

To: Warden and Members of County Council

From: Director of Public Works

Backflow Prevention Program By-law Update

RECOMMENDATION

1. That County Council enact By-law No. 6544-2023, being a by-law to regulate Backflow Prevention and Cross Connection Control to protect the County of Oxford's Municipal Drinking Water Systems.

REPORT HIGHLIGHTS

- The purpose of this report is to seek County Council approval to implement a Backflow Prevention Program (BPP) and enact a supporting by-law designed to further safeguard Oxford's municipal drinking water systems and the public health of its water customers.
- An overview of the feedback received through the public consultation campaign is provided for the proposed BPP and associated backflow prevention by-law which aligns with legal and regulatory requirements (Ontario Building Code), industry best practices and standards (Canadian Standards Association) and levels of service.
- Throughout the public consultation campaign, which took effect from January to April, 2023, County staff sought feedback on the proposed BPP from Area Municipalities, industrial commercial and institutional (ICI) customers, Business Improvement Areas, building officials, Chambers of Commerce and local plumbers.
- The multi-year implementation of the proposed BPP and backflow prevention by-law will serve to regulate and enforce the installation, inspection, maintenance and testing requirements of backflow prevention devices and other associated cross-connection activities that pose potential risk to the safety of the County's municipal drinking water system.

Implementation Points

Upon Council's enactment of By-law No. 6544-2023, staff will initiate its multi-year implementation plan and work with all stakeholders during execution. A phased implementation approach has been developed to be initiated between approximately 2023 and 2026. The full BPP implementation plan is included as Attachment 1 of this report.

Financial Impact

Backflow Prevention Program Funding Structure

As noted in Report No. [PW 2022-35](#), a user pay model is the most common model used by municipal BPPs across Ontario. BPPs charge user fees (property owner) for different elements of the program to recover costs including, but not limited to, the following:

- Test Tag Fees;
- Cross Connection Survey Submission Fees; and
- Backflow Testing Report Submission Fees.

These fees are in addition to any backflow prevention device (BPD) and installation fees that property owners are required to obtain through the Area Municipalities Building Officials office, as well as labour costs to hire an authorized accredited external tester who is qualified to perform the backflow surveys, BPD testing and associated BPD repairs/installation.

The County has developed proposed user fees as outlined in Table 1 by considering other municipal BPP comparator user fees (refer to Attachment 1 of Report No. PW 2022-35) as well as the projected annual BPP expenses which are related to the anticipated number of property owners participating in the mandated BPP. All fees will be incorporated into future annual County Fees and Charges by-law updates and subject to annual review to ensure the program continues operating in a budget neutral fashion.

Table 1 – Backflow Prevention Program Proposed User Fees

Description	User Fee Cost
Backflow Testing and Report Submission Fee <i>(annually per device)</i>	\$35 / test + HST
Cross Connection Survey Submission Fee <i>(re-survey required every 5 years or with change in process/ownership)</i>	\$30 + HST
Test Tag Fee <i>(5 year term)</i>	\$25 (tax exempt)

The proposed user pay model is intended to nominally charge user fees at a level which is sufficient to offset annual BPP costs in a manner which operates near a net zero budget. All fees collected would be used to offset the operational costs of the program, not as a means to generate profit. The anticipated program budget is noted in Table 2.

Table 2 – Oxford County Backflow Prevention Program Budget

Budget Item	Implementation Cost (One Time)*	Annual Recurring Cost
Expenses		
Cross Connection Survey Database Creation	\$5,000	-
Backflow Prevention and Cross Connection Database Software Support <i>(Annual Subscription)</i>	-	\$600
Backflow Prevention Program By-law Compliance Officer (0.5 FTE) **	-	54,000
Print Costs <i>(Tester Tags)</i>	-	900
Advertisement	5,000 Implementation of By-law notices in Newspaper and Mail Outs at program onset.	- Annual notices for testing reminders are included in the Annual Subscription.
Total Expenses (rounded)	\$10,000	\$55,500
Total Revenue (at program maturity)	N/A	\$52,000 ***

The above noted costs and revenues are incurred solely by the County.

- * The costs outlined in the Implementation Costs (one time) column are already provisioned for in the approved 2023 Budget and will not require further cost recovery.
- ** The 0.5 FTE is already provisioned within existing staffing resources.
- *** Assumes minimum of 2,500 properties, 1 backflow prevention device requirement per property.

If enacted, the BPP would appropriately remove the cost burden of backflow protection from residential homeowners (rate payers) who are not posing a hazard to the municipal drinking water system and place that onus, cost and responsibility on certain ICI and Multi-residential customers that are connected to the municipal water distribution system and posing the potential risk to the safety of the drinking water.

