



City of Columbia, Missouri



Utilities Billing Internal Audit
December 2021 – February 2022



CERTIFIED PUBLIC ACCOUNTANTS & BUSINESS CONSULTANTS

March 9, 2022

Mr. De'Carlton Seewood, City Manager
City of Columbia
701 East Broadway
Columbia, Missouri 65205

Re: Utilities Billing Internal Audit

Dear De'Carlton:

We have completed our internal audit of the utilities billing process at the City of Columbia ("City"). Our services were performed in accordance with the Consulting Standards for the Professional Practice of Internal Auditing, as promulgated by the American Institute of Certified Public Accountants (AICPA).

The accompanying report includes an Executive Summary, Observations and Recommendations, and Process Improvement Opportunities. Because the procedures performed in conjunction with our internal audit are more limited than would be necessary to provide an opinion on the system of internal controls taken as a whole, such an opinion is not expressed. In addition, the engagement did not include a detailed audit of transactions that would be required to discover fraud, defalcations, or other irregularities.

This report is intended solely for the information and use of management and the City Council and is not intended to be, and should not be, used by anyone other than the specified parties. The City of Columbia's external auditors may be provided with a copy of this report in connection with fulfilling their responsibilities. In addition, we understand that the City may be required to make our report, once finalized, available under sunshine laws.

We would like to express our gratitude to all employees involved with this project. Each person involved was accessible and responsive to our requests for information.

Sincerely,

RUBINBROWN LLP

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Executive Summary


Project Overview and Scope

The objectives of the utilities billing internal audit were to:

1. Independently examine the policies and procedures in place for the utilities billing process to determine if internal controls are in place and operating effectively.
2. Evaluate the utilities billing process for operating efficiencies and applicability of best practices.

Our internal audit included activity from December 1, 2020 to November 30, 2021. In order to achieve the objectives above, we performed the following actions:

- Interviewed more than 20 employees within the Utilities Department and Finance Department who are responsible for the utilities billing process. The objective of these interviews was to gain an understanding of the processes and document them in a written narrative.
- Evaluated the following areas to determine whether procedures over these areas are operating effectively and identify opportunities for improvement:
 - Customer initiation of service including deposits
 - Customer billing cycles
 - The collection of meter read data and generation of customer bills
 - Available payment methods including budget billing
 - Disconnections and payment arrangements
 - Cash receipts and posting the payments to customer accounts (Finance Dept.)
- Evaluated billing and/or cash collection done outside the core Utilities Management System (CIS Infinity) to assess the related internal controls and identify areas for improvement. This evaluation included each of the five utilities:
 - Electric
 - Water
 - Sewer
 - Storm Water
 - Solid Waste

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- Performed limited testing of key controls identified in the interview process, including:
 - Walkthrough of one utility accounts receivable transaction from creation through entry in the general ledger;
 - Walkthrough of one billing adjustment from creation through entry to the general ledger;
 - Setup of rate codes in CIS Infinity;
 - Invoices from partner entities;
 - Invoices generated and sent to customers, including large industrial customers; and
 - Adjustments to customer account balances.

The scope of our internal audit did not include evaluating the rate development process.

Background

The City of Columbia, Missouri serves more than 60,000 residential and commercial customers by providing one or more of the following utilities: electric, water, sewer, storm water, and solid waste. The Utilities department has its own dedicated customer service team to better serve its customers. The Utilities Management System used by the City of Columbia since 2016 is *CIS Infinity* (CIS) by Advanced Utilities Systems. Within CIS, the Utilities Department can manage its core assets (meter network), service orders, customer information, customer billing, and more.

The Finance Department, of which the Treasury Office is located, collects customer payments in a variety of payment methods and records the receipt in CIS. The Finance Department has a dedicated Senior Accountant over Utilities, who performs periodic reconciliations between CIS and the Munis General Ledger.

Some billing functions performed by the Utilities Department are done outside of the CIS billing system. In these cases, the low volume of transactions and/or type of service provided do not make sense to perform within the CIS infrastructure. These billing functions, and their related internal controls, were included in the scope of our internal audit. Examples include landfill billing in the Waste Works software and sewer surcharges.



Best Practices

Based on discussions with management personnel, the following processes are in place at the City and represent best practices:

- The City employs three Billing Auditors to review invoices flagged by the billing system for further review before the invoices are sent to customers.
- Large industrial customer invoices, which are more complex and are manually processed, are reviewed by an independent Billing Analyst before the invoices are sent.
- The City has several cash receipt controls in place at the City Hall cashier desks, including independent cash counts, unique log-ins, security cameras, and independent reconciliations. Utility payments are collected in separate cash drawers so they are not mixed with payments for other City departments.

