or other sewerage facilities, the DNR would require the establishment of an “Equipment Replacement Fund” or ERF. Each year the utility is required to set aside money in a separate fund to provide for the replacement of equipment whose service life is shorter than the expected service life of the wastewater treatment plant. Generally speaking that means that equipment with a service life of 20 years or less should be included in the ERF. Annual operating, maintenance, and replacement costs are referred to as OM&R costs. These costs **must** be recovered from current users in order to have a DNR approvable user charge system. In order to preserve the option of obtaining a “low interest loan” in the future, the decision was made in 1990 to establish an equipment replacement fund.

During past rate studies concerns have been raised that the balance in the ERF fund is too large. The DNR has issued guidelines for the determination of the “Minimum Required ERF Balance”. These guidelines can be found on the internet at the following web address: <http://dnr.wi.gov/aid/documents/eif/guide/replace.html>. There are two accepted methods for determining the minimum ERF balance: 1) the annual accrual for each line item piece of equipment times the number of years that piece of equipment has been in-service, and 2) a balance equal to a percentage of mechanical equipment to be replaced. Under the 1<sup>st</sup> method the calculated “Minimum Required ERF Balance” balance should be \$3,990,335. Under the 2<sup>nd</sup> method the minimum balance should be \$1,457,784. The actual ERF balance as of 12/31/2013 was \$2,208,686 so under Method 1 the ERF is under-funded by \$1,781,650 but under Method 2 it is over-funded by \$750,902. Under the proposed CIP construction coupled with the recommended increase the ERF balance will decrease to \$671,000. This should be considered a temporary condition and restoring the minimum ERF balance of about \$1.5 million calculated under Method 2 should be considered a goal.

### **Level of Existing Non-Replacement Fund Balances**

A 2<sup>nd</sup> concern that has been raised in the past is that the level of existing cash reserves (exclusive of the ERF) is too large. The utility has been able to fund all of its capital improvements during the past 10 years from cash reserves without the need to resort to borrowing. The ability to fund capital projects from cash on hand without borrowing is the key element to keeping sewer rates as low as possible. One needs only to look at Schedule 3, Page 1 to see that the City’s sewer rates are extraordinarily low.

A utility’s “cash balance” (excluding cash in the “equipment replacement fund”) can be viewed as having two components: 1) an “operating reserve fund” or “rate stabilization” fund which can be used to handle year-to-year variations in revenues, annual increases in operating costs,

and any unforeseen major repairs, and 2) a “capital reserve fund” (or “depreciation reserve fund” if you will) which is used to pay for capital items without the need to borrow.

Logically utilities need a minimum of working capital equal to their billing cycle or 3 months which would translate to about \$1,500,000. On the high side, 4½ months of revenues would seem more than sufficient which would be \$2,200,000. Therefore an “operating reserve fund” between \$1.5 and \$2.2 million would be a reasonable target range.

Most utilities **do not** have a funded depreciation reserve as such. Utilities typically accumulate cash over time by having revenues in excess of expenses that may or may not be the result of including “depreciation” as a line item in the rate setting process. The cash in the utility’s bank account not identified as an “operating reserve fund” can be considered a “capital reserve fund”, and typically is used for the purchase and/or construction of capital assets. There is no “right” or “wrong” level of cash to be held in a “capital reserve fund”. Common sense would suggest that accumulating vast amounts of cash for no definitive future construction project might be inappropriate. However if “big ticket items” are in the foreseeable future and it is desired by the municipality to fund such projects wholly or partly from revenues versus borrowing, then the only question becomes one of making sure that monies are collected in a fair and equitable manner.

The argument often raised against cash financing large capital expenditures is that of timing. Some feel that the benefit received from a particular piece of equipment is best matched by bonding since this matches the “cost” of the item to the service life of that same item. The contra argument is that a customer should pay for a service based on the cost to replace that service, hence replacement or “marginal cost pricing”. Unless the utility is accumulating cash for a specific capital project or projects, a reasonable accumulation of cash in the “capital reserve fund” equal to 3 or 4 years of depreciation is suggested. Using Public Service Commission of Wisconsin (PSCW) guideline depreciation rates, that would translate to \$3.7 to \$5.0 million

Consequently non-ERF cash reserves ranging from \$1.5 million to \$7.2 million would be “reasonable”. ***The current non-ERF balance is \$3.1 million is on the low side of the range.*** The utility has proposed **\$7,366,000** worth of capital improvement projects for 2015 – 2019 that are desired to be funded without borrowing. Utilities that can consistently avoid borrowing and can fund ongoing periodic construction from cash reserves always end up to be the utilities with the lowest rates. If these projects are cash-financed, the non-ERF cash reserves will be reduced to an estimated \$401,000 level by the end of 2014. This is an uncomfortably low level, however it was considered acceptable in order to limit the increases to the absolutely smallest possible, but still be able to cash-finance the needed construction.

## **Conclusion**

The recommended rates shown on Schedule 1 are projected to continue to cover operating costs and also permit the utility to cash-finance the \$7.37 million of construction as shown on Schedule LAX-1. The rate increase is a “bare bones” level of increase, and if the 5-year CIP materializes as estimated it will reduce cash balances by over \$4 million. ***If combined unrestricted and ERF cash balances decrease under \$2.5 million the SSU needs to review rates once again and likely implement another increase before the typical 5-year review mark.***

Attached are several schedules showing the current rates and recommended rates, comparisons with sewer rates in other communities, and a graph showing La Crosse compared to the rates in other university communities. The bound report consists of this **Executive Report** plus additional sections containing schedules-only which show detailed financial and cost study work-papers that support the recommended rate changes.