Communications







Public consultation on the proposed backflow prevention by-law was undertaken through a range of tools to seek feedback from Oxford’s various communities and demographics as follows:

- **Speak Up, Oxford!:** This served as an engagement hub for consultation. The project web page was published in December 2022, with 743 total visits since its inception.
- **Project Awareness Mail Outs:** A project awareness sheet was mailed out via water bill inserts (physical and digital) to commercial, industrial, and institutional properties directing them to the project feedback page.
- **Public Consultation Centres:** Eight in person public consultation centres were hosted throughout Oxford County - one in each area municipality. A total of fourteen people attended the PCCs. For those unable to attend an in person event, a digital recording of the PCC presentation was available on the project page.
- **Print Advertising:** For audiences that prefer to receive news through newspapers and community publications, information on how to provide input as well as where to attend PCCs was outlined in 6 print ads and public notices between January 12, 2023 and March 9, 2023. These notifications were circulated in the Norfolk-Tillsonburg News, Woodstock Sentinel Review, Ayr News and Tavistock Gazette.
- **Social Media:** Social media included organic posts throughout the consultation period and promoted (paid) campaigns for changes in scheduling due to inclement weather.

Speak Up, Oxford! will continue to serve as an engagement hub leading up to the enactment of the backflow prevention by-law and will include public notices and news releases, presentations, question forum, Council reports and project contact information. When the by-law is enacted the content will be migrated to the Oxford County website www.oxfordcounty.ca/backflow.

Report No. PW 2023-29, along with any potential amendments, will be circulated to all of the County’s Area Municipalities for information.

Strategic Plan (2020-2022)

					
WORKS WELL TOGETHER	WELL CONNECTED	SHAPES THE FUTURE	INFORMS & ENGAGES	PERFORMS & DELIVERS	POSITIVE IMPACT
1.i. 1.ii.		3.ii. 3.iii.	4.ii.	5.i. 5.ii.	

DISCUSSION

Background

As a municipal authority of 17 municipal drinking water systems, Oxford County is responsible for upholding the Statutory Standard of Care when exercising any decision that can impact the quality of their communities' drinking water. To date, nearly 60 municipalities across Ontario have already implemented BPPs and associated by-laws to further the multi-barrier approach used to protect our municipal drinking water supply.

If approved, the BPP will help the County ensure that minimum requirements for annual inspections, maintenance, reporting and auditing of BPDs are followed. The proposed BPP and by-law also ensures that best practices related to the selection, purchase, installation, inspection and maintenance of BPD systems are appropriately carried out by property owners (at their expense) in order to further safeguard the municipal drinking water system.

Recognizing the importance of this program, which was previously detailed in Report No. PW 2022-35, Council authorized staff to undertake public consultation with stakeholders to solicit feedback on the draft BPP and by-law. As part of this report, staff were directed to report back to Council with the findings of the public consultation and provide final policy recommendations for consideration.

Comments

Public Consultation Campaign

The County undertook a public consultation campaign for the draft BPP from January to April, 2023. Through this campaign, a number of outreach efforts were made, including various social media and advertising initiatives and direct stakeholder contact by telephone, mail and/or email.

The purpose of the consultation process was to ensure that the proposed BPP was communicated to key stakeholders and to gather feedback from affected businesses, Area Municipalities, qualified persons and other stakeholders. The number of contacts made in this regard is summarized in Table 3.

Table 3 - Summary of Public Consultation Contacts

Contacts	Total Contacts
ICI Customers	37
Area Municipalities	23
Chambers of Commerce – BIA	11
Tradespeople	28
Mail Outs Sent to ICI addresses	1,700 (approx.)

Outreach Efforts

With the assistance of the County's Strategic Communications division, a number of outreach efforts were made consisting of a social media campaign, mail-outs and direct contacts with stakeholders. These efforts are summarized below.

Social Media Campaign

The social media efforts consisted of a news release, website posting (*Speak up, Oxford!*), social media postings, and newspaper ads as follows:

A Summary Report from *SUO!* indicated 743 total web page visits, with up to 40 visits per day at the height of the PCC period. Documents from the page were downloaded 132 times. The full *SUO!* summary is included in Attachment 2.

Direct Contact with Stakeholders

A stakeholder contact list was created to track interested persons, who will then be consulted during the progression of the program's implementation. The intent of these efforts was to generate awareness and communicate the proposed BPP to all stakeholders as well as receive feedback. The following stakeholders were solicited directly for feedback through staff outreach:

- All large water users (over 5,000 m³/year);
- Area Municipality Councils;
- Business Improvement Area offices of Woodstock, Tillsonburg, Ingersoll, Rural Oxford, and Thamesford;
- Chambers of Commerce of Norwich, Tavistock, Ingersoll and Woodstock;
- Local Area Plumbers and Backflow Testers from surrounding municipalities; and
- Building Officials for each Area Municipality.

