



Committee of the Whole Excerpts
April 14, 2026

KAMSTRUP AMR WATERMETER PILOT PROGRAM EXCERPT

As West Hants Regional Municipality continues to manage a newly consolidated regional water utility alongside rapid local development, protecting infrastructure and reducing water loss have become critical priorities. Traditional leak detection methods were often reactive, costly, and resource-intensive. The proposed Kamstrup flowIQ® 2200 smart meter pilot offered an opportunity to modernize water management by introducing advanced, always-on acoustic leak detection directly into residential meters and allowed staff to identify and address leaks earlier and more precisely, improve operational efficiency, reduce non-revenue water, and better preserve system capacity.

The recommended motion was that Committee of the Whole recommends ...

COUNCIL DIRECT STAFF TO PROCEED WITH THE KAMSTRUP PILOT PROGRAM TO EVALUATE THE ULTRASONIC WATER METERS AND EXPLORE INDUSTRY LEADING AUTOMATED METER READING TECHNOLOGY WITH INTEGRATED ACOUSTIC LEAK DETECTION TO REDUCE NON-REVENUE WATER AND OPTIMIZE OPERATIONAL EFFICIENCY AND APPROVE THE EXPENDITURE OF \$91,500 PLUS APPLICABLE TAXES AS INDICATED IN THIS REPORT AS PILOT PROGRAM PACKAGE #2.



WEST HANTS REGIONAL MUNICIPALITY REPORT

Information ☐	Recommendation X	Decision Request ☐	Councillor Activity ☐
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To: Committee of the Whole

Submitted by: 

Todd Richard, Director of Public Works

Date: April 14 , 2026

Subject: Kamstrup AMR Watermeter Pilot Program

LEGISLATIVE AUTHORITY

Nova Scotia Municipal Government Act, Section 65 authorizes Council to expend funds for municipal purposes.

RECOMMENDATION or DECISION REQUEST

That Committee of the Whole recommends to Council...

That staff proceed with the Kamstrup Pilot Program to evaluate the ultrasonic water meters and explore industry leading automated meter reading technology with integrated acoustic leak detection to reduce non-revenue water and optimize operational efficiency.

and,

Approve the expendidure of \$91,500 plus applicable taxes as indicated in this report as Pilot Program Package #2.

BACKGROUND

As staff continues to manage our recently consolidated regional water utility and navigates a local development boom, maintaining infrastructure and managing water loss are critical priorities. Traditional leak detection is often reactive, time-consuming, and expensive. Kamstrup's flowIQ 2200 is the first residential smart meter to feature built in acoustic sensors that "listen" for leaks both in the service connecton and the distribution main.

Property ☐	Public Opinion ☐	Environment ☒	Social ☐	Economic ☒	Councillor Activity ☐
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DISCUSSION

Key Benefits of the Kamstrup Pilot

- **Advanced Leak Detection Capability**
 - The flowIQ® 2200 acts as a "fine-meshed network of noise loggers," monitoring the system 24/7/365.
 - It identifies leaks **before the meter** in adjacent service connections and mains, areas where the largest losses typically occur.
 - Proprietary algorithms filter out background noise (e.g., traffic) to isolate specific leak sound patterns.
- The meter can detect leaks on PVC pipe which can be a challenge with traditional leak detection equipment.**Operational Efficiency & Cost Savings**
 - **Targeted Repairs:** Instead of "searching blindly," staff can use the map-based **Leak Detector** software to pinpoint high-risk areas, significantly reducing the cost per identified leak.
 - **Proven Results:** Similar municipal pilots have seen NRW reductions of over 20% within months and identified major leaks saving thousands of dollars annually.**Resource Management:** By automating leak detection and meter reading, the utility can reallocate staff from manual tasks to proactive infrastructure maintenance.
 - **Billed Consumption Efficacy:** The meter starts registering consumption at 1/125th GPM while new mechanical water meters don't start until 1/8th – 1/4th

GPM. Life happens at under 1/8th GPM like washing fruit, wetting toothbrush, dripping faucet, and leaky toilets.

- **Long-Term Reliability**

- The meter features a solid-state, ultrasonic design with no moving parts, ensuring pinpoint accuracy and a **20-year battery life**.
- The hermetically sealed, IP68-rated housing is engineered for submerged and harsh environments.

