



HARFORD COUNTY, MARYLAND

Office of the County Auditor

October 3, 2014

Report Highlights

Why We Did This Audit

This audit was conducted as part of the County Auditor's risk-based Annual Audit Plan, approved by the County Council for FY2014.

What We Found

Adjustments may be made to accounts without review.

What We Recommend

Management should ensure manual adjustments are proper and collections are pursued timely.

AUDIT OF WATER AND SEWER BILLING AND COLLECTION CONTROLS

Council Members and County Executive Craig:

In accordance with Section 213 of the Harford County Charter, we have performed an audit of Water and Sewer Billing and Collection.

Overall, the audit found procedures and controls were reasonable, but could be improved to ensure that water and sewer customers are billed for the correct usage and revenue is collected timely.

More detailed results of our audit, our findings and recommendations for improvement are detailed in the attached report. We would like to thank the members of management for their cooperation during the audit. The audit team is available to respond to any questions you have regarding the attached report.

Sincerely,

Chrystal Brooks
County Auditor

cc: Ms. Kathryn Hewitt, Treasurer
Mr. Tim Whittie, Director of Public Works
Mr. Ted Pibil, Director of Information and Communication
Technology

~ Preserving Harford's past; promoting Harford's future ~

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HARFORD COUNTY, MARYLAND
Office of the County Auditor

**AUDIT OF WATER AND SEWER BILLING
AND COLLECTION CONTROLS**

Report Number:
2014-A-08

Period Covered:
07/01/2012 through 06/30/2014

Date Issued:
October 3, 2014

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BACKGROUND INFORMATION

INTRODUCTION AND KEY STATISTICS

The Department of Public Works, Division of Water and Sewer, provides water and sewer service to citizens of Harford County. According to the Harford County Government website, "The Department of Public Works, *Division of Water and Sewer* is responsible for the operation, maintenance, administration, planning and engineering of public water and sewer facilities to service over 70,000 citizens of Harford County who reside outside the three incorporated towns." Revenue for water and sewer usage totaled approximately \$28.4 million during FY2014.

Customers receive quarterly bills for their consumption. Those bills are calculated automatically based on quarterly water meter readings and the rates in the Water and Sewer Billing System. Rates are adjusted annually for use beginning in July to reflect the consumer price index increase. Adjustments to bills are made on a case-by-case basis and in accordance with the County's regulations.

Customers are also billed annually for User Benefit Assessments. User benefit assessments are charged (\$70 for water and \$70 for sewer) for 25 years after a property has been added to the County's utility systems. They are collected to pay for the expansion, extension or reconstruction of the water and sewer infrastructure. Some properties are charged additional benefit assessments to recoup the County's debt service costs for local projects; only benefitted customers are charged for those projects. Biannually, the County Treasurer reviews the benefit assessments to ensure the revenue generated is adequate to cover the related project expenses and to ensure the correct properties are billed.

Property owners within the County's service area may request a new connection to the County's water and sewer system via an application process. After approval, an invoice is generated for the labor, supplies and equipment used to build the connection to the system. The invoice must be paid prior to the County making the connection.

REVIEW OBJECTIVE, SCOPE AND METHODOLOGY

The objective of this review was to confirm that controls over Water and Sewer billing and collection are adequate to ensure that citizens are billed the correct amount and revenue is collected timely. The scope of this review was limited to ensuring billings were proper, collections were timely and adjustments were reviewed for propriety.

The audit focused on activity during the period of 07/01/2012 through 06/30/2014. Our audit procedures included interviewing personnel, observation and testing. Specifically, we inquired of Water and Sewer Administration and Engineering, the Meter Department, and Water and Sewer Accounting to gather an understanding of the meter reading and

billing processes. We observed the new connection invoicing process, meter reading process and bill review process and gathered an understanding of manual adjustments both in the Meter Reading system and the Water and Sewer Billing system.

We recalculated the billing rates approved by the County Council to determine if rates, and subsequent increases, were correct in the billing system. In addition, we recalculated bills to confirm that they were calculated correctly, and rate increases were implemented timely.