Observations and Recommendations

Observations from our internal audit are noted below:

- Billing information for non-metered services are not always accessible to the employees providing the service, potentially allowing some customers to receive non-metered services without paying the correct amount.
- Electric personnel do not have proper procedures in place to review the setup of the rate code in CIS to ensure customers are being billed using the correct rate code.
- Utilities Customer Service Representatives do not require identification or a lease copy when customers sign up for services online.
- The City cannot send active delinquent accounts to collections, which makes it impossible to collect from customers who fail to pay for non-metered services and do not move out.
- We identified a small number of billing adjustments performed by Utility Customer Service Representatives, who should have requested a Supervisor or Billing Auditor complete the adjustment instead.
- A secondary review of high dollar billing adjustments is not currently in place.

All observations, recommendations, and process improvement opportunities noted during our internal audit are further detailed below. Additionally, these items have been communicated to management.

City of Columbia, Missouri
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 Observations and Recommendations



#	Process/Procedure	Observation and Risk	Recommendation	Management Response
1	<p>The City of Columbia bills its customers for both metered (electric, water) and non-metered (solid waste, storm water, sewer) services. Customers may receive one or more of these services from the City.</p> <p>It is more difficult to determine whether all customers who should be billed for non-metered services are properly billed. Metered services are easier to bill for because the City maintains an electronic record of the meters to be read in its service territory.</p>	<p>Observation: The City's solid waste employees pick up trash along routes without knowing whether each customer has properly paid for the services. The City's "pay as you throw" program has helped ensure some revenue is captured, but it is still possible a small number of customers are not being properly billed for non-metered services.</p> <p>Risk: Customers may receive trash pickup services without paying the proper fee because the solid waste drivers do not currently have access to customer billing information.</p>	<p>Install route management software in the solid waste trucks that is connected to the billing system. This way, if a customer has not paid for solid waste pickup services, the driver will know not to collect trash from that residence or business.</p>	<p>Responsible Party: Solid Waste Manager</p> <p>The City is currently in the process of obtaining route management system for the solid waste collection vehicles. The specifications for the route management system require that the software package be capable of pushing information to and pulling information from the billing system. This system will allow the drivers the ability to see which addresses have active accounts for solid waste services.</p> <p>Target Date for Implementation: Fall 2022</p>

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Observations and Recommendations



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2	<p>New meters are installed by the Electric Meter Shop, Electric Engineering, or Water Meter Shop. The meter information is loaded into CIS Infinity by one of several departments, and a rate code is assigned to the customer based on the type of services to be provided.</p> <p>Rate codes are periodically reviewed by the Rate Analysts in cooperation with Electric Engineering, as some customers' utilities demands (and thus rate codes) may change periodically.</p>	<p>Observation: Per inquiry with Utilities personnel, the risk of billing errors is more likely to occur during the setup of the rate codes in a new customer account in CIS Infinity. The water metering crews utilize a checklist and fill out a meter installation card that is reviewed by a Supervisor.</p> <p>However, the electric metering crew does not have a similar checklist related to meter installations. The electric rate code can initially be setup in CIS by one of several different employees within different departments (i.e. Engineering, Customer Service, etc.), making it difficult to determine whether it is done correctly.</p> <p>Risk: A customer who is setup on the wrong rate code may go undetected and be improperly billed for an extended period of time.</p>	<p>The meter setup, and related rate code, should be reviewed by an independent supervisor or designee to ensure the correct rate code is used.</p> <p>Create a departmental procedure that describes how electric rate codes are to be entered into CIS and by whom. Include in the procedures that the rate code should be checked anytime a meter is installed for the first time or serviced.</p> <p>Consider whether a field could be added to CIS service orders to acknowledge that the rate code has been checked and the date it was checked. Then, Rate Analysts can later query the system to identify meters that have not been inspected in a long time and conduct periodic inspections of those meters and/or the activity on the account to ensure the correct rate code is used.</p>	<p>Responsible Party: Substation Superintendent</p> <p>There are processes followed to help ensure the electric rate codes are set up properly with new services however, these processes are currently not well documented. Currently, there is an automated process in CIS that 30 days after a meter is set a new work order is generated to check the account to verify the proper rate code. Staff will work to document processes and investigate the possibility of adding a field to CIS service orders to acknowledge that the rate code has been checked and the date it was checked.</p> <p>Target Date for Implementation: August 2022</p>

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 Observations and Recommendations