**ESTIMATE 5-YEAR CAPITAL PROJECT COSTS**

ESTIMATED AMOUNTS FOR CAPITAL PROJECTS-NEXT 5 YEARS

CURRENT PROJECTS & EQUIPMENT BUDGETED FOR 2015

			<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
1	CONVERT SCADA TO RADIO	\$160,000					
2	REPLACE LIGHTING-PLANT 1	35,000	\$1,015,450	\$693,600	\$80,200	\$330,000	0
3	INSTALL SEWER LINER - 24" MAIN FROM LAX RIVER TO STATE ST	135,000	<u>\$1,049,400</u>	<u>\$1,049,400</u>	<u>\$1,049,400</u>	<u>\$1,049,400</u>	<u>\$1,049,400</u>
4	PLC REPLACEMENT & INTEGRATOR SERVICES	432,000					
5	NEW SANITARY SEWER ON 22ND ST-MARKET TO WINNEBAGO	18,700	\$2,064,850	\$1,743,000	\$1,129,600	\$1,379,400	\$1,049,400
6	NEW SANITARY SEWER ON 22ND ST-WINNEBAGO TO MISSISSIPPI	30,400					
7	NEW SANITARY SEWER ON 22ND ST-MISSISSIPPI TO JACKSON	34,300					
8	SANITARY SEWER MODIFICATIONS - BNSF R.O.W.	100,000					
9	EQ ITEMS - LAB SPEC, HOTTSY & SALT SPREADER	19,250					
10	EQ ITEM - SEWER MAINT TRUCK (S-11)	30,000					
11	EQ ITEM - PICKUP TRUCK (D-22)	<u>20,800</u>					
		\$1,015,450					

CURRENT PROJECTS & EQUIPMENT BUDGETED FOR 2016

1	REPLACE CONTROLS AT CAUSEWAY SANITARY LIFT STATION	\$25,000
2	INSTALL SEWER LIUNER-30" MAIN FROM LAX RIVER TO STATE ST	136,000
3	NEW SANITARY SEWER ON 13TH ST FROM FERRY TO MARKET	35,100
4	SANITARY SEWER & REHAB PROJECTS	330,000
5	EQ ITEM - FLATBED TRUCK (D-21)	36,000
6	EQ ITEM - FLATBED TRUCK (D-35)	38,000
7	EQ ITEM - POTABLE GENERATOR	90,000
8	EQ ITEM - CHAIN HOIST	<u>3,500</u>
		\$693,600

CURRENT PROJECTS & EQUIPMENT BUDGETED FOR 2017

1	EQ ITEM - (4) LAPTOP CPMPUTERS	\$7,200
2	EQ ITEM - TRUCK (TRP-54)	19,000
3	EQ ITEM - VAN (TVB - 01)	37,000
4	EQ ITEM - VAN (VAN -10)	<u>17,000</u>
		\$80,200

CURRENT PROJECTS & EQUIPMENT BUDGETED FOR 2018

1	SANITARY SEWER & REHAB PROJECTS	\$330,000
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PROJECTS APPROVED IN PREVIOUS CAPITAL BUDGETS

1	INSPECT/REHAB LARGE COLLECTION SYSTEM GATES	\$240,000	2011 - 2012
2	DIGESTER/HEATING SYSTEMS REHAB - DIGESTER HEATING	1,386,000	2011 - 2012
3	DIGESTER/HEATING SYSTEMS REHAB - FACILITY-WIDE HEATING SYSTEM	589,000	2011 - 2012
4	DIGESTER/HEATING SYSTEMS REHAB - BLDG ROOF & REPAIR DIG. #4 COVER	379,000	2011 - 2013
5	DIGESTER/HEATING SYSTEMS REHAB - DIGESTER RECIRCULATION	666,000	2011 - 2013
6	DIGESTER/HEATING SYSTEMS REHAB - DIGESTER MIXING	1,323,000	2011 - 2013
7	DIGESTER/HEATING SYSTEMS REHAB - F.O.G. & HIGH STR. WASTE RECEIVING	468,000	2012 - 2014
8	DIGESTER/HEATING SYSTEMS REHAB - ENERGY RECOVERY	0	2014 - 2015 BUDGETED 3,119,000 - DID NOT INCLUDE; OTHER PROJECTS FIRST
9	DIGESTER/HEATING SYSTEMS REHAB - 2ND WASTE GAS BURNER	<u>196,000</u>	2014 - 2015
		\$5,247,000	
		<u>\$1,049,400</u>	5-YEAR AVERAGE AMOUNT FOR PREVIOUSLY BUDGETED PROJECTS

Total 2015 - 2019 Construction

\$7,366,250

**LA CROSSE WASTEWATER UTILITY  
CONSTRUCTION CASH FLOW ANALYSIS**

		Total Cash	Unrestricted Cash	Equipment Replacement Fund
Cash Balance as of	12/31/2013	\$ 5,281,813	\$ 3,073,128	\$ 2,208,686
Generated thru Rates	2014	\$ 612,135	\$ 247,172	\$ 364,963
Cash Available for Construction		\$ 5,893,949	\$ 3,320,300	\$ 2,573,649
Normal Construction For	2014	(108,200)	-	(108,200)
Major Construction For	2014	(\$863,800)	(863,800)	-
Cash Balance as of	12/31/2014	\$ 4,921,949	\$ 2,456,500	\$ 2,465,449
Generated thru Rates	2015	\$ 970,580	\$ 571,200	\$ 399,380
Cash Available for Construction		\$ 5,892,529	\$ 3,027,700	\$ 2,864,829
Normal Construction For	2015	(126,500)	(18,300)	(108,200)
Major Construction For	2015	(\$2,064,850)	(1,414,850)	(650,000)
Cash Balance as of	12/31/2015	\$ 3,701,179	\$ 1,594,550	\$ 2,106,629
Generated thru Rates	2016	\$ 988,380	\$ 589,000	\$ 399,380
Cash Available for Construction		\$ 4,689,559	\$ 2,183,550	\$ 2,506,009
Normal Construction For	2016	(126,500)	(18,300)	(108,200)
Major Construction For	2016	(\$1,743,000)	(1,093,000)	(650,000)
Cash Balance as of	12/31/2016	\$ 2,820,059	\$ 1,072,250	\$ 1,747,809
Generated thru Rates	2017	\$ 860,880	\$ 461,500	\$ 399,380
Cash Available for Construction		\$ 3,680,939	\$ 1,533,750	\$ 2,147,189
Normal Construction For	2017	(126,500)	(18,300)	(108,200)
Major Construction For	2017	(\$1,129,600)	(479,600)	(650,000)
Cash Balance as of	12/31/2017	\$ 2,424,839	\$ 1,035,850	\$ 1,388,989
Generated thru Rates	2018	\$ 730,780	\$ 331,400	\$ 399,380
Cash Available for Construction		\$ 3,155,619	\$ 1,367,250	\$ 1,788,369
Normal Construction For	2018	(126,500)	(18,300)	(108,200)
Major Construction For	2018	\$ (1,379,400)	(729,400)	(650,000)
Cash Balance as of	12/31/2018	\$ 1,649,719	\$ 619,550	\$ 1,030,169
Generated thru Rates	2019	\$ 598,080	\$ 198,700	\$ 399,380
Cash Available for Construction		\$ 2,247,799	\$ 818,250	\$ 1,429,549
Normal Construction For	2019	(126,500)	(18,300)	(108,200)
Major Construction For	2019	\$ (1,049,400)	(399,400)	(650,000)
Cash Balance as of	12/31/2019	\$ 1,071,899	\$ 400,550	\$ 671,349
<b>Cumulative Change in Cash Balance</b>		<b>\$ (4,209,915)</b>	<b>\$ (2,672,578)</b>	<b>\$ (1,537,337)</b>
Ordinary Incr. in O&M		\$125,000	/yr inflated by 2.0%/yr.	
		<u>per year avg.</u>		
Total Major Construction		\$ 7,366,250	\$ 1,473,250	
Total "Normal" Construction		\$ 632,500	\$ 126,500	

