

Baltimore City Department of Public Works – Biennial Performance Audit FY21-22

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Objective

The **Department of Audits (DOA)** reviewed the performance of the **Baltimore City Department of Public Works (DPW)** for the fiscal years ending on June 30, 2022, and June 30, 2021. The goal was to assess the efficiency and effectiveness of controls over the water billing process. Although the scope of the audit was for FYs 2021 and 2022, and only included retail water for both Baltimore City (City) and Baltimore County (County); other procedure and transactions outside that period were reviewed to understand and verify the information during the audit period. DOA's review included the following six functions relevant to the water billing process: (1) setting BOE approved rates in DPW billing systems; (2) customer account set up; (3) meter reading; (4) billing; (5) customer complaints; and (6) collections.

Background

City and County Accounts

The City maintains and provides water to the residents of the City and County. The City provides water to the County at cost, and the two jurisdictions share the costs associated with the production and use of water. The City is responsible for the maintenance of all the City and County meters. Between the City and the County, there are over 400,000 water meters. More than half of these meters are in the County. There are two separate systems used for water billing processing: Baltimore City uses the UMAX system and Baltimore County uses the 3270/Legacy system.

All reads, regardless of the system used, are automatic. If there are bad reads, approximately 100 out of 4,000 per billing cycle, the DPW Meter Shop will go on site to perform manual reads and fix meters that are giving inaccurate readings.

Rates

Customer water rates are approved by Baltimore City's Board of Estimates (BOE). The approved rates are set up in the billing systems by DPW IT Division and Baltimore City Information Technology (BCIT) for City and County accounts, respectively. These rates are applied for customer billing in UMAX and the 3270/Legacy Systems.

Billing and Exceptions

The DPW Customer Support and Service Division (CSSD) oversees the meter and billing systems for all City and County accounts. The CSSD Billing and Adjustments section bills approximately 200,000 City accounts on a monthly cycle and approximately 207,000 County accounts on a quarterly cycle. The CSSD is responsible for:

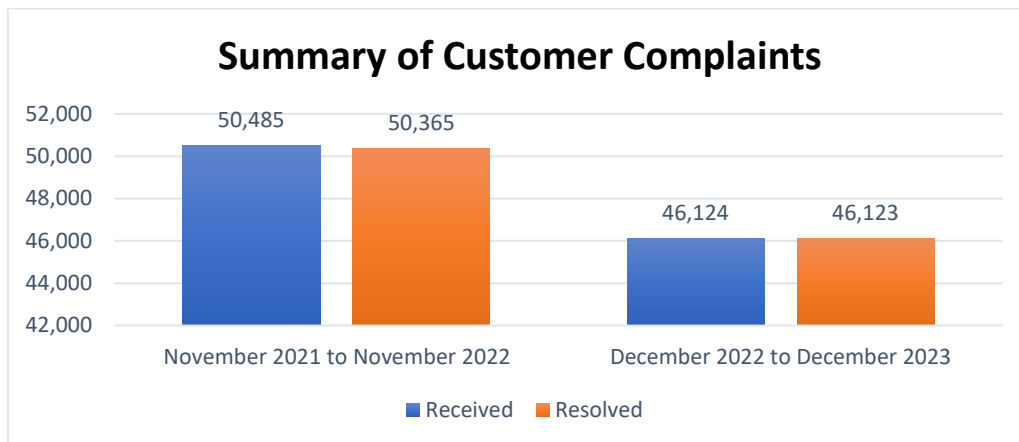
- Creating customer accounts in both the UMAX and the 3270 Systems;
- Reviewing exception reports from both the UMAX and 3270 Systems;
- Tracking and resolving exceptions
 - If there is an error associated with the collected data, or
 - If there is a billing-related customer complaint, to manually adjust the bill as needed.

Customer Complaints

A ticketing system called JitBit was implemented in November 2021 to improve the customer complaints process for both the City and the County. Customers can submit billing complaints on DPW’s website (via the jitBit platform), send an email to CSSD, contact the 311 call center, or visit a DPW walk-in-center. JitBit tracks and monitors all actions that occur from ticket creation to resolution of complaints.

