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MEMORANDUM

TO: Charlene Stevens, City Administrator, City of Willmar
Steve Okins, Finance Director, City of Willmar
Mayor and City Council

FROM: Patty Kettles
Matt Stark

DATE: November 15, 2012

SUBJECT: Wastewater Rate Study – Findings and Recommendations

Earlier this year, the City of Willmar engaged Springsted Incorporated to review the financial performance of its Wastewater Utility, and to make recommendations on rate changes necessary to meet the Utility's required cash flow needs. These needs consist primarily of operational expenses, capital replacement and maintenance, debt service, and cash reserve requirements. This memorandum contains the findings of our review, and our recommendations for rate adjustments based on these findings.

Summary of Findings and Recommendations

Recent performance in the Wastewater Utility shows significant net losses in recent years; the net loss in 2011 was \$1,666,528, and the net loss projected for 2012 is \$1,435,893. Cash reserves for the Utility have fallen correspondingly, from a level of approximately \$9 million in 2009 and 2010, to approximately \$6.4 million estimated for the end of 2012. These trends are unsustainable, and rate adjustments will be necessary to restore the Utility to positive net income and to establish sufficient cash reserves.

Our analysis of the Utility's costs allocated to the treatment of wastewater from the Jennie-O Turkey Store (JOTS) indicates that revenues from the customer are sufficient to cover the Utility's costs related to treating its wastewater. We calculate costs related to JOTS at \$2,324,199, with corresponding revenues of \$2,319,387, resulting in a calculated subsidy of just \$4,812, or 0.2% of total costs.

To meet the Utility's revenue and cash flow requirements, we project that rate increases will be required annually. Our recommended rates are as follows:

	2012	2013	2014	2015	2016	2017
Admin/Billing Charge	\$ 2.54	\$ 2.62	\$ 2.70	\$ 2.78	\$ 2.86	\$ 2.95
Utility Improvement Charge	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00
Meter Charge (5/8" meter)	\$ 18.00	\$ 18.00	\$ 18.00	\$ 18.00	\$ 18.00	\$ 18.00
Tier 1 Volume (per 100 cu ft)	\$ 2.17	\$ 2.57	\$ 3.05	\$ 3.36	\$ 3.70	\$ 3.96
Tier 2 Volume (per 100 cu ft)	\$ 3.33	\$ 3.95	\$ 4.68	\$ 5.15	\$ 5.67	\$ 6.07

We recommend that the City revisit these projections each year, to assure that they are consistent with the actual performance of the Wastewater Utility, and to update the scheduled rate adjustments as necessary. We also recommend that the Utility track its costs relating to treatment of wastewater from JOTS, to ensure that revenues adequately cover these costs.

A more detailed examination of our analysis, findings and recommendations is discussed in the balance of this memorandum. We thank the City of Willmar for the opportunity to be of service, and we hope that this study proves useful as the City sets its wastewater rates for the next several years.

Assumptions

A wide variety of assumptions were required in order for us to project the Utility's financial performance into future years. Where possible, we based these assumptions on existing values and trends as recorded by the Wastewater Utility. Where such figures were not available, we based our assumptions on general historical trends, discussions with City and Utility staff, engineering studies, and our professional experience. A summary of the various assumptions used in this model is as follows:

Meters: The Utility uses differing numbers of meters for its various meter-based fees. For Administration and Billing, there are 6,309 meters assigned to residential, commercial, public, and light industrial (RCPLI) accounts; for the Utility Improvement Charge, there are 8,563 RCPLI meters; and for the Meter Charge applied against the Utility's debt service, there are 6,206 RCPLI meters. The reason for the much higher number used for the Utility Improvement Charge is that this charge is billed to each customer, as opposed to each physical meter. The Utility has several large meters which serve multiple customers, resulting in a larger base for this revenue stream. In each case, the number of meters used in our projections is based on detailed monthly billing reports from 2011.

For the Jennie-O Turkey Store (JOTS) account, there are 12 meters against which the various meter-based charges are billed. For the Eagle Lake district, we assume 356 accounts; Eagle Lake contributions for Utility Improvement Charges and Administration & Billing fees are assumed to be limited until 2016, when the City's agreement with the Eagle Lake district expires. In 2017 and beyond, we project Eagle Lake revenues based on the regular residential billing structure.

Volume: The volume baseline was derived from water usage and billing figures gathered in 2011. Wastewater flow from RCPLI accounts was estimated at 88,806,100 cubic feet per year, which is approximately 92.5% of recorded water sales. This 7.5% reduction is due primarily to the Utility's policy of using average winter consumption as the basis for billing summer usage, on the assumption that higher summer usage is due to activities such as irrigation, which do not require treatment at wastewater facilities.

Annual flow from JOTS was estimated at 55,993,300 cubic feet, which represents approximately 37.6% of total wastewater volume. Flows contributed from Eagle Lake were estimated at 4,272,000 cubic feet per year, or 2.9% of total volume. Usage is assumed to remain level over the course of our projections, for all customer classes.

Operating Revenues: Charges for services from RCPLI accounts are assumed to increase at 0.45% annually, which represents the addition of 40 new accounts each year as estimated by the City's Planning Department. Charges for Kandiyohi County and delivered waste are assumed to go up 1% per year. Replacement charges are expected to remain level. Administration & Billing Charges and Other Revenues are projected to increase by 3% annually. Except for the RCPLI growth, these percentages are chosen to reflect modest growth; recent trends for these line items are too variable to provide a baseline growth rate.

Operating Expenditures: As with the revenue line items listed above, the recent trends for most operating expenses vary widely from year to year, making it impossible to base annual growth rates on these trends. For the sake of our projections, we assume that salaries increase 3% annually, while pension and insurance contributions increase 5%. Supplies and Other Services are assumed to increase 3% each year. Depreciation for 2013 was estimated at \$2.4 million, and is assumed to decrease by 5% each year thereafter. This decrease is offset in part by additional depreciation expenses related to future capital purchases.

Interest Earnings: Fund balances are assumed to earn 1% in annual interest. While it is that these rates will improve in future years, we feel it prudent to maintain a conservative estimate for these returns.

Transfers Out: Administration and Billing charges and Replacement Charges are assumed to be transferred out of the Utility Fund.

