



City of Markham

Report of the Auditor General Water Revenue Audit – Follow Up

Presented to: General Committee of Council, City of Markham

Date: June 18, 2018

BACKGROUND

On February 21, 2017, the Water Revenue Audit Report was issued, evaluating the City's water revenue processes and internal controls.

The results of the audit identified 1 medium priority and 8 low priority observations and corresponding recommendations.

A follow-up audit on all observations was completed in March 2018.

1. DATABASE ALIGNMENT WITH ALECTRA UTILITIES

Medium

Audit Recommendation:

A validation exercise should be performed to ensure that all database tables match Alectra Utilities' tables.

Remediation Status: Complete

The City now receives, on a monthly basis, an upload directly from Alectra Utilities of customer data, including customer account numbers and meter data, into the City's database. Upon receiving the upload, the City prepares dashboards for review and validates the accounts to ensure that the City's and Alectra Utilities' databases are aligned, and all required data is provided. These monthly processes and procedures have been documented into the City's standard operating procedures documents.

2. AUTOMATE, EXTRACT, TRANSFER & LOAD PROCESSES

LOW

Audit Recommendation:

Automating processes for extracting, transferring and loading data (e.g. web services or ETL software), could facilitate the accurate and timely transfer of data.

Remediation Status: Complete

The City, Alectra Utilities and Neptune Technology Group are working together to develop and test ETL processes including the implementation of an automated, timely and secured data transfer process. The project is targeted for completion in Q4 2019.

3. ENHANCED CONTROLS FOR AMI ROLL-OUT

LOW

Audit Recommendation:

In order to effectively manage the inherent risks associated with the potential AMI rollout, we recommend the following:

- A phased approach to assess the functionality of communication infrastructure before proceeding to subsequent phases;
- A user acceptance testing (“UAT”) period where manual readings are used to verify accuracy of data communicated over the AMI;
- Establish and document processes for monitoring and resolving zero reads, missed reads, and spikes in consumption, including dashboard reports and alerts;
- Documenting communication and data processing issues and resolutions as they occur to facilitate quicker identification and resolution of issues; and,
- Customer education campaigns should be augmented with information about the AMI rollout.

Finally, internal controls should be in place to ensure that there is adequate monitoring over multiple estimated reads and consecutive zero reads.

Remediation Status: Complete

The City has determined to not move forward with the roll-out of AMI due to the high costs associated with it.

However, recognizing the importance of having documented procedures and processes, the City has developed Standard Operating Procedures for monitoring and resolving zero reads, estimated read checking, high consumption reads and defective/broken water meter repair/replacement.

4. DATA TIMELINESS, ACCURACY & GRANULARITY

LOW

Audit Recommendation:

Implementation of DMA would improve the City's ability to detect and resolve issues causing water volume imbalances. The City should weigh these benefits against the cost of implementation. Furthermore, DMA in tandem with AMI implementation would enable the City to perform ILI calculations and meter lag analysis on a rolling-twelve-month basis.

Remediation Status: Complete

City staff presented and received approval from the Executive Leadership Team in September 2017 for a DMA pilot project to gather data, conduct a cost/benefit analysis and perform testing in one area. The pilot project has targeted completion of design work in 2018, with construction and data gathering in 2019.

5. PROCESS DOCUMENTATION

LOW

Audit Recommendation:

All processes should be documented to a standard similar to the Drinking Water QMS and in sufficient detail to facilitate staff training and provide guidance over standard operating procedures (“SOP”) including swim lanes to outline roles and responsibilities around key tasks. The documentation should reflect the key controls in place to ensure the effective operation of the process, especially in the event of staff attrition (i.e. departures or absences).

Remediation Status: Complete

The City has prepared detailed procedures and process documentation, including the roles and responsibilities of tasks and the key controls, for the areas identified.

6. THIRD PARTY VENDOR RISK MANAGEMENT

LOW

Audit Recommendation:

To ensure the internal controls at Alectra Utilities are designed and operating effectively with respect to the billing, collection and remittance of water revenue to the City, consideration should be given to including a “right to audit” and/or “service audit” clause in future SSAs that would allow the City to either conduct independent evaluations of the internal controls at Alectra Utilities or require Alectra Utilities to provide the City with an independent audit report (i.e. service audit report) in accordance with the Canadian Standards on Assurance Engagements (“CSAE”) 3416.

Remediation Status: Complete

The City has made Alectra Utilities aware that the "right to audit" or “service audit” clause will be included in an amendment to the SSA. The amendment is targeted for June 2018.

7. MERGER INTEGRATION CONTROLS

LOW

Audit Recommendation:

While planning for transition of the meter reading, billing, and collection function to Alectra Utilities, the City must ensure adequate controls are in place to minimize potential for missed or inaccurate bills or data accessibility and integrity.

Remediation Status: Complete

Further to the remediation overview of Observations #1 and #2 above, the City has been working with Alectra Utilities to ensure that the City's and Alectra Utilities' CIS databases are aligned, all required data is provided to the City for monitoring, and processes and procedures are documented into the City's standard operating procedures documents. The City and Alectra have also established quarterly meeting updates where merger integration, ongoing projects and service improvement opportunities are discussed.

8. WORKFLOW AUTOMATION

LOW

Audit Recommendation:

Continuing to work with Alectra Utilities on investigating options to leverage Neptune's automated work order system could streamline meter installation and testing processes.

Remediation Status: Complete

In conjunction with Observation #2 above, the City, Alectra Utilities and Neptune Technology Group are working together to develop and test ETL processes including work order data transfer processes. The project is targeted for completion in Q4 2019.

9. RESOURCE MODEL

LOW

Audit Recommendation:

The City should regularly assess whether staff have the necessary training, expertise, and experience to implement new technologies and supporting processes to ensure any gaps are filled in a timely manner.

Remediation Status: Complete

For Waterworks Operators, both legislated and organizational training is tracked to ensure staff have attended the required courses to maintain/obtain their licences.

For other Waterworks staff, training and skills development is tailored to meet professional and personal developmental goals.

OVERALL RECOMMENDATION

The Auditor General recommends that:

- 1) The Water Revenue Audit – Follow Up Presentation be received.

ACKNOWLEDGEMENT

MNP extends our appreciation to the staff and management of the City for their co-operation and assistance throughout the engagement.