Tests of selected transactions were performed to verify our understanding of, and assess the adequacy of, the above processes as well as the County's collection controls. We also performed application reviews of the ITRON (Meter Reading) and Water and Sewer Billing systems to determine if proper controls exist over the input, processing and output of data.

The audit was performed in accordance with Generally Accepted Government Auditing Standards (GAGAS). Those standards require that we plan and perform the audit to obtain sufficient evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

REVIEW RESULTS

Harford County management is responsible for establishing and maintaining effective internal controls. Internal control is a process designed to provide reasonable assurance that objectives pertaining to the reliability of financial records, effectiveness and efficiency of operations including safeguarding of assets and compliance with applicable laws, rules and regulations are achieved. Because of inherent limitations in internal control, errors or fraud may nevertheless occur and not be detected.

In our opinion, based on the evidence obtained, some controls over water and sewer billing and collection are not adequate to ensure accurate billing and timely collection. We were able to confirm that the Water and Sewer billing system calculates bills correctly based on the data (consumption, meter size, usage rates) recorded in the system.

As stated in Bill 12-11, all Water and Sewer charges and rates are adjusted annually:

“to reflect the annual change of the 'Consumer Price Index" [CPI] for "All Urban Consumers" for the expenditure category "All Items Not Seasonally Adjusted", and for all regions. The annual Consumer Price Index for the period ending each December, as published by the Bureau of Labor Statistics of the U.S. Department of Labor, shall be used to adjust all charges and rates to be applied beginning July 1 of the following year.”

We confirmed that the usage rates for FY2013 and FY2014 were calculated correctly. Those rates were adjusted using the average annual CPI change as of December of each year. We were additionally able to confirm that this index has been used consistently since 1996. However, we noted that the description of the CPI included in the County's water and sewer rate legislation (Bills 95-40 and 12-11) could also be interpreted as the annual CPI change from December to December, which is reported alongside the average annual CPI by the Bureau of Labor Statistics. Since the same index has been used consistently for many years, we have not identified this as a reportable condition. Instead, we suggest future legislation more clearly define the Consumer Price Index intended to be used each year.

In our review of Water and Sewer collection procedures, we noted water meters were not always turned off timely for delinquent accounts, in accordance with the Harford County Code.

We were able to confirm the amounts billed for benefit assessments and user benefit assessments.

Monitoring procedures were adequate to ensure all processing errors of the meter readings and billings were investigated and resolved timely. However, reviews of manual adjustments were not always documented.

Finally, in our review of the Water and Sewer Billing and ITRON systems, we determined automated controls are sufficient to ensure the integrity of data and calculations. However, data transfers between the systems were not verified to confirm the correct number of bills was properly uploaded from the meter reading system to the billing system. The interfaces should be verified prior to finalizing the upload process to ensure they are complete.

Areas for improvement are described in the Findings and Recommendations section of this report. Management has been provided an opportunity to respond to this report; the response provided is below.

MANAGEMENT RESPONSE

We thank the Office of the County Auditor for their thorough review of the billing process from meter readings thorough payment. As a result of this review, two changes will be made to enhance and improve the process. Our specific comments to the findings are included after each Finding and Recommendation.

FINDINGS AND RECOMMENDATIONS

Finding Number: 2014-A-08.01 Water and Sewer Billing Adjustments

Procedures for verifying the propriety of certain adjustments to water and sewer billing accounts were inadequate.

Analysis: The Division's procedures for verifying the propriety of non-cash credit adjustments in the Water and Sewer Billing System were not adequate. Specifically, we noted even though a supervisor verified the adjustments initiated by the billing clerks in the Water and Sewer Billing System, a system generated report is not used to ensure all adjustments are subject to the review. As a result, other adjustments could have been recorded in the system without the supervisor's knowledge.