Capital Outlay: Annual expenditures for capital purchases are based on the Capital Improvement Plan we received from the Utility. The following table shows the anticipate timing and costs for the Utility's capital projects:

Year	Project	Depreciable Life	Priority	G.O. Sewer Revenue Bonds
2013	Cab for Gator		2	3,000
2013	Diesel Particulate Filters Stby Generators		2	60,000
2013	Lab equipment		2	1,200
2013	Lift Station Construction and CRS	30	2	275,000
2013	Lift Station Design Work		2	24,000
2013	MgOH recirculation pump		2	8,500
2013	Pallet lifter		3	4,000
2013	Sewer Rplcment on st being constructed	50	1	50,000
2014	Lakeland Drive Interceptor	50	1	3,000,000
2014	Lakeland Drive Interceptor CRS	50	1	300,000
2014	Lift Station Construction and CRS	30	2	300,000
2014	Overlay driveway at old site (2014)		3	100,000
2014	Plant BIN Computers/copy machine/printers		2	25,000
2014	Sewer Rplcment on st being constructed	50	1	50,000
2015	Lift Station Construction and CRS	30	2	300,000
2015	MgOH recirculation pump		2	8,500
2015	PCN HMI Computer Hardware Costs		3	87,000
2015	PCN HMI Computer Software upgrades		2	128,000

2015	Plant BIN Computers/copy machine/printers		2	4,500
2015	Re-roof admin bldg at old site (2015)	25	3	130,000
2015	Sanitary Sewer Mapping		2	75,000
2015	Sewer Rplcment on st being constructed	50	1	50,000
2016	Lift Station Construction and CRS	30	2	50,000
2016	Sewer Rplcment on st being constructed	50	1	50,000
2017	Lift Station Construction and CRS	30	2	250,000
2017	MgOH recirculation pump		2	8,500
2017	Sewer Rplcment on st being constructed	50	1	50,000

For most of these capital projects, we assume that costs will be financed over 20 years at a 3% interest rate. The exception to this assumption is the Lakeland Drive Interceptor project in 2014. For this project, we assume that the Utility will finance the project via a loan through the Minnesota Public Facilities Authority (PFA), at a rate of 2% over 30 years. In addition to the list above, we included generic CIP projects at \$300,000 annually after 2017. These placeholder projects were added to represent a nominal amount of capital spending in the later years of the planning period, so as not to understate the Utility's needs in these years.

The list above does not include the planned Western Interceptor project, estimated at \$2.87 million. Financing for this project has already been arranged; for this reason, we treated the project as existing debt. Actual figures for annual principal and interest for this debt have been used, according to the amortization schedule provided by PFA.

Findings – Recent Financial Trends

A look at the Utility's recent financial trends shows that operating revenues have been increasing significantly each year, as a result of recent rate increases. These revenues have resulted in annual operating income that is consistently over \$1 million. Unfortunately, these levels of operating income are not sufficient to offset non-operating expenses, particularly those related to supplies and fuel at the new plant, along with interest on outstanding debt. These interest payments have been growing, from a 2009 amount of \$633,500 to an estimated \$2.375 million in 2012. Coupled with transfers out of the Utility Fund, these expenses result in net losses of \$1.67 million in 2011 and an estimated \$1.44 million in 2012. A snapshot of revenues and expenses is shown below.

	2009	2010	2011	2012
Operating Revenues	Actual	Actual	Actual	Budget
Charges for Services - City	2,876,419	3,773,160	4,964,021	5,840,045
Charges for Services - Eagle Lake	121,794	157,644	78,411	150,000
Charges for Services - Kandiyohi Co	416	3,379	-	120,000
Charges for Services - Delivered Waste	-	-	-	16,000
Administration and Billing Charges	167,887	176,366	202,118	200,000
Replacement Charges	409,144	-	425,616	410,200
Other Revenue	542	28,552	-	15,100
Total Operating Revenue	3,576,202	4,139,101	5,670,166	6,751,345
Operating Expenses				
Total - Personal Services	905,654	950,855	945,389	957,093
Total - Supplies	131,241	275,966	481,454	757,550
Total - Other Services and Charges	1,180,672	1,851,491	3,209,440	3,655,050
Total Operating Expenses	2,217,567	3,078,312	4,636,283	5,369,693
Operating Income (Loss)	1,358,635	1,060,789	1,033,883	1,381,652
Non Operating Revenues (Expenses)				
State or Federal Grants	2,666,655	295,788		
Interest Income	241,866	221,619	149,665	100,000
Interest Expense Existing Debt	(633,500)	(1,776,231)	(2,315,968)	(2,374,845)
Special Assessments	3,471		-	-
Refunds and Reimbursements	-		-	15,000
Other	29,125	(140,091)	131,508	2,500
Total Non Operating Revenues (Expenses)	2,307,617	(1,398,915)	(2,034,795)	(2,257,345)
Net Income (Loss) Before Transfers	3,666,252	(338,126)	(1,000,912)	(875,693)
Operating Transfers				
Transfers (Out)	(250,000)	(250,000)	(665,616)	(560,200)
Total Operating Transfers	(250,000)	(250,000)	(665,616)	(560,200)
Net Income (Loss)	3,416,252	(588,126)	(1,666,528)	(1,435,893)

A look at the Utility's cash position shows the major capital outlays undertaken by the Utility in recent years, along with their related debt proceeds. All told, the Utility's cash balance has fallen from approximately \$9 million in 2009 and 2010, to an estimated \$6.4 million in 2012, as shown below.

	2009	2010	2011	2012
	Actual	Actual	Actual	Budget
Beginning Cash & Investments	8,313,400	8,954,947	9,070,148	7,886,546
Net Income	3,416,252	(588,126)	(1,666,528)	(1,435,893)
Depreciation	640,562	1,162,069	2,320,343	2,400,000
Acquisition and Construction of Assets	(45,914,457)	(17,575,044)	(5,133,018)	(2,958,557)
Proceeds from New Long-Term Debt	49,632,130	17,422,103	4,991,931	2,873,557
Payments on Long-Term Debt	(7,511,720)	(650,792)	(2,022,566)	(2,355,263)
Adjustment to Accruals	378,780	344,991	326,236	-
Ending Cash Balance	8,954,947	9,070,148	7,886,546	6,410,390

Looking at these recent trends, it becomes clear that revenues are currently insufficient to cover the Utility's non-operating expenses, particularly those related to repayment of the debt issued to finance the new treatment facility. If the Utility is expected to restore positive net income, and to maintain cash reserves sufficient to its needs, it will need to increase revenues by approximately \$1.4 million annually.

