

INTERNAL AUDIT REPORT FOR

Stormwater Billing

Department of Water Resources
Audit Plan Year 2022

January 30, 2023

GWINNETT COUNTY
INTERNAL AUDIT DIVISION

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Background & Scope

The Department of Water Resources (DWR) operates and maintains a countywide network of pipes that primarily serves to drain stormwater runoff from roads. This drainage system is necessary among other reasons to minimize hazards to residents caused by potential flash flooding. DWR must also meet federal regulatory requirements for stormwater systems under the National Pollutant Discharge Elimination System permit program. Compliance and maintenance activities require significant resources. Gwinnett County (the County) therefore adopted a Stormwater Utility Ordinance (the Ordinance), effective January 2006, which authorized the County to collect a stormwater utility user fee (user fee) in an equitable way to fund the costs for maintaining the stormwater system. The Ordinance established an annual user fee for property owners who have impervious surface areas on their properties. These hard surfaces, such as parking lots, driveways, and roofs, serve as the best estimate of stormwater generation because they prevent ground absorption and increase runoff volume.

DWR aggregates annual user fees in an Excel table format and sends the data to the Office of the Tax Commissioner (OTC) for billing purposes. Currently, user fees appear on annual property tax bills as a service fee for each property. DWR bills property owners a fixed rate per square foot of impervious area contained on their property. The rate was \$2.46 per 100 square feet of impervious surface for the audit period January 2021 through August 2022. This rate has remained unchanged since 2011. DWR identifies the location of impervious surfaces within the County each year from satellite photographs taken by a third-party contractor, Eagle View. DWR uses Geographic Information Systems (GIS) software to scan the pictures and automatically digitize the impervious surfaces to calculate the impervious square footage by parcel. DWR staff adjust initial calculations for any errors and then generate a billing summary table in Excel based on the adjusted square feet. DWR also sends an Excel file containing credits by parcel to OTC. In 2022, OTC billed approximately \$31 million in stormwater user fees on behalf of the department for approximately 222,000 parcels. DWR's objectives for user fee billing and collections are as follows:

- Fund stormwater activities in a fair and equitable way.
- Accurately bill applicable property owners based on current impervious surfaces and valid exemptions.
- Collect on delinquent accounts when possible and provide an accurate accounting of the Stormwater Fund Accounts Receivable Asset.

The purpose of this audit was to evaluate the adequacy and effectiveness of management's control activities that provide reasonable assurance of achieving the objectives. Internal Audit (IA) interviewed employees, observed certain control activities, and reviewed documents on a sample basis for the audit period. We believe the evidence provided a reasonable basis for our assessment. See **Exhibit A** for a summary of our audit procedures. We excluded environmental regulatory compliance and Stormwater Utility Fund expenditures from this review.

Assessment

Management's control activities may not provide reasonable assurance of achieving one or more objectives. IA evaluated eight key control activities and observed deficiencies in the design or operation of some control activities that could prevent management from achieving billing and collections goals. We made three recommendations to improve the integrity of billing data and collection reporting. We found no evidence of abuse or improprieties.

Recommendations

1. The quality assurance process for billable area could be improved.

The imaging process for identifying impervious surfaces is not always precise. Some areas highlighted in aerial images as impervious may not be billable. For example, the imaging and classification processes sometimes designate gravel as impervious in GIS map layers even though they create porous rain surfaces. Photographs occasionally include partial or complete parcels with impervious surfaces from adjoining counties. DWR staff review parcels on a sample basis given the large number of parcels to detect these anomalies. They use the results to continuously refine the GIS map layer to prevent future billing errors.

We selected a judgmental sample of 191 parcels and compared billed impervious areas with aerial photographs to confirm the accuracy of billing records. We identified 31 (16%) parcels where aerial photography did not support the areas used to calculate user fees. Six of the parcels were either partially or completely located in other counties. Also, IA could not evaluate any of DWR's prior quality assurance and control results, the status of identified errors, or the adequacy of their sampling methodology. DWR staff did not keep any records or reports related to these quality assurance procedures.