#	Process/Procedure	Observation and Risk	Recommendation	Management Response
3	<p>New customers can sign up for services either in person at the City Hall or online using a request form on the City's website.</p>	<p>Observation: Utilities Customer Service requires identification and a lease copy when customers sign up for services in-person, but do not require these same documents when customers sign up for services online.</p> <p>Risk: Customers may sign up for services under a false identity in order to leave behind prior balances or leave a balance due in the future.</p>	<p>It is common practice to require identification for post-pay services such as utilities. Begin requiring identification and a lease copy where applicable before a customer can sign up for new service, regardless of whether this application is done in person or online. Modify the ordinances if necessary to reflect this revised policy.</p>	<p>Responsible Party: Utility Customer Services Manager</p> <p>The City upgraded the utility billing system customer portal on January 28, 2022. With this upgrade there is a file "dropbox" for customers to upload a copy of their photo ID and a copy of the lease or proof of ownership. The file "dropbox" is not currently a required field. Staff will work with the vendor to make this a required field and require this information be provided for both in person and online applications.</p> <p>Target Date of Implementation: May 2022</p>

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4	<p>Customers with delinquent balances are subject to disconnection of metered services in accordance with Ordinance section 27-21. Delinquent customer accounts that have been finalized (closed) are subject to be sent to a third party collection agency.</p>	<p>Observation: According to Ordinance 27-19(k), the City cannot send a delinquent account to collections until the account has been finalized (the customer has moved out). This presents a challenge for customers who have not paid for non-metered utilities (i.e. sewer, storm water, solid waste). The City has no recourse against accounts who fail to pay for non-metered services and do not move out unless the City can send active accounts to collections.</p> <p>Risk: In some cases, the customer may not move out for many years, at which point the statute of limitations has passed making the balance due uncollectable.</p>	<p>Revise the ordinances to allow the City to send delinquent accounts, whether active or finalized, to collections after all other attempts to recover the balance due are exhausted.</p>	<p>Responsible Party: Director of Utilities or Assistant Director of City Utilities</p> <p>This recommendation would require City Council approval of a revision to the City Code of Ordinances. City staff will work with the current contracted collection agency to work out a process on how to collect unpaid balances on active accounts. In addition, City staff will have to research the collection process and write-off process in our current utility billing system to see if this is manageable or if we will need assistance from the vendor in order to implement this recommendation. Once complete, ordinance revisions can be drafted and presented to Council for consideration.</p> <p>Target Date for Implementation: Staff believes this could be accomplished within six months. Estimated target date of September 2022.</p>
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#	Process/Procedure	Observation and Risk	Recommendation	Management Response
5	<p>Billing adjustments to customer balances in CIS Infinity are necessary from time to time. The requesting party (such as a Utility Customer Service Representative) emails a request or creates a task in CIS infinity detailing the purpose of the billing adjustment request. The request is processed by a Supervisor or Billing Auditor. Notes regarding the adjustments are placed on the customer account in CIS for future reference.</p>	<p>Observation: We analyzed one year's worth of billing adjustments in CIS Infinity to determine whether each adjustment was made by an authorized employee. Four Utility Customer Service Representatives made one adjustment each without proper authorization. The adjustments were reversals of deposits or fees ranging from \$6 to \$95 each. Utility Customer Service Representatives should request adjustments be made by a Supervisor or Billing Auditor instead of doing the adjustment themselves.</p> <p>Risk: Error or fraud related to incorrect or unauthorized adjustments.</p>	<p>Work with the IT department and/or CIS Representatives to logically restrict the ability to record adjustments within CIS Infinity to authorized personnel only.</p>	<p>Responsible Party: Utility Customer Services Manager</p> <p>City staff has worked with IT department staff to determine what options are available within our utility billing system to restrict the ability for a Utility Customer Service Representatives (UCSR) to record adjustments to utility accounts. The options were identified and the ability to record adjustments is now limited to Billing Auditors and Supervisors.</p> <p>Target Date of Implementation: This recommendation was implemented on February 8, 2022</p>

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#	Process/Procedure	Observation and Risk	Recommendation	Management Response
6	Billing Adjustments are typically made by someone different than the requestor, although Supervisors or Billing Auditors may perform their own adjustments if necessary.	<p>Observation: Although most adjustments are inherently reviewed because they are performed by someone different than the requestor, some adjustments are not reviewed by a second person. There is no dollar threshold in place where an adjustment is reviewed by an independent Supervisor or designee.</p> <p>Risk: Error or fraud related to incorrect or unauthorized adjustments.</p>	<p>Add a second level of review for all adjustments \$500 or greater to be performed by the Utility Customer Services Manager weekly.</p> <p>The list of adjustments to be reviewed should come directly from a CIS query that is either initiated by the Customer Services Manager or sent to her weekly straight from the system.</p>	<p>Responsible Party: Utility Customer Services Manager</p> <p>Staff will need to work with IT department staff to create a filter/query to gather this information and create a report that will be reviewed on a weekly basis.</p> <p>Target Date of Implementation: April 2022</p>

City of Columbia, Missouri
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 Process Improvement Opportunities



We noted the following process improvement opportunities during our performance audit. While these observations do not constitute internal control weaknesses, they could help strengthen the overall internal control environment or improve the efficiency of a business process. We recommend management consider each observation and take action where appropriate.

