

Water Loss Reduction Initiatives Update

The Water Operational Audit Procedures Report by Deloitte, dated November 2020 identified opportunities to reduce the Town's unaccounted for water. Some of the areas identified as best suited for reducing the amount of unaccounted for water are; replacing under-reading meters, theft investigation and leak detection.

Aging water meters are one of the primary sources of apparent losses in water billing. As water meters age they tend to under-read the actual amount of water that flows through them because the mechanical parts inside don't turn as freely as they did when they were new. Following recommendations from the Audit Report, Town staff are continually replacing water meters that are aging beyond reliability.

Water theft is another reason the Town does not invoice and collect for water registered by metering. Unauthorised use from fire hydrants has been found and locks have been installed on private hydrants to prevent this. There may be more hydrants around Town, specifically in areas that are more out of public sight which could be locked also to prevent unauthorised use. Another example of water theft is water users, typically in commercial facilities that open valves in their plumbing systems to allow water to flow around by-passes therefore not registering through the meter. By-pass valve locks are recommended for all these locations to ensure that all water entering the building is going through the meter for billing purposes. Many locations have already been inspected and now have bypass valves locked and ongoing inspections are continuing.

Water main leaks underground are another potential source of unaccounted for water that could contribute to significant monetary losses. The Water Audit Report also recommends the implementation of a leak detection program. The estimated cost of a correlation survey with external sensors to find repairable leaks was approximately \$176,000. at the time of the report. Several leaks have been located and repaired by staff already and contractors to conduct a correlation survey of the municipal water mains are being reviewed for efficiency and return on investment.

The most recent numbers we had calculated for total water loss throughout the Town were shown in the Deloitte report from 2020. Those figures showed the percentage **losses of 22% for 2018 and 25% for 2019**. While all numbers required for calculation

are not yet in for 2024, the following numbers in cubic meters have been calculated for 2023;

Total water purchased from the Region	2,989,000
Total water billed through NOTK Hydro	2,381,542
Total water used through bulk water stations	52,183
Total water billed through hydrant irrigation	12,328
Estimate used for hydrant and WM flushing	12,047
Estimate used for fire fighting and training	8,900
Subtotal of water billed and estimated use	2,467,000

Based on the numbers shown above, the calculated **water loss for 2023 is 17.5%**

This shows a significant improvement in our water efficiency over the past few years and we are confident that our continuing efforts will continue to improve the financial efficiency of our water systems management.