We were advised that when an adjustment is required, a supervisor will calculate the adjustment and request that a billing clerk make the adjustment in the system. The supervisor ensures the adjustment agrees to her calculation. In our test of 30 adjustments, we noted 14 of them lacked documentation of approval by a supervisor. Additionally, the individual who was responsible for verifying adjustments to accounts also has the ability to make such adjustments.

As a result, adjustments recorded to customer accounts could be recorded without detection. According to the Water and Sewer Billing system, during fiscal year 2014, non-cash credit adjustments recorded in water and sewer customer accounts totaled approximately \$305,000.

Recommendation: We recommend that supervisory personnel verify, at least on a test basis, the propriety of adjustments and document such review. The review should utilize a system generated report of all adjustments. We also recommend an independent employee review all adjustments made by the supervisor to ensure they were proper.

Management Response: The Department of Treasury agrees with the recommendation and will have the supervisor use the system generated report of all adjustments to verify the propriety of adjustments and document such review by signing off on each adjustment on the report. If an adjustment is made by the supervisor, the Chief of Revenue Collections will sign off on the adjustment on the report.

Expected Completion Date: 10/01/2014

Finding Number: 2014-A-08.02 Timeliness of Collection Activities

Delinquent water and sewer accounts were not turned off in a timely manner.

Analysis: Delinquent water and sewer usage bills were not pursued for collection in a timely manner by turning off the water service. According to the Water and Sewer Rules and Regulations, water and sewer accounts that remain unpaid for 50 days are subject to a turn off fee and subject to having the water service turned off. Generally, the County allows customers an additional 12 days to settle to outstanding balance prior to turning off the service. Our test of delinquent accounts disclosed several instances in which the service was not turned off timely (within 64 days). In addition, for two of these instances, we noted the account was not subject to turnoff of service even though an approved payment plan was not adhered to.

Recommendation: We recommend that Treasury and the Division of Water & Sewer ensure collection procedures are routinely enforced and service is turned off timely for delinquent accounts, in accordance with the County Code.

Management Response: The Departments of Treasury and Public Works disagree with the finding which implies that collections procedures are not routinely enforced and that timely actions are not taken when accounts are delinquent. There are a number of situations that can affect the time to turn-off for a delinquent account including holidays, staffing, weather, inaccessible curb stops or meter vaults, special needs and other unique situations that may delay a turn-off for a short period of time. A testament to the effectiveness of our routine procedures is the high rate of collection on accounts and the very low rate of selling a lien on the property at tax sale for collections. The water and sewer utility has a history of collecting 99% of all water and sewer usage bills yearly for the past 5 years.

Expected Completion Date: N/A

Finding Number: 2014-A-08.03 Meter Reading Upload to Mainframe

The water meter reading upload for billing purposes is not reviewed for completeness.

Analysis: Water and Sewer usage bills are calculated based on the water consumption data from the meter reading application. The meter readings are uploaded to the Water and Sewer Billing System in a batch process. However, the meter reading upload to the Water and Sewer Billing System is not reviewed to ensure the completeness of upload. We noted, in our testing, two instances in which the number of accounts uploaded was less than the number of accounts that were input. Management was able to explain that the difference was due to some accounts having meters with multiple dials (two readings for one meter, billed together) and that no records were missing. However, the difference was undetected until our audit.

Recommendation: We recommend the number of sectors and number of projected bill count be verified on the Host Upload Summary and the related SYSM Message prior to the completion of the upload to the billing system.

Management Response: After the Itron upload is complete, a SYSM message is automatically generated that shows the “projected bill count”. That number should and always has matched the “export customers” from the MV-RS Host Upload Summary. Another set of numbers has come to our attention during this audit that can be used for additional confirmation of a successful upload. The number of “lines” on the Transfer Activity Log from the BIM transfer software should match the “total export records” from the M-RS Host Upload Summary report. These numbers will never match the numbers mentioned earlier due to accounts that have multi dial meters. This latest report information brought to our attention by this audit will enhance our records checking process that has been flawless up this point.

Expected Completion Date: Immediately