**PRESENT & PROPOSED "USER CHARGE" RATES**

	Present Rate	Proposed Rate
	\$	\$

**Domestic Sewage Customers (Category A)**

BOD<250 mg/l, TSS<350 mg/l, P<10 mg/l , NH3-N<40 mg/l):

Quarterly Facilities Charge:

Meter Size	Present Rate	Proposed Rate
5/8	\$13.50	\$15.00
3/4	13.50	15.00
1	22.00	24.00
1½	37.00	39.00
2	56.00	60.00
3	100.00	108.00
4	162.00	174.00
6	318.00	342.00
8	506.00	543.00
10	756.00	813.00
12	1,006.00	1,080.00

Volume Charge:

\$ per 100 cubic feet	\$1.14	\$1.26
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Flat Rate for Unmetered Customers

New Quarterly Charge

(Based on 17 CCF/quarter)	\$32.88	\$36.40
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**Non-Domestic Sewage Customers**

BOD>250 mg/l, TSS>350 mg/l, P>10 mg/l , NH3-N>40 mg/l):

Quarterly Facilities Charge:

Same as Domestic Sewage Customers

Volume Charge:

Same as Domestic Sewage Customers

Surcharge per lb. Over

Domestic Strength Sewage:

B.O.D.	(\$/lb.)	\$0.210	\$0.224
T.S.S.	(\$/lb.)	\$0.223	\$0.211
Phosphorus	(\$/lb.)	\$2.465	\$4.177
NH <sub>3</sub> -N	(\$/lb.)	\$0.600	\$0.559

**WHOLESALE CUSTOMERS**

	Contract Expires		Present	Rates per Cost Study
Onalaska	3/28/2017	\$ per million gallons	\$1,488	\$1,631
Tn. of Campbell	12/31/2014	\$ per million gallons	\$1,488	\$1,631
Shelby SD#2	12/31/2014	\$ per million gallons	\$1,488	\$1,631
La Crescent, MN	12/31/2027	\$ per million gallons	\$1,488	\$1,631

**TANKER TRUCK HAULERS**

	Present	Proposed
Billing Charge (Admin./Testing)	\$11.00	\$11.00

Bill at Category "B" Rates if Tested for Strength, or in appropriate category below:

Volume Charge:

Holding Tank (Low Strength)	BOD / TSS / P / NH3-N < 600 / 1800 / 25 / 50	\$/Kgal	\$5.40	\$5.70
Septic Waste (Medium Strength)	BOD / TSS / P / NH3-N < 1800 / 5500 / 60 / 100	\$/Kgal	\$15.40	\$15.90
Grease Trap (High Strength)	BOD / TSS / P / NH3-N < 7500 / 15000 / 120 / 200	\$/Kgal	\$45.00	\$46.00

## PROPOSED RATES - DETAIL

### Domestic Sewage Customers

BOD<250 mg/l, TSS<350 mg/l, P<10 mg/l , NH3-N<40 mg/l):

Quarterly Facilities Charge:

<u>Meter Size</u>	<u>Total</u>	<u>OM&amp;R</u>	<u>Capital</u>
5/8	\$15.00	\$8.48	\$6.52
3/4	\$15.00	\$8.48	\$6.52
1	\$24.00	\$14.55	\$9.45
1½	\$39.00	\$24.67	\$14.33
2	\$60.00	\$36.82	\$23.18
3	\$108.00	\$65.16	\$42.84
4	\$174.00	\$105.65	\$68.35
6	\$342.00	\$206.87	\$135.13
8	\$543.00	\$328.33	\$214.67
10	\$813.00	\$490.28	\$322.72
12	\$1,080.00	\$652.23	\$427.77

<u>Volume Charge:</u>	\$ per 100 cubic feet	\$1.26	\$1.21	\$0.05
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### Non-Domestic Sewage Customers

BOD>250 mg/l, TSS>350 mg/l, P>10 mg/l , NH3-N>40 mg/l):

Quarterly Facilities Charge:

Same as Domestic Sewage Customers

Volume Charge:

Same as Domestic Sewage Customers

Surcharge per lb. Over

Domestic Strength Sewage:

	<u>Total</u>	<u>OM&amp;R</u>	<u>Capital</u>
B.O.D. (\$/lb.)	\$0.224	\$0.206	\$0.018
T.S.S. (\$/lb.)	\$0.211	\$0.190	\$0.021
Phosphorus (\$/lb.)	\$4.177	\$3.862	\$0.315
NH <sub>3</sub> -N (\$/lb.)	\$0.559	\$0.541	\$0.018

