3. BACKFLOW PREVENTION PROGRAM – IMPLEMENTATION UPDATE

PROGRAMME DE PRÉVENTION DES REFOULEMENTS – COMPTE RENDU SUR LA MISE EN ŒUVRE

COMMITTEE RECOMMENDATIONS

That Council:

1. **Approve the Backflow Prevention Program Requirements and Implementation Plan as outlined within this report.**

2. **Approve an amendment to the Water By-law 2013-360 to add Schedule "G" – Backflow Prevention Program, attached as Document 1 including, any required consequential amendments to the main By-law provisions with an in force date of January 1, 2018.**

RECOMMANDATIONS DU COMITÉ

Que le Conseil :

1. **approuve les exigences et le plan de mise en œuvre du Programme de prévention des refoulements selon les modalités exposées dans le présent rapport;**

2. **approuve une modification à apporter au Règlement municipal sur l'eau 2013-360 afin d'y ajouter l'annexe G (Programme de prévention des refoulements) reproduite ci-joint dans l'annexe 1, ainsi que toutes les modifications consécutives obligatoires à apporter aux dispositions principales du Règlement pour qu'elles entrent en vigueur le 1er janvier 2018.**

DOCUMENTATION/DOCUMENTATION

1. Manager's Report, Technology, Innovation and Engineering Support Services, dated 13 June 2017 (ACS2017-PWE-GEN-0007)

   Rapport du Gestionnaire Services de soutien en technologie, en innovation et en génie, daté le 13 juin 2017 (ACS2017-PWE-GEN-0007)

Report to
Rapport au:

Environment and Climate Protection Committee
Comité de l'environnement et de la protection climatique
20 June 2017 / 20 juin 2017

and Council
et au Conseil
28 June 2017 / 28 juin 2017

Submitted on June 13, 2017
Soumis le 13 juin 2017

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Ward: CITY WIDE / À L'ÉCHELLE DE LA VILLE

File Number: ACS2017-PWE-GEN-0007

SUBJECT: Backflow Prevention Program – Implementation Update

OBJET: Programme de prévention des refoulements – Compte rendu sur la mise en œuvre

REPORT RECOMMENDATIONS

That the Environment and Climate Protection Committee recommend that Council:

1. **Approve the Backflow Prevention Program Requirements and Implementation Plan as outlined within this report.**
2. **Approve an amendment to the Water By-law 2013-360 to add Schedule "G" – Backflow Prevention Program, attached as Document 1 including, any required consequential amendments to the main By-law provisions with an in force date of January 1, 2018.**

RECOMMANDATIONS DU RAPPORT

Que le Comité de l'environnement et de la protection climatique recommande que le Conseil :

1. **approuve les exigences et le plan de mise en œuvre du Programme de prévention des refoulements selon les modalités exposées dans le présent rapport;**
2. **approuve une modification à apporter au Règlement municipal sur l'eau 2013-360 afin d'y ajouter l'annexe G (Programme de prévention des refoulements) reproduite ci-joint dans l'annexe 1, ainsi que toutes les modifications consécutives obligatoires à apporter aux dispositions principales du Règlement pour qu'elles entrent en vigueur le 1er janvier 2018.**

EXECUTIVE SUMMARY

Through water testing and monitoring, and the implementation of programs and regulations, the City of Ottawa delivers safe drinking water to residents, businesses and visitors. To further safeguard drinking water quality, in October 2015, Council approved the development of a Backflow Prevention Program. This program aims to protect drinking water quality by ensuring the appropriate installation and inspection of devices that would prevent water from flowing back into the system, thereby reducing the likelihood of contamination. This program is primarily focused on preventing backflow events from industrial, commercial, institutional and some multi-residential buildings.

While past backflow incidents have not compromised the drinking water system, they do highlight the City's vulnerability to these events and the need for diligence and oversight to protect Ottawa's drinking water. Protection of drinking water through a backflow prevention program was recommended in reports by the City's Auditor General (2005 and 2009) and are reflected in provincial regulations (Guidelines developed by the Ministry of Environmental and Climate Change and the Ontario Building Code).