Findings – Costs Allocated to Jennie-O Turkey Store

In 2008, the City of Willmar commissioned an engineering study as part of the planning and design process for the new wastewater treatment facility. As part of this study, the engineer estimated the share of capital and operating expenses attributable to treatment requirements for flows from the Jennie-O Turkey Store (JOTS). Based on the cost allocations estimated in the 2008 Engineer's Report, updated to include budgeted 2012 expenditures, we calculated updated estimates of costs to be allocated to JOTS.

In the 2008 engineering study, general treatment costs were allocated to various elements of wastewater treatment according to the following proportions:

Cost Component	Percentage
Overall flow:	40%
Biological Oxygen Demand (BOD):	20%
Total Suspended Solids (TSS):	20%
Total Nitrogen (TKN):	15%
Total Phosphorus (TP):	5%

In the 2012 budget, the Utility's costs for operations and replacement are projected at just under \$3 million. This figure includes all operating costs, less depreciation. If we split these costs according to the above proportions, we get the following cost allocations:

	Flow	BOD	TSS	TKN	TP	Total
Allocation to specific loads	40.00%	20.00%	20.00%	15.00%	5.00%	100%
General Admin, O&M	398,599	199,300	199,300	149,475	49,825	996,498
Electricity	307,307	153,654	153,654	115,240	38,413	768,268
Natural Gas	50,693	25,346	25,346	19,010	6,337	126,732
Chemicals	233,000	116,500	116,500	87,375	29,125	582,500
Additional Biosolids	34,198	17,099	17,099	12,824	4,275	85,495
Replacement Fund	164,080	82,040	82,040	61,530	20,510	410,200
TOTAL COST	1,187,877	593,939	593,939	445,454	148,485	2,969,693

According to the same engineering study, the contribution to each element of wastewater treatment from the Jennie-O Turkey Store was estimated at the following percentages:

Specific Load	Contribution from JOTS
Overall flow:	23.2%
Biological Oxygen Demand:	63.9%
Total Suspended Solids:	26.0%
Total Nitrogen:	56.3%
Total Phosphorus:	68.0%

To calculate the total amounts attributable to JOTS, we must multiply each column of numbers from the first table by the corresponding percentage for that element. The results of these calculations are shown in the table below:

JOTS share of each load category	Flow	BOD	TSS	TKN	TP	Total
	23.20%	63.90%	26.00%	56.30%	68.00%	100%
General Admin, O&M	92,475	127,352	51,818	84,154	33,881	389,681
Electricity	71,295	98,185	39,950	64,880	26,121	300,431
Natural Gas	11,761	16,196	6,590	10,703	4,309	49,559
Chemicals	54,056	74,444	30,290	49,192	19,805	227,787
Additional Biosolids	7,934	10,926	4,446	7,220	2,907	33,433
Replacement Fund	38,067	52,424	21,330	34,641	13,947	160,409
TOTAL JOTS SHARE	275,588	379,527	154,424	250,791	100,970	1,161,298

In all, we calculate that JOTS is responsible for approximately \$1.16 million of the \$3 million total operating and replacement costs.

In addition to these operating costs, JOTS is responsible for a share of the Utility's debt service related to construction of the new treatment facility. Materials provided by the City show that JOTS was calculated to be

responsible for \$20,019,414 of the total cost of the new facility. Debt schedules show that the total principal borrowed for the project was \$81,429,119. By these measures, we calculate that JOTS is responsible for 24.585% of the Utility's debt for the project. Applying this percentage to 2012's debt service, this amounts to \$1,162,901. This figure, combined with operating expenses calculated earlier, brings the total costs allocated to JOTS to \$2,324,199.

These figures include only the current operating and debt service costs attributable to the costs of treatment for JOTS flows. They do not include any costs relating to the Utility's need to restore its cash reserves, nor to capital outlays required for maintenance of the wastewater system.

Findings – Revenues from Jennie-O Turkey Store

To offset the costs outlined above, we estimate that JOTS will generate three primary revenue streams for the Utility: meter charges, volume charges, and surcharges. The JOTS facility has 12 meters assigned to it; using the 2012 fee schedule, the meter fees for JOTS will come to \$51,624 for the year. Administration/Billing charges are expected to amount to \$366, and Replacement Charges are expected to add \$576. In total, these fees come to \$52,566.

For Usage Fees, we assume that usage in 2012 will be approximately the same as it was in 2011. In this case, total usage fees based on volume come to just under \$1.8 million, as shown below:

Estimated volume (2011 levels) in units of 100 cu ft:					
Tier 1:	62,759	at	\$ 2.17	per unit	136,187
Tier 2:	497,174	at	\$ 3.33	per unit	1,655,589
Total JOTS Volume Revenue:					1,791,776

Calculations for surcharges are more complicated than those for meters and volume. We begin the calculations by looking at the average daily loads from JOTS as reported in 2011, and assume that current and future flows will share a similar profile. Average daily flow from JOTS was reported as 1.043 million gallons per day (MGD). Permitted limits on load factors are given in concentrations of milligrams per liter (mg/L). We can convert these concentration limits to weight limits based on the average flow from JOTS. This conversion gives us daily limits in pounds, instead of mg/L. In the table below, these limits are compared to the average daily loads as measured at the treatment facility in 2011:

	TBOD	TSS	TKN	TP
Allowable concentration (mg/L)	250	250	40	5
Pounds allowed at 1.043 MGD	2,175	2,175	348	43
Pounds per day from JOTS	5,342	1,992	1,100	235
Overage per day	3,167	-	752	192

The share of costs allocated to JOTS for each load factor was calculated earlier. A portion of these costs is assumed to come from volume charges, based on the limits allowed for each load factor before surcharges apply. The remaining costs are expected to be covered by surcharges applied to JOTS for its high strength wastewater. These calculations are shown on the following page.