**SEWER BILL COMPARISON**

Qtrly Usage CCF	0.750 INCH METER				1 INCH METER				2 INCH METER			
	Present	Proposed	\$ Chg.	% Chg.	Present	Proposed	\$ Chg.	% Chg.	Present	Proposed	\$ Chg.	% Chg.
0	13.50	15.00	1.50	11.1%								
1	14.64	16.26	1.62	11.1%								
2	15.78	17.52	1.74	11.0%								
3	16.92	18.78	1.86	11.0%								
4	18.06	20.04	1.98	11.0%								
5	19.20	21.30	2.10	10.9%								
6	20.34	22.56	2.22	10.9%								
7	21.48	23.82	2.34	10.9%								
8	22.62	25.08	2.46	10.9%								
9	23.76	26.34	2.58	10.9%								
10	24.90	27.60	2.70	10.8%	33.40	36.60	3.20	9.6%				
11	26.04	28.86	2.82	10.8%	34.54	37.86	3.32	9.6%				
12	27.18	30.12	2.94	10.8%	35.68	39.12	3.44	9.6%				
13	28.32	31.38	3.06	10.8%	36.82	40.38	3.56	9.7%				
14	29.46	32.64	3.18	10.8%	37.96	41.64	3.68	9.7%				
15	30.60	33.90	3.30	10.8%	39.10	42.90	3.80	9.7%				
16	31.74	35.16	3.42	10.8%	40.24	44.16	3.92	9.7%				
17	32.88	36.42	3.54	10.8%	41.38	45.42	4.04	9.8%				
18	34.02	37.68	3.66	10.8%	42.52	46.68	4.16	9.8%				
19	35.16	38.94	3.78	10.8%	43.66	47.94	4.28	9.8%				
20	36.30	40.20	3.90	10.7%	44.80	49.20	4.40	9.8%				
22	38.58	42.72	4.14	10.7%	47.08	51.72	4.64	9.9%				
25	42.00	46.50	4.50	10.7%	50.50	55.50	5.00	9.9%	84.50	91.50	7.00	8.3%
30	47.70	52.80	5.10	10.7%	56.20	61.80	5.60	10.0%	90.20	97.80	7.60	8.4%
35	53.40	59.10	5.70	10.7%	61.90	68.10	6.20	10.0%	95.90	104.10	8.20	8.6%
40	59.10	65.40	6.30	10.7%	67.60	74.40	6.80	10.1%	101.60	110.40	8.80	8.7%
45	64.80	71.70	6.90	10.6%	73.30	80.70	7.40	10.1%	107.30	116.70	9.40	8.8%
50	70.50	78.00	7.50	10.6%	79.00	87.00	8.00	10.1%	113.00	123.00	10.00	8.8%
60	81.90	90.60	8.70	10.6%	90.40	99.60	9.20	10.2%	124.40	135.60	11.20	9.0%
70	93.30	103.20	9.90	10.6%	101.80	112.20	10.40	10.2%	135.80	148.20	12.40	9.1%
80	104.70	115.80	11.10	10.6%	113.20	124.80	11.60	10.2%	147.20	160.80	13.60	9.2%
90	116.10	128.40	12.30	10.6%	124.60	137.40	12.80	10.3%	158.60	173.40	14.80	9.3%
100	127.50	141.00	13.50	10.6%	136.00	150.00	14.00	10.3%	170.00	186.00	16.00	9.4%
150	184.50	204.00	19.50	10.6%	193.00	213.00	20.00	10.4%	227.00	249.00	22.00	9.7%
200	241.50	267.00	25.50	10.6%	250.00	276.00	26.00	10.4%	284.00	312.00	28.00	9.9%
300	355.50	393.00	37.50	10.5%	364.00	402.00	38.00	10.4%	398.00	438.00	40.00	10.1%
400	469.50	519.00	49.50	10.5%	478.00	528.00	50.00	10.5%	512.00	564.00	52.00	10.2%
500	583.50	645.00	61.50	10.5%	592.00	654.00	62.00	10.5%	626.00	690.00	64.00	10.2%
750	868.50	960.00	91.50	10.5%	877.00	969.00	92.00	10.5%	911.00	1,005.00	94.00	10.3%
1000	1,153.50	1,275.00	121.50	10.5%	1,162.00	1,284.00	122.00	10.5%	1,196.00	1,320.00	124.00	10.4%
2000	2,293.50	2,535.00	241.50	10.5%	2,302.00	2,544.00	242.00	10.5%	2,336.00	2,580.00	244.00	10.4%
3000	3,433.50	3,795.00	361.50	10.5%	3,442.00	3,804.00	362.00	10.5%	3,476.00	3,840.00	364.00	10.5%

\* Average Residential = **16.2** Units/quarter  
 \* Typical Residential = **16.0** Units/quarter  
 Typical % of Avg. = **98.9%**

## SEWER BILL COMPARISON - SELECTED CUSTOMERS

Meter Size (in.)	Customer Type	CCF Used	Quarterly Bill @			
			Present	Proposed	\$ Change	% Change
			\$	\$	\$	%
0.625 *	Small Residential	8	22.62	25.08	2.46	10.9%
0.625 *	Typical Residential	16	31.74	35.16	3.42	10.8%
0.750 *	Large Residential	32	49.98	55.32	5.34	10.7%
0.750 *	Small Commercial	62	84.18	93.12	8.94	10.6%
1.000	Typical Commercial	124	163.36	180.24	16.88	10.3%
1.500	Large Commercial	372	461.08	507.72	46.64	10.1%
1.500	Very Large Commercial	500	607.00	669.00	62.00	10.2%
2.000	Industrial	700	854.00	942.00	88.00	10.3%
3.000	P/A - School	400	556.00	612.00	56.00	10.1%

\* Note: The PSCW considers 5/8" x 5/8" meters, 5/8" x 3/4" meters, and 3/4" x 3/4" meters to be identical. The recommended SSU rates also uses those definitions.