The purpose of this report is to seek Council approval of the Backflow Prevention Program requirements and implementation plan, as well as corresponding changes to the Water By-law.

After meeting with property owners and recognizing the need to balance implementation costs with the protection of safe drinking water, staff recommend a 10-year implementation plan, focusing first on ensuring compliance by buildings that pose a severe risk, followed by those that present a moderate hazard. Between 2017 and 2027, based on severity of the hazard, all affected property owners would be required to:

- Conduct site surveys every five years to identify risks and report backflow prevention requirements to the City for review.
- Install premise isolation backflow devices to prevent contaminants from entering the City's water supply.
- Test backflow devices every year to make sure that they are functioning properly and submit the test results to the City for review.

To aid some property owners in complying with the program, staff are also seeking the delegated authority to adjust program requirements and timelines as necessary when these owners can demonstrate progress towards achieving compliance. Staff will also provide support through information on the City's website, future consultation and open dialogue with affected stakeholders, and a comprehensive outreach and communications plan.

The implementation plan and requirements of the Backflow Prevention Program, as well as the corresponding changes to the Water By-Law, reflect feedback provided by

affected property owners through staff's ongoing consultation activities, industry best practices as well as a review of similar programs in other municipalities.

Assumption and Analysis

The 2016 Risk Assessment for Water Distribution shows that backflow incidents are considered a Critical Control Point (CCP) because they are a high ranking risk (12)[1] and because they can be prevented or reduced by applying preventive or control measures.

The purpose of a Backflow Prevention Program is to:

- Protect Ottawa's drinking water system and reduce public health risks
- Demonstrate due diligence and regulatory compliance
- Align the City with current best practices for drinking water systems in Ontario

Financial Implications

The cost to the City of Ottawa to deliver the program is estimated to be $3.01 million over 11 years, subject to annual inflationary increases. On average, it will cost approximately $274,034 per year to administer and enforce the requirements of the program. Initial program implementation operational budget funding was approved through the 2017 budget. The program is designed to be 100 per cent cost-recoverable through the collection of a $53 administration fee per survey and/or test submission**.** The administration fee will be applied when property owners of buildings that pose a severe or moderate backflow risk submit: site surveys and test results.

City-owned and operated facilities will be required to comply with the program by 2027, following the same schedule based on the severity the hazard each facility poses to safe drinking water. This will impact approximately 539 City-owned and operated facilities. Costs (capital or operating) associated with compliance and the program will be included in future annual budgets as required for Council consideration.

[1] The risk assessment is based on the Hazard Analysis and Critical Control Point (HACCP) principles, adapted for the City's water systems and focusing on impacts to water quality.

Public Consultation/Input

Public Works and Environmental Services undertook stakeholder consultations in February 2016. Two public consultations sessions were held in March of 2016, and staff followed-up each of the sessions with an online survey. Additional meetings to discuss the program requirements and implementation plan were held with the Building Owners and Managers Association (BOMA), Ottawa Community Housing Corporation, City of Ottawa internal stakeholders and the Institutional Working Group (IWG), which is a departmental-lead group that is comprised of representatives from local hospitals, universities and school boards. In an effort to maintain an on-going dialogue with key stakeholders that were consulted, staff also created a Backflow Prevention Program website and email account (backflow@ottawa.ca) to share additional information and answer stakeholder questions.

Key issues raised from these consultation sessions focused on implementation timelines, qualifications for surveyors, installers and testers and questions related to general program requirements. On-going feedback has been invaluable to the development of the program requirements and implementation plan, both of which address the key concerns that were raised by stakeholders.

With the 10-year implementation plan and delegated authority to adjust requirements and timelines, among other elements outlined within this report, staff have developed a Backflow Prevention Program that balances the risk of backflow incidents on the City's drinking water system with the financial impact on impacted stakeholders.

BACKGROUND

Safe drinking water is a vital resource. The City of Ottawa and its property owner stakeholders have a communal interest in the protection of the municipal drinking water system. Investment in this shared water resource is essential to continue to deliver safe, clean drinking water to the City's residents, businesses and visitors. A key element to this continued success is the development of a Backflow Prevention Program where both the City and industrial, institutional, commercial and select multi-residential property owners share the responsibility of preventing contaminants from entering the public drinking water system by adhering to the program requirements outlined within this report.

