



Audit Services Memorandum

Date: April 10, 2003

To: Johnson County Board of County Commissioners, Doug Smith, Wastewater Administrator, and the County Manager

From: John M. Middleton
Interim County Auditor

Subject: Johnson County Wastewater User Charge Review

Background

The County Auditor completed a limited scope review of the Johnson County Wastewater User Charge (User Charge). We attempted to verify the accuracy and completeness of the User Charge as submitted by Johnson County Wastewater. The User Charge was adopted by the Board of County Commissioners in Resolution No. WD 02-67. In completing this review we read the recommendations of the engineering studies by Black & Veatch in 1980 (updated in 1999) and Camp, Dresser and McKee in 2001; reviewed the calculations made to Johnson County Wastewater; and, interviewed Johnson County Wastewater personnel about the calculation of the User Charge.

There have been three studies of the alternatives for Wastewater User Charges.

(1) *Report on Customer Classification, User Charges, Industrial Cost Recovery Systems, and Sewer Use Resolution for the Johnson County Unified Sewer Districts*, Black & Veatch, Kansas City, Missouri, 1980.

This report recommends an *ad valorem* method of collecting user charges but describes an actual use system as an alternative.

- All customers would be billed based on the estimated wastewater.
- Residential customers would be billed based on water usage during the winter period.
- Commercial customers would be billed based on actual water usage.
- Charges would consist of a service charge and a volume charge.
- Large commercial and industrial customers would be charged based on a multiple part rate schedule.

(2) *Report on Evaluation of Service Based Wastewater User Fee and Billing/Collection System Alternatives*, Black & Veatch, Kansas City, Missouri, 1999.

This report recommended a user charge system consisting of a Customer Charge (billing, collection and infiltration), Volume Charge (winter period water use), and a Strength Charge (based on Biochemical Oxygen Demand and Total Suspended Solids).

(3) *Johnson County Wastewater User Fee System Evaluation*, Camp Dresser & McKee, April 2001 (CDM).

This report relies on the 1980 Black & Veatch report to develop a detailed analysis of the allocation of costs to the user charge types: Customer, Volume, and Strength.

Discussion

Johnson County Wastewater relied primarily on the CDM report to calculate the User Charge. The estimated costs to be recovered for 2003 were \$25,022,971 based on the approved budget.

Planned Cost Recovery

Total Costs	\$ 25,022,971
Plus: Estimated Uncollectible	1,084,437
Recoverable Costs	\$ 26,107,408
Less Other Revenue (Estimated):	
Olathe Revenue	\$ 1,500,000
Permit/Inspection Fees	676,500
Interest	595,280
Project Administration	289,600
Private Review Charges	149,352
Other	123,501
Net Costs to be Recovered	\$ 22,773,175

Cost Recovery Components

Volume plus Strength	Volume in Gallons (Estimated)	Rate per Gallon	Estimated Revenue
Residential/Commercial(a)	12,007,548,500	.00143	\$ 17,170,794
Industrial	603,700,245	.00143	863,291
Wholesale	587,190,525	.00107	628,294
	13,198,439,270		\$ 18,662,379

Service	Service Charge	Number of Invoices	Estimated Revenue
Residential/Commercial(a)	5.41	714,900	\$ 3,867,609
Industrial	5.41	3,576	19,346
Wholesale(b)			234,102
			\$ 4,121,057

(a) Includes Residential (single and multi-family) and Commercial customers. Residential volume is based on Average Winter Water Use and Commercial volume is based on actual water use.

(b) The Wholesale Service Charge is a calculated dollar total. Neither the number of Wholesale customers nor the number of Wholesale invoices has been determined.

Total Revenue (Volume plus Service) \$ 22,783,436

Rates per Gallon

Rate Calculation	Volume per Gallon	Oxygen Demand per Gallon	Suspended Solids per Gallon	Total Rate per Gallon
Residential/Commercial	\$.00063	\$.00041	\$.00039	\$.00143
Industrial(c)	\$.00063	\$.00041	\$.00039	\$.00143
Wholesale(d)	\$.00027	\$.00041	\$.00039	\$.00107

(c) The Industrial total rate of \$.00143 per Gallon is not used for billing purposes. Industrial customers are billed using actual metered flow and tested Strength factors.