## COMPARISON WITH OTHER SEWER RATES

Municipality:	Source Data	(x)	Quarterly Conn. Chg.	Volume Chg. \$/CCF	Qtrly. Bill @ 16 CCF
Rhineland	Oct-2009	(4)	\$52.00	\$5.89	\$146.31
Tomahawk	Jan-2013	(1)	\$37.00	\$5.54	\$125.68
Platteville	Jan-2013	(1)	\$45.00	\$4.61	\$118.72
Marshfield	Jan-2013	(1)	\$54.50	\$3.78	\$114.94
Park Falls	Jan-2013	(1)	\$42.00	\$4.01	\$106.15
Whitewater	Jan-2013	(1)	\$27.25	\$4.68	\$102.05
Fond du Lac	Jan-2009	(4)	\$37.50	\$3.91	\$100.06
Ashland	Jan-2007	(3)	\$40.50	\$3.72	\$99.98
Durand	Jan-2013	(1)	\$38.75	\$3.63	\$96.79
Tomah	Jan-2013	(1)	\$15.00	\$4.75	\$91.00
Stevens Point	Apr-2010	(4)	\$34.00	\$3.31	\$86.96
Mondovi	Jan-2013	(1)	\$22.00	\$3.93	\$84.95
Oshkosh	Jan-2014	(4)	\$22.50	\$3.65	\$80.90
Black River Falls	Jan-2013	(1)	\$10.00	\$3.94	\$73.07
Prairie du Chien	Jan-2013	(1)	\$30.00	\$2.58	\$71.29
Monroe	Jan-2013	(1)	\$20.00	\$3.18	\$70.86
Kenosha	Jan-2010	(2)	\$7.25	\$3.86	\$69.00
West Salem	Jan-2013	(1)	\$45.00	\$1.38	\$67.14
Portage	Jan-2013	(1)	\$32.75	\$2.14	\$66.98
Beloit	Jan-2013	(1)	\$19.00	\$2.95	\$66.15
Janesville	Jan-2013	(1)	\$35.50	\$1.77	\$63.86
Port Washington	Jan-2013	(1)	\$15.25	\$2.94	\$62.28
Madison	Jan-2013	(1)	\$33.75	\$1.77	\$62.11
Milwaukee	Jul-2014	(4)	\$18.83	\$2.56	\$59.79
Ripon	Jan-2013	(1)	\$17.50	\$2.58	\$58.79
Wausau	Jan-2013	(1)	\$17.00	\$2.59	\$58.41
Onalaska	Jan-2013	(1)	\$15.00	\$2.52	\$55.33
Holmen	Jan-2010	(2)	\$12.50	\$2.60	\$54.15
Eau Claire	Apr-2014	(4)	\$5.31	\$2.97	\$52.83
Sheboygan	Jan-2013	(1)	\$24.25	\$1.54	\$48.90
Chippewa Falls	Jan-2010	(2)	\$13.75	\$2.15	\$48.10
Appleton	Jan-2013	(1)	\$13.50	\$2.04	\$46.17
Sauk City	Jan-2013	(1)	\$15.50	\$1.57	\$40.63
<b>La Crosse</b>	<b>2015 Proposed</b>		<b>\$15.00</b>	<b>\$1.26</b>	<b>\$35.16</b>
<b>La Crosse</b>	<b>Jan-2013</b>		<b>\$13.50</b>	<b>\$1.14</b>	<b>\$31.74</b>
Average without La Crosse			\$26.35	\$3.18	\$77.28

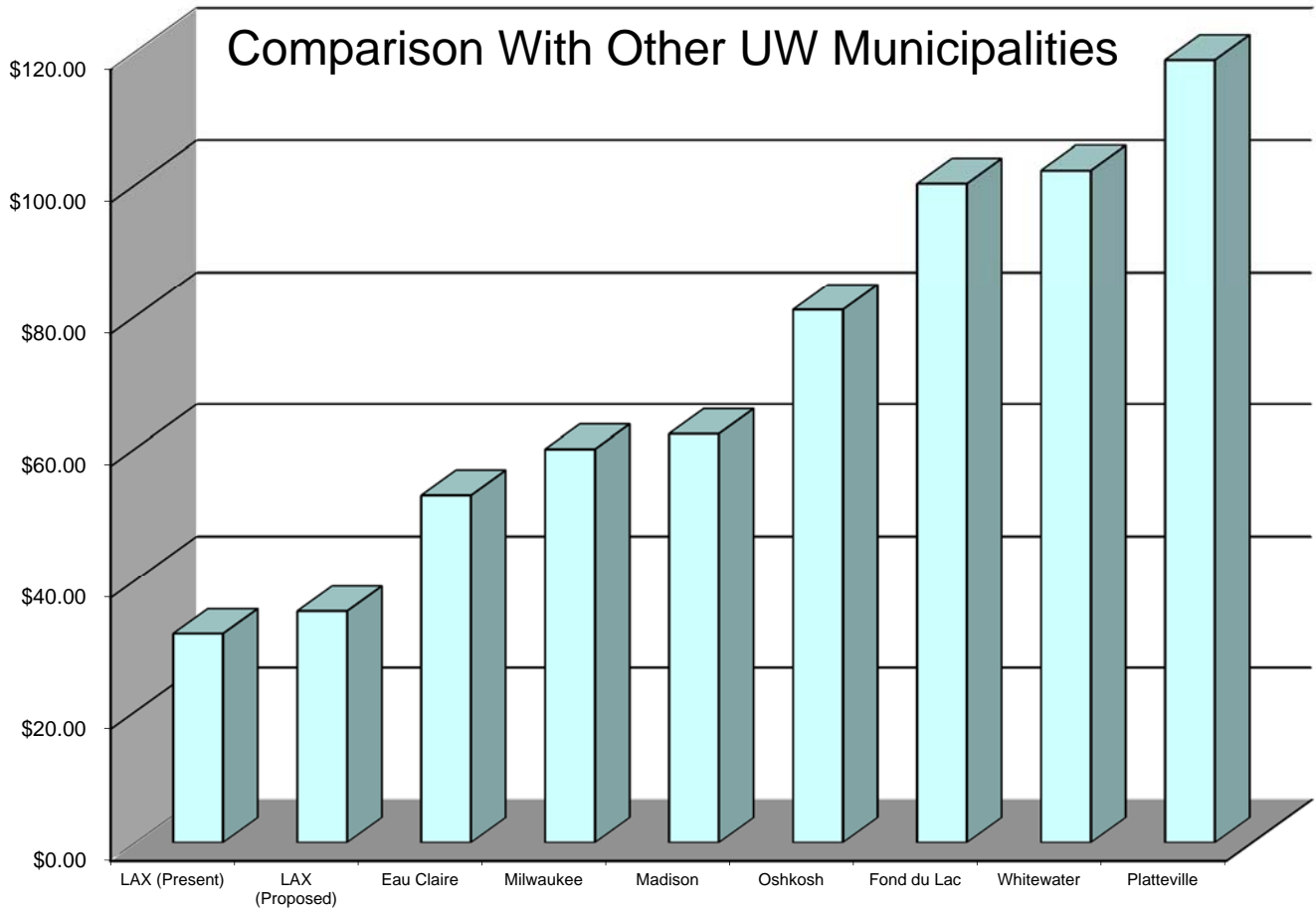
- (1) MSA's "2013 Wisconsin Sewer User Charge Survey Report"  
(2) MSA's "2010 Wisconsin Sewer User Charge Survey Report"  
(3) MSA's "2007 Wisconsin Sewer User Charge Survey Report"  
(4) Updated Rates per Consultant  
(5) MMSD plus Local Rate