	TBOD	TSS	TKN	TP
Total costs attributable to load factor	379,527	154,424	250,791	100,970
Costs included in allowable limits	154,512	168,584	79,328	18,687
Costs recoverable from overages	225,015	-	171,462	82,282

If we convert these annual costs to daily costs, and divide them by the reported daily loads, we can calculate the cost per pound of each surcharge. These calculations are below:

	TBOD	TSS	TKN	TP
Daily recoverable costs	616.48	-	469.76	225.43
Daily pounds over limit	3,167	-	752	192
Cost per pound	0.19	-	0.62	1.18
Existing surcharge per pound	0.19	0.19	0.62	1.13

These costs per pound are comparable with existing surcharges for TBOD and TKN. The calculated cost per pound for TP is five cents higher than the existing surcharge rate; we recommend that this surcharge be increased accordingly in the Utility's 2013 rate schedule. If these surcharges and average daily loads are combined, the total annual surcharges come to \$475,045.

In sum, the revenues from JOTS come to \$2,319,387, which is very close to the \$2,324,199 in costs allocated to JOTS; indicating that the customer is paying its proportionate share of wastewater treatment costs. As noted earlier, these costs do not include the Utility's capital and cash reserve requirements.

Expenses Allocated to JOTS		Revenues from JOTS	
General Admin, O&M	389,681	Meter charges	52,566
Utilities	349,990	Volume charges	1,791,776
Chemicals	227,787	Surcharges	475,045
Additional Biosolids	33,433		
Replacement Fund	160,409		
Debt Service	1,162,901		
Depreciation	-		
Total	2,324,199	Total	2,319,387
		Surplus/(Deficit)	(4,812)

Recommendations

In order to restore the Utility to positive net income, and to maintain sufficient cash reserves, it will be necessary to increase rates between 2013 and 2017. We assume that the meter charges remain unchanged from their 2012 levels. Administration/Billing Charges and the Utility Improvement Charge are assumed to pass through to other funds, so any changes made to these revenue sources do not affect the Utility Fund's performance.

Assuming that these rate adjustments are made, the fees for wastewater usage would rise from \$2.17 per unit of 100 cubic feet in 2012, to \$3.96 per unit in 2017. The charge for Tier 2 volume (usage over 1,605 units per month) would rise from \$3.33 to \$6.07 per unit. The table below shows recent and proposed usage fees.

	2012	2013	2014	2015	2016	2017
Admin/Billing Charge	\$ 2.54	\$ 2.62	\$ 2.70	\$ 2.78	\$ 2.86	\$ 2.95
Utility Improvement Charge	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00
Meter Charge (5/8" meter)	\$ 18.00	\$ 18.00	\$ 18.00	\$ 18.00	\$ 18.00	\$ 18.00
Tier 1 Volume (per 100 cu ft)	\$ 2.17	\$ 2.57	\$ 3.05	\$ 3.36	\$ 3.70	\$ 3.96
Tier 2 Volume (per 100 cu ft)	\$ 3.33	\$ 3.95	\$ 4.68	\$ 5.15	\$ 5.67	\$ 6.07

If these adjustments are made as scheduled and usage remains at 2011 levels, we project that the Utility will have positive net income by 2014, and will accumulate sufficient cash reserves by the end of 2017. We define sufficient cash reserves as the level at which the Utility has enough cash on hand for 3 months of operations, plus the following year's debt service. With the rate adjustments recommended above, we project that the Utility will have enough cash on hand to cover its debt service requirements each year; the portion of cash reserves for operations would not be in place until 2017. A summary of the projected cash position is shown below.

	2012	2013	2014	2015	2016	2017	2018
Beginning Cash & Investments	7,886,546	6,410,390	5,463,118	5,183,025	5,175,031	5,596,297	6,348,184
Net Income	(1,435,893)	(705,667)	192,550	670,648	1,325,510	1,878,269	1,954,955
Depreciation	2,400,000	2,280,000	2,176,167	2,144,867	2,058,182	1,963,108	1,879,587
Acquisition and Construction of Assets	(2,958,557)	(425,700)	(3,775,000)	(783,000)	(100,000)	(308,500)	(300,000)
Proceeds from New Long-Term Debt	2,873,557	425,700	3,775,000	783,000	100,000	308,500	-
Payments on New Long-Term Debt		-	(15,843)	(109,371)	(140,862)	(147,860)	(162,809)
Payments on Existing Long-Term Debt	(2,355,263)	(2,521,605)	(2,632,968)	(2,714,137)	(2,821,563)	(2,941,630)	(2,740,000)
Ending Cash Balance	6,410,390	5,463,118	5,183,025	5,175,031	5,596,297	6,348,184	6,979,917
Minimum Cash Balance							
For ongoing operations (months)	1,342,423	1,336,199	1,334,805	1,352,360	1,356,913	1,360,242	1,367,364
For debt service	4,841,290	4,911,632	5,076,501	5,148,863	5,184,288	4,910,191	4,903,829
Minimum Cash Balance Required	6,183,714	6,247,831	6,411,306	6,501,223	6,541,201	6,270,433	6,271,193
Amount Over (Under) Minimum	226,677	(784,713)	(1,228,281)	(1,326,192)	(944,903)	77,750	708,723

A more detailed look at the Utility's projected financial performance is shown on the following pages.