The CSSD documents their review of customer complaints as well as other issues such as inspections, follow-ups on residential leaks, repairs, adjustment requests, and missing payments on the account in UMAX.

The DOA review of data from the JitBit System showed customer complaints are being resolved at a 99% completion rate and overall decreased during the time audited.



Significant Improvements

DPW made the following billing process improvements since the previous biennial performance audit:

- Implementation of JitBit to track the life cycle of a billing complaint ticket from submission to resolution for both the City and the County;
- Establishment of DPW IT’s semi-annual review process to validate only appropriate users have access to UMAX System; and
- Establishment of Standard Operating Procedures (SOP).

Finding 1 – The DPW Customer Care Analysts (CAA) daily review of problem bill reports is not effective and does not consistently catch errors.

The DPW implemented SOP for all types of exceptions in UMAX that give guidance to CCAs on how to investigate and resolve exceptions. CCAs review exceptions daily; however, based on the DOA review, the CCA review process is not effective. Of 74 samples the DOA reviewed:

- Three samples (4%) had reads (water consumption); however, the customers were only billed for the minimum fees and were not billed anything for the actual water consumption.
- Twenty-eight (38%) had insufficient notes to substantiate CCAs reviews of exceptions.

The DPW currently does not have SOP for exceptions in the 3270/Legacy System. However, based on the DOA review, the informal practices and procedure for the CAA review process is not effective. Of 50 samples the DOAs reviewed:

- Six samples (12%) showed that CCAs failed to create work orders for possible leaks and malfunctioning meters identified during their review process. This is problematic because to investigate the cause of a leak or malfunctioning meter, a work order must first be created.
- Seven samples (14%) had no notes documented in the 3270/Legacy System to substantiate CCAs reviews of exceptions.

Even though DPW's practice is to perform a supervisory review of staff activities, the DOA review 124 samples in total from exceptions in both UMAX and the 3270/Legacy System, and found no indication of a supervisory or secondary review. Without a supervisory or secondary review, errors and omissions can occur.

For example, a CCA investigated a complaint of a high meter read and possible leak. The complaint was released as resolved by the CCA without a supervisory review resulting in a \$1 million bill sent to the customer.

Recommendation 1

The Director of DPW should: (1) formalize and implement the SOP for exceptions in the 3270/Legacy System; and (2) update and implement the current SOP for exceptions in the UMAX System to require:

- A periodic supervisor or secondary level review of water usage exceptions.
- Documentation to evidence CCA review and status of accounts.
- Documentation to evidence supervisor reviews.

Finding 2 – DPW CSSDs are not in full compliance with the customer complaints standard operating procedures.

In November 2021, when DPW started using JitBit system to track customer complaints, DPW also established SOP named *CSSD JitBit Processes*.

The *CSSD JitBit Processes* states that:

- "Tickets should be responded to within one to five business days."
- "Tickets should be resolved within ten business days."

- “If CCA has not responded to the ticket within ten business days, the Supervisor will follow the step of corrective action within the expectations of Disciplinary Action.”

The DOA review of complaints indicated that DPW is not in full compliance with this SOP. Specifically, of the 46,124 complaints reviewed.

Of the 46,124 complaints reviewed, The DPW did not respond to customers timely for 32,834 (71%) of complaints and did not disposition or resolve 8,092 (18%) of complaints timely.

Daily supervisory review of complaints is not working as intended. Effective monitoring of pending customer complaints and resolutions improves timely resolutions of customer complaints. Unresponsiveness and untimely resolution of customer complaints could cause public distrust in water services.

Recommendation 2

The Director of DPW should require the CSSD Management to review periodic (e.g. weekly) status reports of customer complaints to make sure CSSD personnel adheres to *CSSD JitBit Processes*.

Although DPW has made significant efforts to improve the billing process since the previous performance audit in 2021, without these additional measures in place, DPW cannot possibly fix the remaining weaknesses that continue to hinder the efficiency and effectiveness of the water billing process and the handling of customer complaints.

DPW Management agreed to the findings and will be implementing the recommended changes by June 30, 2024.