La Crosse	Jan-2013	\$13.50	\$1.14	\$31.74
La Crosse	Phase 1	\$15.00	\$1.26	\$35.16

Present Rates +/- Average	-48.77%	-64.19%	-58.93%
Proposed Rates +/- Average	-43.08%	-60.42%	-54.51%

MSA's "2013 Wisconsin Sewer User Charge Survey Report"				
Range	Population:	Avg. Qtrly Conn. Chg.	Volume Chg. \$/CCF	Qtrly. Bill @ 16 CCF
A	0 - 500	\$76.76	\$2.12	\$110.72
B	501 - 1,000	\$65.49	\$3.52	\$121.76
C	1,001 - 2,000	\$65.39	\$3.74	\$125.20
D	2,001 - 5,000	\$50.55	\$3.60	\$108.13
E	5,001 - 10,000	\$35.06	\$2.90	\$81.40
F	10,001 - 50,000	\$26.29	\$3.15	\$76.62
G	Over 50,000	\$23.07	\$1.97	\$54.51

Figure 1



**UNIVERSITY CAMPUS COMPARISON:**

LAX (Present)	
LAX (Proposed)	2015 Proposed
Eau Claire	
Milwaukee	
Madison	
Oshkosh	
Fond du Lac	
Whitewater	
Platteville	
Average - All of the Above	

**Average  
Quarterly  
Resid. Bill**

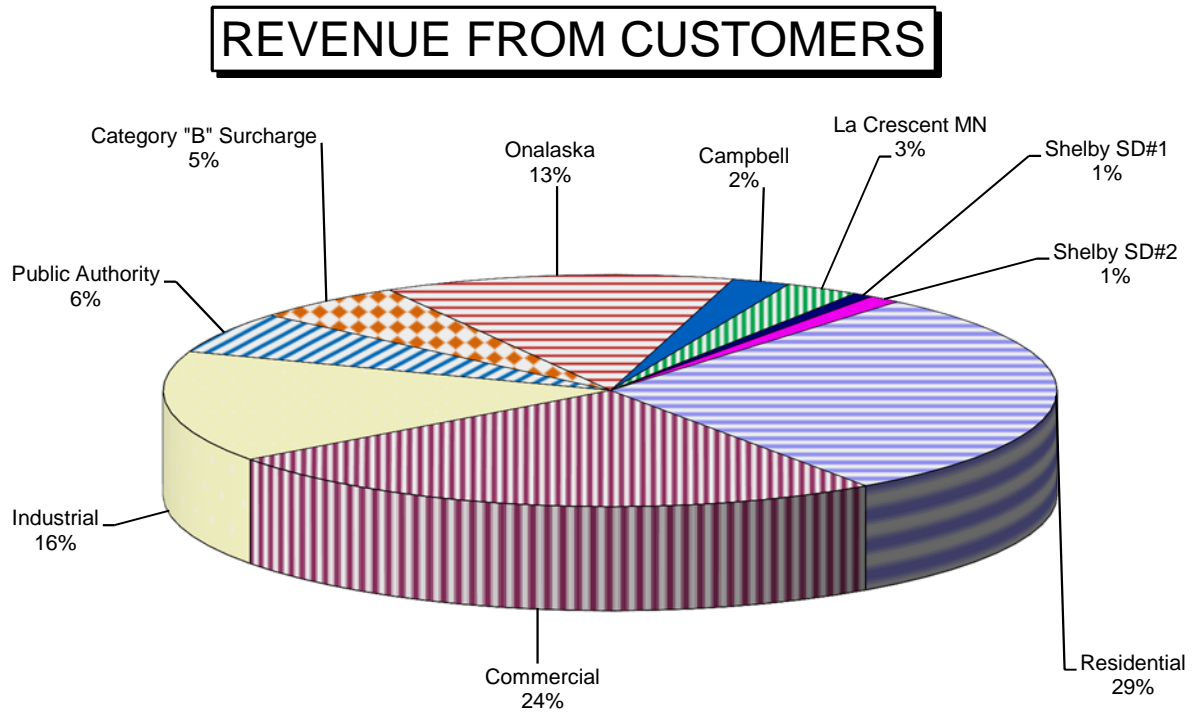
\$31.74
\$35.16
\$52.83
\$59.79
\$62.11
\$80.90
\$100.06
\$102.05
\$118.72
<hr/>
\$76.45