(d) The Wholesale total rate of \$.00107 per gallon is not used for billing purposes. The rates are to be negotiated. Once these rates have been negotiated, the rates for the Residential/Commercial and Industrial classes will be recalculated to recover the total cost.

Findings and Recommendations

The County Auditor noted two differences between the calculations made by Johnson County Wastewater and the CDM calculations:

1. Additional elements in the Service Charge

	CDM	JCW
Personnel Costs		\$ 1,329,544
Professional Services		317,723
Operating Equipment		28,903
OSI Contract (Billing)	\$ 928,200	928,200
Payments to Environmental	751,625	751,625
Charges for Central Services	799,290	799,290
Less: Self Generated Revenue	32,790	32,790
Net Service Charge (a)	\$ 2,446,325	\$ 4,122,495
Estimated Number of Invoices (b)	761,748	761,748
Service Charge per Invoice (a/b)	\$ 3.21	\$ 5.41

Johnson County Wastewater Response: The additional elements in the service charge were estimated based on the information that JCW had at the time. JCW met with CDM in November 2000 and discussed this issue and CDM recommended incorporating these changes on the condition that good estimates could be determined for calculating the allocation of costs to the service charge. JCW feels that these elements could be allocated to the appropriate functional areas. These items will be re-evaluated in June to determine if any adjustments need to be made

Auditor’s Comment: CDM did not include this recommendation in their report dated April 2001.

2. Rounding to four decimals instead of five

The bills generated by Johnson County Wastewater round the rate per gallon to four decimal places. The Cost Recovery calculation was based on five decimal places. In applying the rounded rate to the total projected water use for 2003, there is a shortfall of \$378,316 in the amount of costs recovered.

Johnson County Wastewater Response: JCW will implement this change in July of 2003.

Finding – Invalid Use of Estimated Uncollectible Cost. Johnson County Wastewater has included \$1,084,437 in the cost calculation to allow for uncollectible wastewater billings. The amount included was based on a recommendation by Black & Veatch without the understanding that the uncollected receivables would be secured by the underlying real estate. Commission Resolution WD 02-67 provides that any delinquent User Charges will be placed on the Tax Roll and collected in the same manner as *ad valorem* taxes, including becoming a lien on the real estate of the wastewater user.

Recommendation – The County Auditor recommends that Johnson County Wastewater remove the Estimated Uncollectible of \$1,084,437, from the Wastewater User Charge calculation. Unpaid Wastewater User charges are secured debt of the user and will be collected through the use of alternate collection activities.

Johnson County Wastewater Response: It is standard, generally accepted, and prudent to include an amount for uncollected accounts when establishing customer rates. JCW operates under the cash basis of accounting.

As a result, it must present a budget that shows collections equaling expenses. The offset to billed revenue, labeled uncollected accounts, yields cash collected to pay expenses. If this reduction in revenue were not included in setting the current rate, JCW would not collect enough money in the current year to pay its current expenses.

There are practical implications that still require the inclusion of an uncollected allowance:

- First, JCW will not even begin filing liens until late 2004, and will not be receiving any revenue from these liens for at least three years, yet it will still be incurring the loss of cash flow through current uncollected accounts.
- Second, JCW may not file liens on every delinquent account because it may not be cost effective to do so. In other words, the expense of filing and monitoring the lien would exceed the money owed. It is less expensive to write-off the amount of some uncollected bills rather than process a lien.
- Third, even if JCW were to file a lien against every delinquent account, the cash flow resulting from lien collections would not cover the current uncollected amount as the customer base is growing and the current-year uncollected amounts will likely be greater than any prior balances that could be collected.

If the current uncollectible rate results in JCW receiving more money than required, JCW has a carryover balance threshold that would trigger this money to be refunded to customers in the form of lower rates in subsequent years.

Auditor's Comment: The County Auditor understands that, under the user fee system of recovering costs, cash flow to Johnson County Wastewater is a major concern. However, the user charge system was developed to comply with the Federal Water Pollution Control Act requiring Johnson County Wastewater have a system for "the payment of operation and maintenance costs."¹ [Emphasis added] Under federal regulations an expense for uncollectible accounts is not an allowable cost.²

In addition, the Johnson County Wastewater user fee, unlike many other utility fees, allows securing any unpaid fees by creating a lien against the related realty. While some amount of unpaid user fees may be too small to justify the costs involved in collection, the County Auditor has not seen any evidence to indicate that 5% of the total billings will fall into that category.