RECOMMENDATION

We realize DWR staff cannot validate all billable surface areas due to the large number of parcels. Management should therefore develop a sampling strategy that provides robust coverage in terms of the number of parcels and significant billable square footage. Sample selections should incorporate both random and judgmental selection methods. Alternatively, management could use systematic samples to ensure they validate all parcels over an acceptable period. DWR staff should correct billing records for errors and forward relevant information to Eagle View for, if necessary, changes to their photography programs. The Eagle View contract does not contain any quality assurance procedures. We suggest DWR staff review their quality assurance procedures for sufficiency. Document sample strategies and results for inspection by third parties.

Management Response

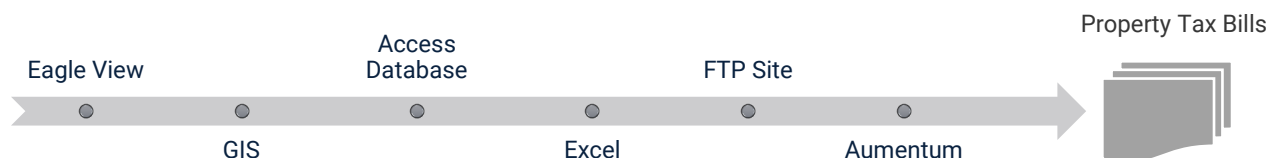
DWR recognizes that Stormwater billing area can have discrepancies, which are common across all stormwater utilities using "best available" current technology and tools. Impervious surface calculations are improving as technology and resulting photograph quality improves. DWR is working on tool enhancements for identifying discrepancies with impervious data. New technology such as AI

technology is being evaluated in Q1-Q2 of 2023 to better differentiate the surface images as paved vs. unpaved. DWR also plans to explore an increased sampling strategy using enhanced technology and tools. DWR will work with these new tools to target the areas that have higher likelihood of discrepancies like mobile homes, townhomes, or condos. DWR will also expand their quality assurance and control processes to include additional sample review and to log any discrepancies found and mark them for research and correction.

2. Improvements could be made to the manual billing workflow.

The Department of Information Technology Services updates GIS using satellite photographs taken by Eagle View each year. DWR exports parcel records with updated impervious surface area into an Access database for quality assurance review procedures. DWR staff may adjust impervious area records for allocation of condo or townhouse surface areas to each home parcel. DWR uses the updated surface area data to create a billing summary table, as well as a list of eligible credits in Excel. The Data Management section manager approves the billing table and the list of credits. A team member then transfers the files to a file transfer protocol (FTP) site so OTC can import the files into their billing system, Aumentum, to generate property tax bills. See **Table 1** for manual data transmissions. The series of data transmissions between business systems including manual adjustments to surface area and the large volume of records increases the likelihood of errors. The billing procedures also exclude important record validation procedures for data file transmissions between systems to ensure accuracy and completeness of transmissions. We could not substantiate whether the section manager summarizes adjustments made during quality assurance by type and account when approving billing summary tables.

Table 1: Manual transmission of photography and real estate parcel data.



RECOMMENDATION

The Data Management team should reconcile pre (source) and post (destination) file record counts and hash totals for surface areas as part of the data transmission process between business applications. The team should account for any differences and adjust destination application records if necessary. The Data Management section manager should summarize and validate all manual adjustments made to records during quality assurance. The section manager should also obtain confirmation that the Excel billing files were successfully uploaded to the FTP site.

Management Response

DWR will develop a reconciliation strategy for all billing data as it passes between each system within DWR and the Tax Commissioner. A batch check will be completed for each step in the data workflow process, including a check of total square footage and total record count. DWR maintains notes of manual adjustments for specific parcels in the billing application when making citizen requested changes or notified by OTC. DWR will develop a Standard Operating Procedure to document and maintain adjustments made on an annual basis.

3. Could not assess accuracy of the Stormwater Fund Accounts Receivable Asset at a detailed account level.

DWR adopted the Delinquent Stormwater Fee Collection and Write-off Policy on February 14, 2021. The policy goals are to collect on delinquent accounts when possible and provide an accurate accounting of the Stormwater Fund Accounts Receivable Asset. The document describes procedures for billing, collections, and write-offs including roles and responsibilities to achieve these goals. IA reviewed a recent write-off list for approval and compliance with guidelines without exception, but we could not determine whether the list was comprehensive. We also received a list of delinquent accounts in an Excel spreadsheet (Storm Water Quarter Balances) as of August 1, 2022, but the information may be incomplete or insufficient to evaluate compliance. Overall, we could not ensure the accuracy and completeness of customer outstanding balances, collections, or write-off reports because of the following deficiencies:

- Cumulative accounts receivable balances per SAP general ledger were not reconciled to quarterly Aumentum reports that contained beginning unpaid balances, collections, credits, write-offs, and ending unpaid balances by customer account and parcel.
- OTC sent funds to Treasury via wire transfers, and they were applied to the SAP aggregate receivable balances, but OTC remittances are not agreed to detailed customer account activity statements in Aumentum to confirm the accuracy or completeness of remittances to DWR.
- See **Recommendation 2** pertaining to the data integrity of source files.