## PRESENT &amp; PROPOSED REVENUES

	Revenues Under		Dollar Increase	Percent Increase	
	Present	Recommended			
	Rates	Rates			
	\$	\$	\$	%	
<u>Customer Class:</u>					
Residential	\$1,718,310	\$1,903,167	\$184,857	10.76%	
Commercial	1,447,428	1,596,944	149,515	10.33%	
Industrial	917,747	1,013,438	95,691	10.43%	
Public Authority	342,722	377,950	35,229	10.28%	LAX Incr.
Category "B" Surcharge	337,053	358,837	21,785	6.46%	10.23%
Onalaska	753,050	825,420	72,370	9.61%	
Campbell	124,543	136,512	11,969	9.61%	
La Crescent MN	160,176	175,569	15,393	9.61%	
Shelby SD#1 [Incr. not calculated]	47,500	47,500	0	0.00%	Whsle Incr.
Shelby SD#2 [Incr. based on Whsle Incr.]	68,800	75,385	6,585	9.57%	9.61%
<b>Total</b>	<b>\$5,917,329</b>	<b>\$6,510,722</b>	<b>\$593,394</b>	<b>10.03%</b>	
<b>Category "B" Hi-Strength Sewage</b> (Domestic Sewage Portion plus Charge for Excess over Domestic Sewage)	<b>\$1,089,747</b>	<b>\$1,190,764</b>	<b>\$101,018</b>	<b>9.27%</b>	
<u>Other Revenue:</u>					
Non-Sewer "Deduct" Meters	1,000	1,000	0		
Late Payment Charge	46,600	46,600	0		
All Other Revenue	28,600	28,600	0		
Pre-Treatment Revenue	61,723	61,723	0		
<b>Total - All Revenue</b>	<b>\$6,055,251</b>	<b>\$6,648,645</b>	<b>\$593,394</b>	<b>9.80%</b>	
Target Revenue Level		\$6,652,272			
Amount Over / (Under) Target		(\$3,627)			
Percent Over / (Under) Target		-0.05%			

Figure 2



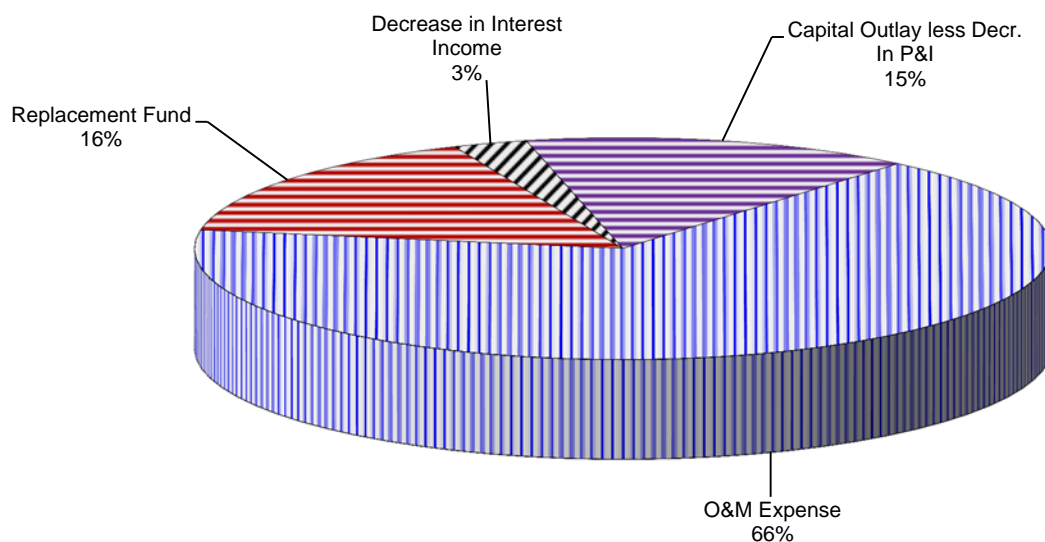
<b>REVENUE UNDER PROPOSED RATES:</b>	<b>\$</b>	<b>% of Total Revenues</b>
Residential	1,903,167	29.2%
Commercial	1,596,944	24.5%
Industrial	1,013,438	15.6%
Public Authority	377,950	5.8%
Category "B" Surcharge	358,837	5.5%
Onalaska	825,420	12.7%
Campbell	136,512	2.1%
La Crescent MN	175,569	2.7%
Shelby SD#1	47,500	0.7%
Shelby SD#2	75,385	1.2%
<b>USER CHARGE REVENUE</b>	<b>\$6,510,722</b>	<b>100.0%</b>
Revenue Over/(Under) Target	(\$3,627)	
Debt Service as % of Revenue	0.00%	Proposed
Debt Service as % of Revenue	0.00%	Present