Pilot Program Objectives

The pilot will allow WHRM to:

1. **Verify Leak Finds:** Turn meter data into actionable evidence of system leaks before committing to a full-scale rollout.
2. **Evaluate Integration:** Test the compatibility of the AMR/AMI data stream with existing municipal software and field operations.
3. **Assess ROI:** Quantify potential water savings and operational improvements to support future capital investment decisions.

AMR Program At-a-Glance

Pilot Duration

- 180 days – counter starts when order ships

Hardware & Software Included

- Kamstrup flowIQ® 2200 ultrasonic AMI meters with embedded acoustic leak detection
- Shipped direct to utility customer
 - 1 Kamstrup READy Converter (on loan from distributor for pilot duration)
- 180-day READy Manager platform license and hosting (activation upon shipment)
- 180-day Leak Detector platform license (activation upon shipment)

Training & Services Included

- AMR system roll-out and set-up
- READy Converter setup & training
- RF propagation study if interested in AMI fixed based system
- Technical support throughout pilot (from Kamstrup & distributor)

Reporting

- Mid-pilot performance check-in
- Final pilot performance report
- Post-pilot performance review & site visit (Kamstrup & distributor)

Strategic Impact: Reducing Non-Revenue Water (NRW)

A primary driver for this pilot is the aggressive reduction of **Non-Revenue Water (NRW)** the

costly gap between water produced and water billed. Currently, undetected background leaks in aging service lines and distribution mains account for a significant percentage of lost revenue and wasted treatment chemicals and energy. With meters already scheduled for replacement, this is an ideal point to implement the pilot in alignment with planned work.

By utilizing Kamstrup's embedded acoustic sensors, WHRM can transition from a reactive "break-fix" model to a proactive management strategy. The flowIQ® 2200 identifies small, silent leaks long before they surface or cause catastrophic main breaks. Reducing NRW not only stabilizes utility rates for residents but also recovers "lost" capacity in the system, ensuring WHRM can support new development without the immediate need for expensive source water capacity upgrades and production upgrades.

Conclusion

Proceeding with the Kamstrup pilot aligns with WHRM's goals of responsible long-term water management and infrastructure preservation. This technology provides the transparency needed to address aging infrastructure and protect the municipality's financial and natural resources.

NEXT STEPS

If approval is given staff will proceed with the pilot program. Depending on capacity and staff resources as many meter as time permits will be installed throughout the service area in a strategic manner. After successful implementation of the pilot program, meter replacements will continue as per the recommended replacement schedule.

FINANCIAL IMPLICATIONS

PROGRAM
2026

The Kamstrup Pilot Program runs from January 1, 2026 through December 15, 2026.

Kamstrup is offering four packages to fit your utility's unique needs.

Package #1

flowIQ® 2200 Composite Meters

- Includes 150 meters available in the following sizes:
 - 5/8-inch
 - 5/8 x 3/4-inch, or
 - 3/4-inch
- Pilot Price: \$46,600.00

Package #2

flowIQ® 2200 Composite Meters

- Includes 300 meters available in the following sizes:
 - 5/8-inch
 - 5/8 x 3/4-inch, or
 - 3/4-inch
- Pilot Price: \$91,500.00

Package #3

flowIQ® 2200 Composite & Stainless-Steel Meters

- Includes 100 meters:
 - 75 Composite 5/8 x 3/4-inch, and
 - 25 Stainless Steel 1-inch
- Pilot Price: \$46,600.00

Package #4

flowIQ® 2200 Stainless-Steel Meters

- Includes 200 meters:
 - 150 3/4-inch meter
 - 50 1-inch meters
- Pilot Price: \$96,900.00

2026-27 Budget Value	
Water Utility Budget	\$100,000
Total Package Cost, incl. applicable taxes	\$95,032
Variance (under budget)	(\$4,968)
Proposed Funding:	
User based funding	\$95,032

Within the 2026-27 Capital Budget, this equipment is scheduled to be funded through User based funding.

ALTERNATIVES

- Council could choose not proceeding with the recommendation.

ATTACHMENTS

- None

CHIEF ADMINISTRATIVE OFFICER REVIEW

The project aligns with the allocation provided in the 2026/27 Capital Budget and equipment purchase plan.

I support the recommendation.

Report Prepared by: 
Todd Richard, Director of Public Works

Report Review by: 
Kaleigh McCarthy, Environmental
Technologist

Report Approved by: 
Mark Phillips, CAO