



# HARFORD COUNTY, MARYLAND

## Office of the County Auditor

### WATER AND SEWER BILLING ANALYSIS

**Report Number:**  
2022-A-01

**Report Date:**  
11/01/2021

Council Members and County Executive Glassman:

In accordance with Section 213 of the Harford County Charter, we have performed an audit of Water and Sewer Billing for the period of 07/01/2018 through 06/30/2021. This audit was conducted as part of the County Auditor’s risk-based Annual Audit Plan approved by the County Council for FY2022.

The objective of this review was to confirm that Water and Sewer customers were billed the correct amount and payment was received timely. The scope of the review was limited to ensuring billings were properly calculated, collections were handled timely, and adjustments were reviewed for propriety. The scope of this project did not include user benefit assessments or development fees. The results of the audit, our findings and recommendations for improvement are detailed in this report.

We would like to thank the members of management for their cooperation during the audit. Although, none was required, they have been provided an opportunity to respond to this report; no response was provided.

Sincerely,  
*Chrystal Brooks, CPA*  
Chrystal Brooks  
County Auditor

### CONCLUSIONS

Our opinion, based on the evidence obtained, is processes are adequate to ensure that invoices for water and sewer services were calculated correctly and collected completely. This assessment is based on the strengths and weaknesses identified for the operational objectives below.

Business Process Objective	Assessment <sup>i</sup>
Ensure service billings are complete and accurate.	Effective
Ensure payments are collected timely.	Effective

## **BACKGROUND, OBJECTIVES, SCOPE AND METHODOLOGY**

The Department of Public Works, Division of Water and Sewer, provides water and sewer service to citizens of Harford County within the Development Envelope. According to the Harford County Government website, “The Division of Water & Sewer is responsible for the operation, maintenance, administration, planning and engineering of the public water and sewer facilities that service over 130,000 citizens of Harford County.” During the review period, fiscal years 2019, 2020 and 2021, Water and Sewer operating revenue was \$61.9, \$79.8 and \$58.9 million in each year, respectively. This represents about 560,000 invoices and 530,000 payments during the 3-year audit period.

Quarterly, customers’ water meters are read, mostly by radio signal, to determine consumption since the last reading. For simplicity, it is assumed that sewer output is the same amount as the water consumption. After confirmation that the consumption amounts are reasonable, invoices are generated automatically based on the rates in the Water and Sewer Billing System. Rates in the system are adjusted annually and quarterly to reflect the charges authorized by Bills 15-022 and 20-003. Adjustments to bills are made on a case-by-case basis and in accordance with the County’s procedures and regulations. Customers are also billed annually for User Benefit Assessments to pay for the expansion, extension or reconstruction of the water and sewer infrastructure. Benefit assessments were outside of the scope of this review.

The audit approach focused on testing the key controls that address management’s objectives. We met with personnel from the Meter Department, Water and Sewer Administration, and Water and Sewer Accounting to gather an understanding of the meter reading, billing, and adjustment processes. We have reviewed the issues reported in prior audits. We considered their impact on our planned audit procedures and noted that all were closed prior to starting this audit. The Water and Sewer Billing System is being replaced this year, so we focused the audit approach on data analysis to confirm the effectiveness of the billing process, rather than testing the system controls. Our audit procedures are described in the table below.

Process / Control Objective	Scope of Review
<b>Service Charge Billing</b>	
Meter Readings are performed quarterly, and anomalies and potential errors are identified automatically, then reviewed manually.	<ul style="list-style-type: none"> <li>• Perform data analysis to confirm that all accounts were read/invoiced quarterly.</li> <li>• Perform data analysis to identify potentially incorrect readings; confirm that management identified and addressed the unusual readings.</li> </ul>
Invoices are generated automatically using the rates approved by the County Council and programmed into the billing system.	<ul style="list-style-type: none"> <li>• Review the legislation authorizing the current service rates.</li> <li>• For all readings, recalculate the invoice to confirm the amounts billed were correct.</li> </ul>
<b>Receivables Collection</b>	
Payments are applied to accounts in an automated fashion	<ul style="list-style-type: none"> <li>• For a sample of payments, confirm that the relevant cashiering systems and documents support the receipt of the money for that account.</li> </ul>
Account adjustments are supported by staff/ supervisor review and notes	<ul style="list-style-type: none"> <li>• For a sample of adjustments identified through data analysis, confirm that the adjustment was proper.</li> </ul>
Late Penalties are applied when payments are received after the due date	<ul style="list-style-type: none"> <li>• Perform data analysis of all invoices to confirm that late payment penalties were applied to customer accounts.</li> </ul>
Service Turn-off are initiated for long-outstanding accounts	<ul style="list-style-type: none"> <li>• Confirm that turn-offs were performed when accounts were unpaid. <i>Note: Turn-offs for non-payment were not done during the pandemic emergency, so were not tested for that period.</i></li> </ul>

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.

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.

<b>Report Distribution:</b>	<i>(Responsible Management and Impacted Parties)</i>	<b>Audit Team:</b>
Mr. Robert Sandlass, County Treasurer		Chrystal Brooks CPA, CIA, CGAP, CISA, CGFM, CRMA <i>County Auditor</i>
Ms. Rachel Holmes, Chief, Bureau of Revenue Collections		
Ms. Jackie Webster, Water and Sewer Billing Supervisor		Brad DeLauder, CPA, CIA <i>Senior Auditor</i>
Mr. Joseph Siemek, Director, Public Works		
Mr. William Bettin, Deputy Director for Water and Sewer		Sarah Self, CIA, CGFM <i>Senior Auditor</i>

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<sup>i</sup> Definitions

**Effective:** The design and effectiveness of the internal control environment address key risks. The business unit complies with external laws and regulations, and internal policies, procedures and guidelines. Business processes are managed effectively resulting in achievement of expected outcomes.

**Generally Effective:** The design and/or effectiveness of the internal control environment generally address key risks; however, the number and severity of findings relative to the size and scope of the business unit being audited indicate that some minor areas of weakness in the control environment need to be addressed. Isolated instances of non-compliance with external laws and regulations, and internal policies, procedures and guidelines may exist. Business processes may not be managed effectively in all areas resulting in reduced achievement of expected outcomes.

**Not Effective:** The design and/or effectiveness of the internal control environment does not address key risks. Non-compliance or historical patterns of non-compliance with key regulatory requirements and internal policies, procedures and guidelines exist which expose the audited entity to financial, reputational, and operational risks. Business processes are not managed effectively and expected outcomes are not achieved.