#	Observation	Process Improvement	Management Response
1	<p>The City of Columbia does not have Advanced Metering Infrastructure (AMI) electric meters or water meters. Currently, Utilities employees must manually read the electric and water meters each month throughout Columbia's service territory.</p> <p>Although AMI meters would require a substantial capital investment, the City would see many benefits including reduced labor costs.</p>	<p>Determine the feasibility and potential timeline for the gradual phasing in of AMI meters at the City of Columbia. Consider the possibility of AMI meters and its impact on future software changes and strategic decisions.</p>	<p>Party Responsible: Director of Utilities or Assistant Director of City Utilities</p> <p>Recently, a City Task Force completed an Integrated Electric Resource and Master Plan (IER&MP) for the electric division. One of the recommendations of this plan is for the City to implement an AMI system for both water and electric. City staff will be discussing the results of the IER&MP with City Council within the next 3-4 months. City Council input will determine if the City moves forward with implementation of an AMI system.</p> <p>Target Date of Implementation: Unknown at this time. Dependent on City Council input.</p>

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 Process Improvement Opportunities



#	Observation	Process Improvement	Management Response
2	<p>The Utilities Department employs three Billing Auditors to review exception reports from the CIS Infinity billing system. Exceptions are those accounts identified by pre-established parameters with unusual activity that should be investigated before a bill is generated.</p> <p>The parameters were established when the City began using CIS Infinity in 2016, but have not been modified since.</p>	<p>Perform a review of the various exception reports and their related parameters utilized by the Billing Auditors. Determine whether the parameters should be changed, or certain reports should be added or removed. The goal should be to maximize the Billing Auditors' time by identifying the accounts that are most likely to contain errors so they are resolved before the bill is generated.</p> <p>Perform this review at least annually.</p>	<p>Responsible Party: Assistant Director of City Utilities.</p> <p>The City currently has a contract with our utility billing vendor to perform annual business practice reviews with staff. City staff has reached out to the utility billing vendor to request that the review of the various exception reports and the parameters utilized be included with this annual review.</p> <p>Target Date of Implementation: June 2022</p>

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 Process Improvement Opportunities



#	Observation	Process Improvement	Management Response
3	<p>The City of Columbia bills customers monthly for utility services. Customers have 20 days from the invoice date to pay the balance due without penalty. After 20 days, a late fee of 3% is added to the balance due.</p> <p>The City suspended late fees from April 2020 through July 2021 due to Covid-19 but has begun assessing late fees again effective August 1, 2021. Customers are not permitted a waived late fee.</p>	<p>Consider allowing one waived late fee per customer per year, upon request. Typically, this would not be disclosed in an ordinance, but rather would be a Utilities Customer Service Department procedure. Many industries will waive one late fee per year, no questions asked, as a customer service initiative.</p> <p>Additionally, determine whether the number of days to pay can be extended beyond 20 days.</p>	<p>Responsible Party: Director of Utilities or Assistant Director of Utilities</p> <p>These recommendations would both require City Council approval of revisions to the City's Code of Ordinances.</p> <p>The waiver of one late fee per customer per year could be added to procedures immediately after ordinance approval.</p> <p>Extending the number of days to pay beyond 20 will need further investigation. 20 days or even fewer days is common throughout the industry. Staff will need to review this recommendation to determine impacts to the utility billing software, staff workload and the feasibility of extending the number of days to pay past 20.</p> <p>Target Date of Implementation: Unknown until the additional review is completed.</p>

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 Process Improvement Opportunities



#	Observation	Process Improvement	Management Response
4	<p>The Boone County Regional Sewer District (BCRSD) discharges some of its customers' waste water to the City of Columbia, and the City invoices BCRSD for this service.</p> <p>However, BCRSD essentially calculates its own invoice. The accounts listing and amount owed is sent in one large PDF file. The calculations are reviewed by the City's Engineering & Operations Manager (Sewer & Storm Water).</p> <p>Because nearly 4,000 accounts are listed on the PDF file, it can be difficult to determine whether the calculations are correct without utilizing Excel. RubinBrown successfully recalculated 5 of 5 months by converting the PDF to Excel and recalculating the invoice details.</p>	<p>To assist with the review of the calculations, request the detail from BCRSD in Excel. If they cannot provide the file in Excel, determine if the file can be extracted from PDF to Excel each month.</p>	<p>Responsible Party: Engineering & Operations Manager (Sewer & Storm Water)</p> <p>City Staff will discuss this recommended process improvement with the Boone County Regional Sewer District to determine if the report is available in an Excel format. The City has the software necessary to convert the PDF file to an Excel file if it the sewer district cannot provide the file.</p> <p>Target date for completion: March 2022</p>