RECOMMENDATION

DWR Finance should reconcile Stormwater accounts receivable cumulative balances per SAP to detailed Aumentum records. This will help ensure management reports (receivable aging, collection, and write-off), Aumentum, and SAP records are accurate and complete. Also, DWR Finance should agree OTC remittance advices to Aumentum customer account activity to confirm completeness.

Management Response

The Accounting Division within the Department of Financial Services currently reconciles the total amounts that post to SAP from Aumentum on a weekly basis as deposits are made from the Office of the Tax Commissioner. They also reconcile ending unpaid balances monthly with the Collection Summary Report for all property taxes including stormwater fees collected. DWR reviews the A/R adjustments made to the balances by the Accounting Division monthly to reconcile what they were for and ties them to the reports provided by the OTC. DWR also reconciles the reported weekly collections by the OTC office to DWR Revenue Fund postings. DWR does not currently receive payment detail reports by parcel/account from the OTC. Also, the data that is recorded in SAP is the totals only and does not include balances by parcel/account. DWR will reach out to the OTC to see if they can provide this level of detail. If we are provided the detail for stormwater fees by parcel and account, we will be able to reconcile this activity with the SAP total balance and billing data to ensure accuracy. If the OTC is unable to provide this level of detail, we will request a sample of parcels for detail information to compare the balances with billing data. If the sample data results in a material discrepancy, DWR will investigate further to confirm the accuracy of the receivables.

Other Considerations

IA observed opportunities to improve certain business activities based on best practices and included related advisory comments for management consideration only. Management is not required to provide written responses or corrective action plans. The advisory comments are as follows:

- The County provides incentives for property owners to reduce runoff themselves. They include fee credits for rain barrels, detention ponds, and watershed education, among other activities. DWR Data Management periodically inspects documentation on a sample basis to validate accuracy and compliance with the credit policies. DWR Best Management Practice (BMP) Credits Review approved a 35% credit for Gwinnett County Public Schools in 2022, but incorrectly entered 40% in Aumentum. This resulted in an invalid reduction in their fee of approximately \$49,000. Although immaterial, management should augment inspection sample sizes to detect similar errors.
- DWR should clarify criteria and procedures in the Delinquent Stormwater Fee Collection and Write-off Policy for removing delinquent account balances from the DWR Finance database and Aumentum (see page 4 of the policy for criteria). Also, the policy should include steps that ensure accurate billing and collection.

Exhibit A: Summary of Audit Procedures

- Interviewed departmental management to identify key control activities. Walked through key activities to confirm understanding and validate procedures.
- Selected a judgmental sample of 191 out of approximately 222,000 parcels and reperformed rating and billing procedures. Compared aerial imagery via the County's GIS software to billable area. Also, recalculated stormwater fees and compared to Aumentum data to verify stormwater fees and credits were accurate in the billing system (**Recommendation 1**).
- Inquired about reconciliation procedures used for data transfers (**Recommendation 2**).
- Evaluated quality assurance controls used to detect and resolve anomalies.
- Reviewed a judgmental sample of 20 credits applied to customer accounts in 2021 and 2022 for compliance with departmental criteria for receiving them. Also, selected a judgmental sample of 12 stewardship credit applications and determined the Data Management Section Manager approved them and applicants qualified for credits. Confirmed physical inspections per policy. Compared approved credit percentages to issued credit percentages and resolved if applicable any discrepancies.
- Obtained aging report for unpaid customer accounts and reviewed for reasonableness. Assessed effectiveness of write-off and collections procedures. Reperformed August 2022 financial reconciliation. Reviewed procedures for validating accuracy of collection reports and detailed customer account records (**Recommendation 3**).
- Selected judgmental sample of customer service complaints filed during the audit period and reviewed documentation for timely resolution.