## REASONS FOR THE CHANGE IN SEWER RATES

	Present Revenues & Expenses	Basis For Present Rates	Increase/ (Decrease)	% Increase/ (Decrease)	
	\$	\$	\$	%	
<b>REVENUES:</b>					
Residential	1,718,310	1,782,305	(63,995)	-3.59%	
Commercial	1,447,428	1,447,354	74	0.01%	
Industrial	917,747	806,649	111,098	13.77%	
Public Authority	342,722	331,196	11,526	3.48%	
Category "B" Surcharge	337,053	214,253	122,800	57.32%	
Tanker Truck Waste	21,600	20,100	1,500	7.46%	
Onalaska	753,050	814,110	(61,060)	-7.50%	
Tn. Of Campbell	124,543	151,998	(27,455)	-18.06%	
La Crescent MN	160,176	169,216	(9,040)	-5.34%	
Shelby SD#1 & 1A	47,500	42,800	4,700	10.98%	
Shelby SD#2	68,800	75,496	(6,696)	-8.87%	
<b>TOTAL SEWER SERVICE</b>	<b>5,938,929</b>	<b>5,855,478</b>	<b>83,451</b>	<b>1.43%</b>	
Misc. Revenues	116,323	86,632	29,691	34.27%	
<b>TOTAL OPERATING REVENUES</b>	<b>6,055,251</b>	<b>5,942,110</b>	<b>113,142</b>	<b>1.90%</b>	
<b>OPERATING EXPENSES:</b>					
Direct Salaries & Wages	1,224,700	1,206,962	17,738	1.47%	Annualized % Chg. 0.25%
Employee Benefits (Pension, Insur., FICA)	866,850	724,645	142,205	19.62%	3.12%
Electric, Gas, Wtr, Swr	723,450	714,750	8,700	1.22%	0.21%
Chemicals	202,800	148,200	54,600	36.84%	5.52%
All Other Costs	2,400,550	2,151,076	249,474	11.60%	1.90%
<b>Total O&amp;M Expense</b>	<b>5,418,350</b>	<b>4,945,634</b>	<b>472,716</b>	<b>9.56%</b>	<b>1.58%</b>
<b>Replacement Fund</b>	<b>399,380</b>	<b>286,580</b>	<b>112,800</b>	<b>39.36%</b>	<b>5.86%</b>
<b>CASH OPERATING EXPENSES</b>	<b>5,817,730</b>	<b>5,232,214</b>	<b>585,516</b>	<b>11.19%</b>	<b>1.84%</b>
<b>CAPITAL COSTS:</b>					
Principal & Interest on Debt	0	175,885	(175,885)	-100.00%	-100.00%
Less: Interest Income / TIF / Spec. Assmnt.	(10,000)	(30,000)	20,000	-66.67%	-17.17%
Capital Outlay - WWTP	95,500	102,200	(6,700)	-6.56%	-1.16%
Capital Outlay - Collection	31,000	11,600	19,400	167.24%	18.36%
Less: Equipment Replacement Fund Withdrawal	0	(59,300)	59,300	-100.00%	-100.00%
Cash Contingency	718,042	509,511	208,531	40.93%	6.06%
<b>TOTAL CAPITAL REQUIREMENTS</b>	<b>834,542</b>	<b>709,896</b>	<b>124,646</b>	<b>17.56%</b>	<b>2.81%</b>
<b>TOTAL OPERATING &amp; CAPITAL EXPENSES</b>	<b>\$6,652,272</b>	<b>\$5,942,110</b>	<b>\$710,162</b>	<b>11.95%</b>	<b>1.95%</b>
<b>TOTAL CHANGE IN REVENUES REQUIRED</b>	<b><u>\$597,020</u></b>	<b><u>\$0</u></b>	<b><u>\$597,020</u></b>	<b><u>9.86%</u></b>	

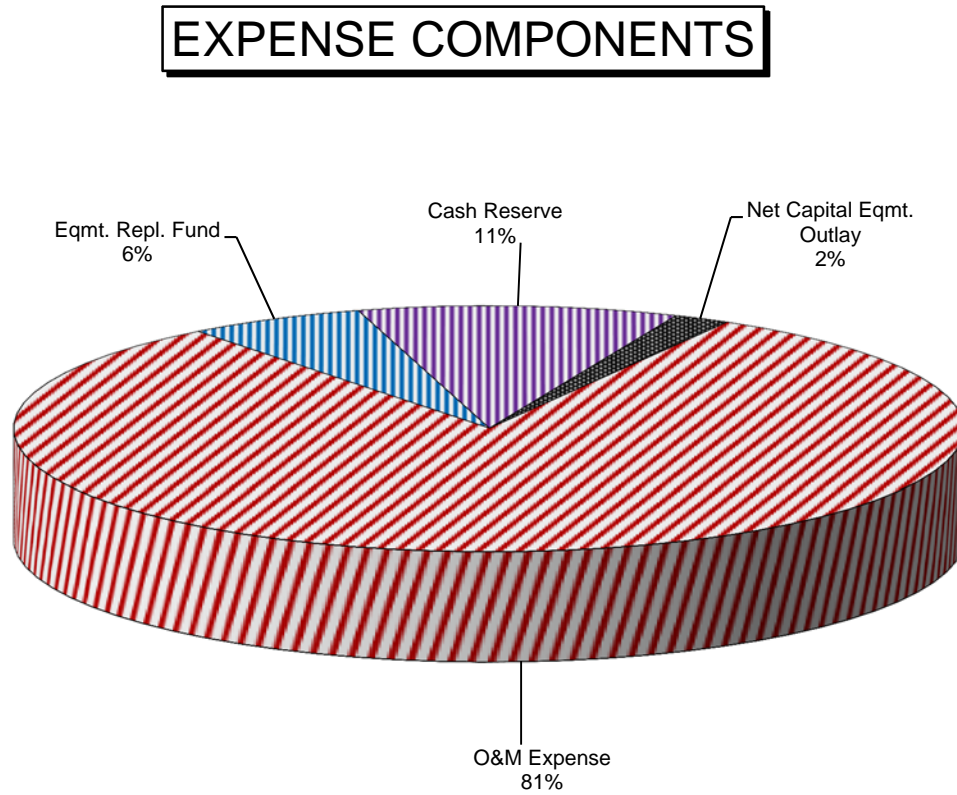
Figure 3

## REASONS FOR THE CHANGE



<u>Reason For The Change:</u>	<u>\$</u>	<u>%</u>	<u>Incr. In Rates Required</u>
O&M Expense	472,716	66.6%	6.6%
Replacement Fund	112,800	15.9%	1.6%
Decrease in Interest Income	20,000	2.8%	0.3%
Capital Outlay less Decr. In P&I	104,646	14.7%	1.5%
Sub-total	\$710,162	100.0%	9.9%
Less: Increase in Revenue	(113,142)		
<b>NET CHANGE REQUIRED</b>	<b>\$597,020</b>		

Figure 4



<b>EXPENSE COMPONENTS:</b>		<u>\$</u>	<u>% of Total Expense</u>
O&M Expense	(w/o PreTrmnt)	5,357,127	81.2%
Eqmt. Repl. Fund		399,380	6.1%
Cash Reserve		718,042	10.9%
Net Capital Eqmt. Outlay		126,000	1.9%
Total Sewer Revenue Required		6,600,549	100.00%
Less: Interest Income		(10,000)	
Less: Other Revenue		(76,200)	
<b>USER CHARGE REVENUE NEEDED</b>		<b>\$6,514,349</b>	