Financial Projections – Operating Revenues and Expenses

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Revenues											
Charges for Services - City	5,840,045	3,843,220	4,253,217	4,517,982	4,808,446	5,030,606	5,030,606	5,030,606	5,030,606	5,030,606	5,030,606
Charges for Services - JOTS	N/A	2,670,943	3,083,850	3,345,263	3,644,977	3,880,009	3,888,295	3,910,885	3,930,731	3,939,716	3,963,005
Charges for Services - Eagle Lake	150,000	225,134	245,640	258,883	273,408	284,515	284,515	284,515	284,515	284,515	284,515
Charges for Services - Kandiyohi Co	120,000	121,200	122,412	123,636	124,872	126,121	127,382	128,656	129,943	131,242	132,555
Charges for Services - Delivered Waste	16,000	16,160	16,322	16,485	16,650	16,816	16,984	17,154	17,326	17,499	17,674
Administration and Billing Charges	200,000	198,732	204,800	210,869	216,937	236,366	243,577	250,788	257,999	266,012	274,024
Replacement Charges	410,200	415,872	415,872	415,872	415,872	415,872	415,872	415,872	415,872	415,872	415,872
Other Revenue	15,100	15,553	16,020	16,500	16,995	17,505	18,030	18,571	19,128	19,702	20,293
Total Revenues	6,751,345	7,506,814	8,358,132	8,905,490	9,518,157	10,007,810	10,025,262	10,057,048	10,086,120	10,105,164	10,138,544
Operating Expenses											
Personal Services											
Salaries - Treatment	541,689	557,940	574,678	591,918	609,676	627,966	646,805	666,209	686,195	706,781	727,985
Salaries - Collection	55,335	56,995	58,705	60,466	62,280	64,148	66,073	68,055	70,097	72,200	74,366
Salaries - Biosolids	59,465	61,249	63,086	64,979	66,928	68,936	71,004	73,134	75,328	77,588	79,916
Pension Contributions	96,346	101,163	106,221	111,533	117,109	122,965	129,113	135,568	142,347	149,464	156,937
Insurance Contributions	204,258	214,471	225,194	236,454	248,277	260,691	273,725	287,412	301,782	316,871	332,715
Total - Personal Services	957,093	991,818	1,027,885	1,065,350	1,104,270	1,144,706	1,186,720	1,230,379	1,275,750	1,322,905	1,371,919
Supplies											
Office Supplies	3,200	3,296	3,395	3,497	3,602	3,710	3,821	3,936	4,054	4,175	4,301
Small Tools	12,900	13,287	13,686	14,096	14,519	14,955	15,403	15,865	16,341	16,832	17,337
Motor Fuels and Lubricants	108,500	111,755	115,108	118,561	122,118	125,781	129,555	133,441	137,445	141,568	145,815
Postage	1,100	1,133	1,167	1,202	1,238	1,275	1,313	1,353	1,393	1,435	1,478
Mtce. Of Equipment	26,000	26,780	27,583	28,411	29,263	30,141	31,045	31,977	32,936	33,924	34,942
Mtce. Of Structures	4,000	4,120	4,244	4,371	4,502	4,637	4,776	4,919	5,067	5,219	5,376
Mtce. Of Other Improvements	14,100	14,523	14,959	15,407	15,870	16,346	16,836	17,341	17,861	18,397	18,949
Subsistence of Persons	2,250	2,318	2,387	2,459	2,532	2,608	2,687	2,767	2,850	2,936	3,024
Cleaning and Waste Removal	3,000	3,090	3,183	3,278	3,377	3,478	3,582	3,690	3,800	3,914	4,032
General Supplies	582,500	599,975	617,974	636,513	655,609	675,277	695,535	716,402	737,894	760,030	782,831
Total - Supplies	757,550	780,277	803,685	827,795	852,629	878,208	904,554	931,691	959,642	988,431	1,018,084

Financial Projections – Operating Expenses, Non-Operating Expenses, and Transfers

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Other Services and Charges											
Communications	5,450	5,614	5,782	5,955	6,134	6,318	6,508	6,703	6,904	7,111	7,324
Printing and Publishing	500	515	530	546	563	580	597	615	633	652	672
Utilities	895,000	921,850	949,506	977,991	1,007,330	1,037,550	1,068,677	1,100,737	1,133,759	1,167,772	1,202,805
Travel, Conferences, and Schools	6,400	6,592	6,790	6,993	7,203	7,419	7,642	7,871	8,107	8,351	8,601
Maint - Equipment	43,000	44,290	45,619	46,987	48,397	49,849	51,344	52,885	54,471	56,105	57,788
Maint - Structures	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524	6,720
Maint - Other Improvements	12,600	12,978	13,367	13,768	14,181	14,607	15,045	15,496	15,961	16,440	16,933
Subsistence of Persons	1,000	1,030	1,061	1,093	1,126	1,159	1,194	1,230	1,267	1,305	1,344
Cleaning and Waste Removal	27,000	27,810	28,644	29,504	30,389	31,300	32,239	33,207	34,203	35,229	36,286
Rents	86,500	89,095	91,768	94,521	97,357	100,277	103,286	106,384	109,576	112,863	116,249
Insurances and Bonds	20,000	20,600	21,218	21,855	22,510	23,185	23,881	24,597	25,335	26,095	26,878
Awards & Indemnities	-	-	-	-	-	-	-	-	-	-	-
Subscriptions & Memberships	5,200	5,356	5,517	5,682	5,853	6,028	6,209	6,395	6,587	6,785	6,988
Licenses & Taxes	27,200	28,016	28,856	29,722	30,614	31,532	32,478	33,453	34,456	35,490	36,555
Professional Services	104,000	107,120	110,334	113,644	117,053	120,565	124,181	127,907	131,744	135,696	139,767
Advertising	200	206	212	219	225	232	239	246	253	261	269
Other Charges	16,000	16,480	16,974	17,484	18,008	18,548	19,105	19,678	20,268	20,876	21,503
Existing Depreciation	2,400,000	2,280,000	2,166,000	2,057,700	1,954,815	1,857,074	1,764,221	1,676,010	1,592,209	1,512,599	1,436,969
New Depreciation	-	-	10,167	87,167	103,367	106,033	115,367	121,367	127,367	133,367	139,367
Total - Other Services and Charges	3,655,050	3,572,702	3,507,649	3,516,294	3,470,751	3,418,055	3,378,183	3,340,929	3,309,435	3,283,521	3,263,018
Total Operating Expenses	5,369,693	5,344,796	5,339,219	5,409,439	5,427,651	5,440,969	5,469,457	5,502,999	5,544,827	5,594,856	5,653,020
Operating Income (Loss)	1,381,652	2,162,019	3,018,913	3,496,051	4,090,506	4,566,842	4,555,805	4,554,049	4,541,293	4,510,307	4,485,524
Non Operating Revenues (Expenses)											
State or Federal Grants	-	-	-	-	-	-	-	-	-	-	-
Interest Income	100,000	64,104	54,631	51,830	51,750	55,963	63,482	69,799	75,332	81,067	85,818
Interest Expense Existing Debt	(2,374,845)	(2,319,685)	(2,250,051)	(2,165,197)	(2,077,503)	(1,986,139)	(1,892,937)	(1,803,575)	(1,713,994)	(1,623,681)	(1,530,690)
Interest Expense New Debt	-	-	(12,771)	(87,796)	(108,935)	(108,658)	(114,446)	(110,549)	(106,555)	(102,461)	(98,266)
Amortization Expense	-	-	-	-	-	-	-	-	-	-	-
Special Assessments - Existing	-	-	-	-	-	-	-	-	-	-	-
New Special Assessments	-	-	-	-	-	-	-	-	-	-	-
Refunds and Reimbursements	15,000	-	-	-	-	-	-	-	-	-	-
Other	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500
Total Non Operating Revenues (Expenses)	(2,257,345)	(2,253,081)	(2,205,691)	(2,198,662)	(2,132,187)	(2,036,335)	(1,941,401)	(1,841,824)	(1,742,718)	(1,642,575)	(1,540,638)
Net Income (Loss) Before Transfers	(875,693)	(91,063)	813,222	1,297,388	1,958,319	2,530,507	2,614,404	2,712,225	2,798,575	2,867,732	2,944,886
Operating Transfers											
Transfers In	-	-	-	-	-	-	-	-	-	-	-
Transfers (Out)	(560,200)	(614,604)	(620,672)	(626,741)	(632,809)	(652,238)	(659,449)	(666,660)	(673,871)	(681,884)	(689,896)
Total Operating Transfers	(560,200)	(614,604)	(620,672)	(626,741)	(632,809)	(652,238)	(659,449)	(666,660)	(673,871)	(681,884)	(689,896)
Net Income (Loss)	(1,435,893)	(705,667)	192,550	670,648	1,325,510	1,878,269	1,954,955	2,045,565	2,124,704	2,185,848	2,254,990