Simply filing a lien is relatively inexpensive. Once that is done, the property system itself will eventually return the fees to Johnson County Wastewater. There would be no additional cost involved because all of Johnson County Wastewater's costs for labor and overhead are included elsewhere in the rate calculation.

Finding – Inadequate Documentation. Johnson County Wastewater has not adequately documented the process of calculating the User Charge and has not adopted policies and procedures to ensure consistent calculation and application of the User Charge. In addition, only one person at Johnson County Wastewater is familiar with the process of calculating the rates.

Recommendation – The County Auditor recommends that Johnson County Wastewater adopt policies and procedures, including a review process that will ensure accurate and repeatable calculation of the User Charge. In addition, Johnson County Wastewater should adopt policies and procedures that will ensure compliance with applicable federal and state regulations and with contractual requirements.

¹ Johnson County Resolution No. WD 02-35

² OMB Circular A-87 – Bad Debts

Johnson County Wastewater Response: JCW staff is currently working on policies and procedures to ensure consistent calculation and application of the User Charge Rate Model. JCW does have policies and procedures for the implementation of the User Charge System.

Finding – Lack of Complete Billing Model. The current calculation model is not a finished product. There is a fixed dollar amount to be collected from two billing groups: 1) those in the Olathe Service area (Wholesale Customers) and 2) those not in the Olathe Service area (Residential Customers). The amount to be collected from the Wholesale Customers is still to be negotiated with the City of Olathe. Until the Wholesale Customer rate is determined, the final Residential Customer rate cannot be determined.

Recommendation – The County Auditor recommends that Johnson County Wastewater develop a comprehensive billing model which will take into account all of the various sources of the User Charge. This model should include a provision for recalculation of the overall billing rate after the determination of the Wholesale Customer rate.

Johnson County Wastewater Response: JCW staff is currently negotiating a new contract with the City of Olathe. Rates for all non-wholesale customers (volume and strength) will be adjusted to reflect the revenue stream generated through this agreement. JCW also has another Wholesale Customer – Loch Lloyd. Revenue estimates for Loch Lloyd will be determined and the rates for all non-wholesale customers (volume and strength) will be adjusted to reflect the revenue stream generated through this agreement.

Auditor’s Comment: The agreement with Loch Lloyd does not include a Service Charge component. The portion of the Service Charge applicable to Loch Lloyd will be included in the overall rate adjustment for Residential/Commercial and Industrial customers.

Finding – Lack of Comprehensive Cost Allocation System. Some of the activities of Johnson County Wastewater are not related to the User Charge, for example, engineering reviews. The current User Charge model assumes that these fee-based activities are fully funded by the fees collected for the activity. The County Auditor did not find any documentation supporting this assumption. The model reduces the total User Charge pool by the amount of the collected fees but does not offer any assurance that these activities are appropriately priced to offset their cost.

Recommendation – Johnson County Wastewater develop and document a comprehensive cost allocation system which will ensure that the users are paying for the services they use and not subsidizing unrelated services.

Johnson County Wastewater Response: JCW will incorporate this as part of its policies and procedures to ensure consistent calculation and application of the User Charge Rate Model. JCW plans on developing a “Self-Generated Revenue” rate study for each of its fees. In the near future, JCW plans on incorporating a direct one on one relationship between Self-Generated Revenue and the cost associated with those fees.

Conclusion

The Johnson County Wastewater User Charge is not yet a finished product. It will become more accurate and complete when sufficient historical information is compiled and when a more rigorous methodology has been implemented. Because the Residential/Commercial customer class uses such a large proportion (90.98%) of the total system volume, the Residential/Commercial Rate is relatively insensitive to changes in the cost components and to variances in estimates.

Johnson County Wastewater has indicated that they will be reviewing the whole process again at mid-year and on a regular schedule from then on. I recommend that an additional review of the rate be made before the rates are adjusted for 2004.