Key Findings

Feedback received from the public consultation was generally positive in nature and supportive of the proposed by-law. Overall, stakeholders seemed to understand and approve of the need to protect the municipal drinking water system from contamination that can be introduced under backflow conditions. A letter of support for County-wide implementation of the user fee based BPP was also received from the Town of Tillsonburg as shown in Attachment 3.

A summary of the most common questions and comments received during the public consultation campaign is detailed in Table 4.

Table 4 – Summary of Questions and Comments

Question	Answer
1. Who will be impacted by the by-law?	Only ICI and multi-residential properties classified as moderate or severe hazards (as per the CSA B64 Standard definition of hazards) are affected.
2. Where are BPDs located?	Premise isolation BPDs are required after the water meter before any plumbing junctions. A BPD is also required to separate any water provided to customers or employees from any non-potable water.
3. Who will be responsible for performing BPD testing?	The tests will be completed by qualified third party testers registered with the County and in good standing. Qualified testers would be verified by confirming they have a valid licence certificate and that the tester remains in good standing.
4. How will the County ensure BPP requirements are communicated during the Ontario Building Code process to ensure occupancy is not held up by BPP requirements?	A County procedure will be drafted and circulated to Area Municipalities requiring CBOs to submit development applications to the Backflow Prevention By-law Compliance Officer to ensure BPDs are tested and tagged before occupancy is approved.
5. Will there be a gap in protection between the City of Woodstock backflow policy ending and implementation of the County of Oxford BPP?	The City of Woodstock does not exercise a formal backflow prevention policy; rather they perform annual testing and inspection of ~ 1000 BPDs across Woodstock. These devices will be added to the consolidated Countywide system BPD database during implementation to ensure no gap in record keeping or annual testing/inspection.
6. Will the program still be free for businesses in the City of Woodstock?	<p>The current testing provided by the City of Woodstock is not free, but rather is covered at a cost through water rates to the users of the Woodstock water system (ratepayers) in order to fund City operations to carry out this service under contract to, and on behalf of, Oxford County.</p> <p>The new BPP will use a user pay model that ensures the program costs are covered by the ICI and multi-residential property owners that introduce potential moderate or severe risk to the safety of the County's municipal drinking water system.</p>
7. Will the City of Woodstock staff that are currently Backflow Prevention Testers be able to be registered testers and continue performing this service in the City limits?	<p>All ICI and multi-residential testing will be performed by third party contractors procured by the Property Owner. This ensures that municipal water operator staff time, which is funded by ratepayers, is not used to administer the BPP. This keeps the BPP in a 100% user pay model.</p> <p>The County and all Area Municipalities will utilize qualified independent accredited testers to test municipally owned devices, as this is the most cost efficient and consistent operational approach.</p>

The County reviewed, considered and responded to all received feedback during the public consultation campaign. Through the public consultation campaign, it was evident that the public and local businesses recognize the importance of protecting our drinking water resources and infrastructure. No direct revisions to the draft by-law were submitted during the consultation process.

All requests for consideration that could result in an amendment to the by-law were considered and it was determined that they could be addressed without revision to the by-law as previously documented in Attachment 2 of Report No. PW 2022-35.

BPP Policy Recommendations

Backflow and cross-connection events can significantly impact residents, businesses and the environment by deteriorating the water quality, posing a health risk to consumers and causing service disruptions. A robust BPP will further protect the municipal drinking water system from potential contamination during backflow events and is a benefit to all residents and businesses in Oxford County.

The proposed BPP and by-law has incorporated the standards for BPDs and hazard ratings utilized in the CSA B64 series. It compliments existing regulations and best management practices by providing clear language concerning compliance and enforcement for device installation, testing and maintenance.

It is recommended that County Council accept the proposed by-law and program and become one of the near 60 Ontario municipalities that have added a BPP to their multi-barrier approach for protecting their community's drinking water supply from source to tap.

Conclusions

Implementation of a County-wide BPP, through the enactment of By-law No. 6544-2023, will appropriately remove the cost burden of backflow protection from residential homeowners (ratepayers) who are not posing a hazard to the municipal drinking water system and place that onus, cost and responsibility on certain ICI and Multi-residential customers that are connected to the municipal water distribution system and posing the potential risk to the safety of the drinking water.

SIGNATURES

Report Author:

Original signed by

Scott Alexander, RMI
By-law Compliance Officer, Backflow Prevention and Source Water Protection

Departmental Approval:

Original signed by

David Simpson, P.Eng., PMP
Director of Public Works

Approved for submission:

Original signed by

Benjamin R. Addley
Chief Administrative Officer

ATTACHMENTS

Attachment 1: Implementation Plan
Attachment 2: Summary Report - Speak-Up Oxford!
Attachment 3: County Backflow Prevention Program Letter of Support, Town of Tillsonburg