Financial Projections – Minimum Recommended Reserves and Projected Actual Reserves

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Beginning Cash & Investments	7,886,546	6,410,390	5,463,118	5,183,025	5,175,031	5,596,297	6,348,184	6,979,917	7,533,152	8,106,732	8,581,752
Net Income	(1,435,893)	(705,667)	192,550	670,648	1,325,510	1,878,269	1,954,955	2,045,565	2,124,704	2,185,848	2,254,990
Depreciation	2,400,000	2,280,000	2,176,167	2,144,867	2,058,182	1,963,108	1,879,587	1,797,376	1,719,576	1,645,965	1,576,335
Amortization	-	-	-	-	-	-	-	-	-	-	-
Acquisition and Construction of Assets	(2,958,557)	(425,700)	(3,775,000)	(783,000)	(100,000)	(308,500)	(300,000)	(300,000)	(300,000)	(300,000)	(300,000)
Proceeds from New Long-Term Debt	2,873,557	425,700	3,775,000	783,000	100,000	308,500	-	-	-	-	-
Payments on New Long-Term Debt	-	-	(15,843)	(109,371)	(140,862)	(147,860)	(162,809)	(166,706)	(170,700)	(174,793)	(178,989)
Payments on Existing Long-Term Debt	(2,355,263)	(2,521,605)	(2,632,968)	(2,714,137)	(2,821,563)	(2,941,630)	(2,740,000)	(2,823,000)	(2,800,000)	(2,882,000)	(2,966,000)
Ending Cash Balance	6,410,390	5,463,118	5,183,025	5,175,031	5,596,297	6,348,184	6,979,917	7,533,152	8,106,732	8,581,752	8,968,088
Minimum Cash Balance											
For ongoing operations (months)	1,342,423	1,336,199	1,334,805	1,352,360	1,356,913	1,360,242	1,367,364	1,375,750	1,386,207	1,398,714	1,413,255
For debt service	4,841,290	4,911,632	5,076,501	5,148,863	5,184,288	4,910,191	4,903,829	4,791,249	4,782,936	4,773,945	4,782,211
Minimum Cash Balance Required	6,183,714	6,247,831	6,411,306	6,501,223	6,541,201	6,270,433	6,271,193	6,166,999	6,169,143	6,172,659	6,195,466
Amount Over (Under) Minimum	226,677	(784,713)	(1,228,281)	(1,326,192)	(944,903)	77,750	708,723	1,366,153	1,937,589	2,409,093	2,772,622

In the scenario above, we calculate that cash reserves will be sufficient to cover each year's debt service. Recommended cash reserves to cover operating expenses are not projected to be on hand until late in 2017. This delay is due primarily to the desire to minimize the need for steeper rate increases in 2013 and 2014.

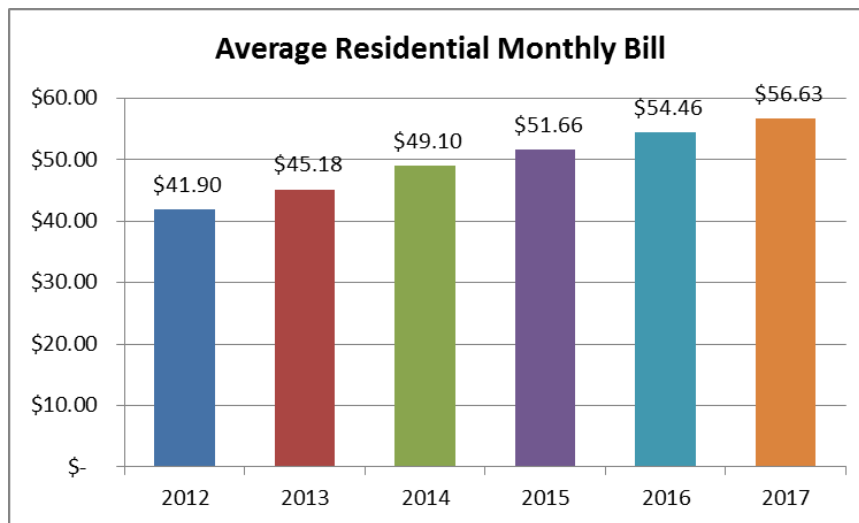
As mentioned in the JOTS analysis earlier, we also recommend that the surcharge for total phosphorus (TP) be increased from the current \$1.13 per pound to \$1.18 per pound to cover the calculated treatment expense for that load factor. In future years, we recommend that surcharges be increased to keep pace with anticipated treatment costs. Our recommended surcharge rates are as follows:

Recommended surcharges (per pound)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
BOD & TSS over 250 mg/L											
250 mg/L - 299 mg/L	\$ 0.15	\$ 0.15	\$ 0.16	\$ 0.16	\$ 0.17	\$ 0.17	\$ 0.18	\$ 0.18	\$ 0.19	\$ 0.20	\$ 0.20
300 mg/L- 399 mg/L	\$ 0.16	\$ 0.17	\$ 0.17	\$ 0.18	\$ 0.19	\$ 0.19	\$ 0.20	\$ 0.20	\$ 0.21	\$ 0.22	\$ 0.22
400 mg/L- 499 mg/L	\$ 0.17	\$ 0.18	\$ 0.19	\$ 0.19	\$ 0.20	\$ 0.20	\$ 0.21	\$ 0.22	\$ 0.22	\$ 0.23	\$ 0.24
500 mg/L - 599 mg/L	\$ 0.18	\$ 0.19	\$ 0.20	\$ 0.20	\$ 0.21	\$ 0.21	\$ 0.22	\$ 0.23	\$ 0.23	\$ 0.24	\$ 0.25
600 mg/L - 699 mg/L	\$ 0.19	\$ 0.20	\$ 0.21	\$ 0.21	\$ 0.22	\$ 0.23	\$ 0.23	\$ 0.24	\$ 0.25	\$ 0.25	\$ 0.26
over 700 mg/L	\$ 0.20	\$ 0.21	\$ 0.22	\$ 0.22	\$ 0.23	\$ 0.24	\$ 0.24	\$ 0.25	\$ 0.26	\$ 0.27	\$ 0.28
TKN over 40 mg/L	\$ 0.63	\$ 0.65	\$ 0.67	\$ 0.69	\$ 0.71	\$ 0.73	\$ 0.75	\$ 0.78	\$ 0.80	\$ 0.82	\$ 0.85
TP over 5 mg/L	\$ 1.18	\$ 1.21	\$ 1.25	\$ 1.29	\$ 1.33	\$ 1.37	\$ 1.41	\$ 1.45	\$ 1.49	\$ 1.54	\$ 1.59

Sample Bills

If the recommended rate adjustments are adopted, the average residential sewer bill would be expected to rise, from a level of \$41.90 per month in 2012 to \$56.63 in 2017. A snapshot of the projected residential monthly bills through 2016 is shown below:

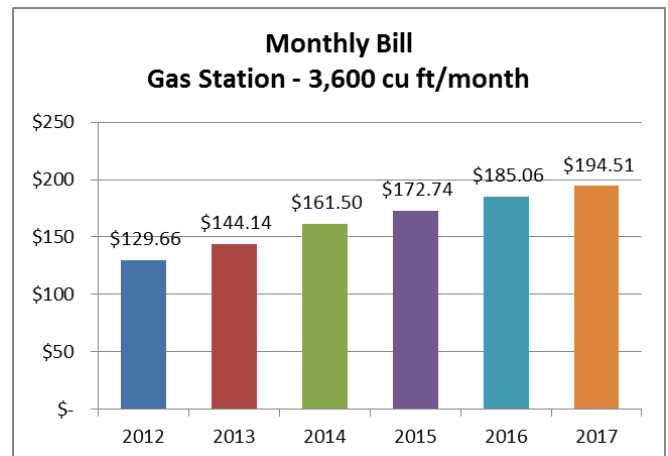
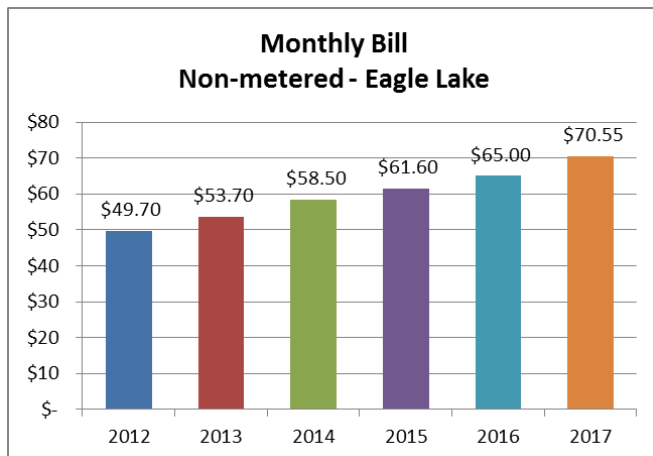
Average Residential User (5/8" meter and 800 cu ft (5,984 gallons) per month						
	2012	2013	2014	2015	2016	2017
Administration and Billing Charge	\$ 2.54	\$ 2.62	\$ 2.70	\$ 2.78	\$ 2.86	\$ 2.95
Utility Improvement Charge	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00
Meter Charge (5/8" meter)	\$ 18.00	\$ 18.00	\$ 18.00	\$ 18.00	\$ 18.00	\$ 18.00
Volume Charge (800 cu ft)	\$ 17.36	\$ 20.56	\$ 24.40	\$ 26.88	\$ 29.60	\$ 31.68
Total Monthly Charges	\$ 41.90	\$ 45.18	\$ 49.10	\$ 51.66	\$ 54.46	\$ 56.63



Monthly bills for other customer classes are expected to show a similar trend. The sample bills which follow include a non-metered residential user in Eagle Lake, a gas station using approximately 27,000 gallons of water per month, a restaurant using just over 56,000 gallons per month, and a retail establishment using 374,000 gallons per month. One detail to note is that bills for Eagle Lake customers are currently projected to start included charges for Administration and Billing. This is expected to result in a slightly greater increase between 2016 and 2017 for this customer class.

Non-Metered Eagle Lake User (1,000 cu ft (7,480 gal) per month and 1.5x residential meter charge)						
	2012	2013	2014	2015	2016	2017*
Administration and Billing Charge	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2.95
Utility Improvement Charge	\$ 1.00	\$ 1.00	\$ 1.00	\$ 1.00	\$ 1.00	\$ 1.00
Meter Charge (residential x 1.5)	\$ 27.00	\$ 27.00	\$ 27.00	\$ 27.00	\$ 27.00	\$ 27.00
Volume Charge (1,000 cu ft)	\$ 21.70	\$ 25.70	\$ 30.50	\$ 33.60	\$ 37.00	\$ 39.60
Total Monthly Charges	\$ 49.70	\$ 53.70	\$ 58.50	\$ 61.60	\$ 65.00	\$ 70.55

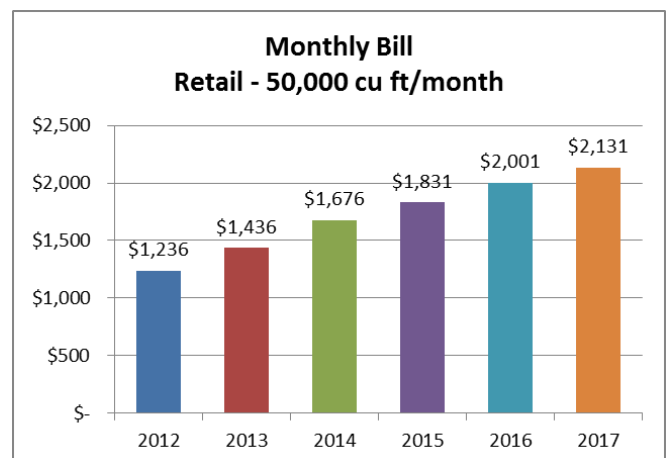
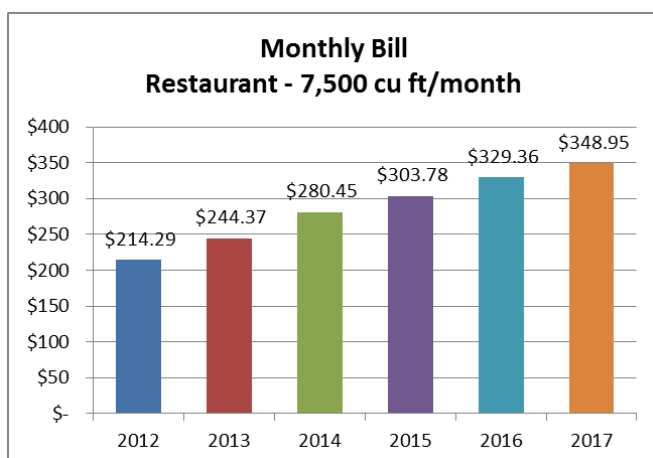
* Eagle Creek agreement expires in 2016; assume that Admin charges start in 2017



Gas Station - 1" meter and 3,600 cu ft (26,928 gallons) per month						
	2012	2013	2014	2015	2016	2017
Administration and Billing Charge	\$ 2.54	\$ 2.62	\$ 2.70	\$ 2.78	\$ 2.86	\$ 2.95
Utility Improvement Charge	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00
Meter Charge (1" meter)	\$ 45.00	\$ 45.00	\$ 45.00	\$ 45.00	\$ 45.00	\$ 45.00
Volume Charge (3,600 cu ft)	\$ 78.12	\$ 92.52	\$ 109.80	\$ 120.96	\$ 133.20	\$ 142.56
Total Monthly Charges	\$ 129.66	\$ 144.14	\$ 161.50	\$ 172.74	\$ 185.06	\$ 194.51

Restaurant - 1" meter and 7,500 cu ft (56,100 gallons) per month						
	2012	2013	2014	2015	2016	2017
Administration and Billing Charge	\$ 2.54	\$ 2.62	\$ 2.70	\$ 2.78	\$ 2.86	\$ 2.95
Utility Improvement Charge	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00
Meter Charge (1" meter)	\$ 45.00	\$ 45.00	\$ 45.00	\$ 45.00	\$ 45.00	\$ 45.00
Volume Charge (7,500 cu ft)	\$ 162.75	\$ 192.75	\$ 228.75	\$ 252.00	\$ 277.50	\$ 297.00
Total Monthly Charges	\$ 214.29	\$ 244.37	\$ 280.45	\$ 303.78	\$ 329.36	\$ 348.95

Retail User - 2" meter and 50,000 cu ft (374,000 gallons) per month						
	2012	2013	2014	2015	2016	2017
Administration and Billing Charge	\$ 2.54	\$ 2.62	\$ 2.70	\$ 2.78	\$ 2.86	\$ 2.95
Utility Improvement Charge	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00
Meter Charge (2" meter)	\$ 144.00	\$ 144.00	\$ 144.00	\$ 144.00	\$ 144.00	\$ 144.00
Volume Charge (50,000 cu ft)	\$ 1,085.00	\$ 1,285.00	\$ 1,525.00	\$ 1,680.00	\$ 1,850.00	\$ 1,980.00
Total Monthly Charges	\$ 1,235.54	\$ 1,435.62	\$ 1,675.70	\$ 1,830.78	\$ 2,000.86	\$ 2,130.95



Conclusion

As noted earlier, the Utility's financial performance over the past few years shows an unsustainable trend. While operating income has been positive through this period, it has been insufficient to cover the Utility's non-operating expenses, the greatest of these being the debt service payments for the new treatment facility. As a result, the Utility has seen its cash reserves fall from approximately \$9 million in 2009 and 2010, to an anticipated level of \$6.4 million at the end of this year.

In order to cover its non-operating costs, and to restore the Utility to positive net income and adequate cash reserves, it will be necessary for the Utility to increase its revenues. We recommend that volume charges be increased as shown in the table below. We project that these increases will allow the Utility to restore positive net income by 2014, and to accumulate our minimum recommended cash reserves by 2017. We do not foresee any rate increases from 2018 to 2022.

	2012	2013	2014	2015	2016	2017
Admin/Billing Charge	\$ 2.54	\$ 2.62	\$ 2.70	\$ 2.78	\$ 2.86	\$ 2.95
Utility Improvement Charge	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00
Meter Charge (5/8" meter)	\$ 18.00	\$ 18.00	\$ 18.00	\$ 18.00	\$ 18.00	\$ 18.00
Tier 1 Volume (per 100 cu ft)	\$ 2.17	\$ 2.57	\$ 3.05	\$ 3.36	\$ 3.70	\$ 3.96
Tier 2 Volume (per 100 cu ft)	\$ 3.33	\$ 3.95	\$ 4.68	\$ 5.15	\$ 5.67	\$ 6.07

Our analysis of the costs and revenues related to the treatment wastewater flows from Jennie-O Turkey Store (JOTS) shows that the current rate structure is generating revenues sufficient to cover the associated treatment costs. Our only recommended change in regards to JOTS billing is in the area of the surcharge for total phosphorus (TP), where we recommend that the surcharge be increase from the current \$1.13 per pound, to a level of \$1.18 per pound.

We appreciate the opportunity to serve the City of Willmar, and we hope that our findings will prove useful to the City as it sets rates and manages the Wastewater Utility in the coming years. If the City has questions or concerns about this study, it will be our pleasure to address them. We look forward to serving the City again, as needs arise in the future.