In October 2015, Council approved the development of a Backflow Prevention Program. This program aims to protect drinking water quality by ensuring the appropriate installation and inspection of devices that would prevent water from flowing back into the system, thereby reducing the likelihood of contamination. This program is primarily focused on preventing backflow events from industrial, commercial, institutional and some multi-residential buildings.

Although infrequent, backflow incidents pose a risk to public health. While past backflow incidents have not compromised the drinking water system, they do highlight the City's vulnerability to these events and the need for diligence and oversight to protect Ottawa's drinking water. Protection of drinking water through a backflow prevention program was recommended in reports by the City's Auditor General (2005 and 2009) and are reflected in provincial regulations (Ministry of Environment and Climate Change and Ontario Building Code).

The development of a Backflow Prevention Program also forms part of an action item of the 2014 Drinking Water Quality Management Standards Annual Report (ACS2015-COS-ESD-0017) and the Auditor General's recommendation in both 2005 and 2009 that the City implement a Backflow Prevention Program.

Staff have been working towards implementing a Backflow Prevention Program that compliments the 2012 changes to the Ontario Building Code and satisfies the recommendations of the MOECC and Auditor General. The City's Backflow Prevention Program will apply the requirements outlined in this report to all buildings, including those that were built before the Building Code amendments. This comprehensive approach is needed to address all potential hazards and protect the drinking water supply.

Staff have worked closely with internal and external stakeholders to develop program details and requirements that balance the costs to property owners while protecting the City's drinking water supply from contaminants. These details and the necessary by-law amendments to monitor and enforce the program requirements are outlined within this report.

DISCUSSION

The program requirements and proposed by-law amendments provided in this report demonstrate the outcomes of on-going dialogue between staff and affected property owners in regards to developing a backflow prevention program that balances the need to safeguard the City's water system with both financial and non-financial impacts to property owners, all while ensuring compliance to the program is realized and achieved within a timely manner.

The purpose of the program is to:

- Protect Ottawa's drinking water system and reduce public health risks
- Demonstrate due diligence and regulatory compliance
- Align the City with current best practices for drinking water systems in Ontario

In an effort to develop a program that takes into consideration the impacts on its key stakeholders, the Public Works and Environmental Services department has worked closely with and sought feedback from industrial, institutional, commercial and select multi-residential property owners, gathered lessons-learned from municipalities that currently have similar programs, and developed a communications plan to enhance information sharing and support affected stakeholders.

The Backflow Prevention Program includes the following elements:

- Program Requirements
- Implementation Plan
- List of Qualified Persons
- Program Delivery and Administration
- Program Costs
- Monitoring and Enforcement

Backflow Prevention Requirements

The standards for backflow prevention are established in the Canadian Standards Association (CSA) *Manual for the Selection and Installation of Backflow*

Preventers/Maintenance and Field Testing of Backflow Preventers (CSA B64.10 or most current version) and Ontario Building Code 2012 or most current version. Ottawa's Backflow Prevention Program will align with these CSA standards and Ontario Building Code.

The standards identify severe, moderate and minor hazards to drinking water systems. The City's program will address properties in the severe[2] and moderate[3] hazard categories. This approach is consistent with other municipal backflow programs.

Industrial, commercial, institutional and select multi-residential buildings that are a severe or moderate risk for contamination from backflow incidents will be required to comply with the program requirements. Table 1 lists the type and approximate number of accounts that will be impacted by the program based on information from the City's Water Billing System.

Table 1: Backflow Prevention Program Participants

Risk/Hazard Rating	**Property Type Examples**	**Number of Accounts[4]**
Severe	Manufacturing, automotive, hospital	815
Moderate-severe	Farm, funeral home, university	154
Moderate	Apartment building, office, restaurant	14,164
Minor-moderate	Commercial premise, places of worship	341
Total		**15,474**

The program will address moderate risks from multi-residential buildings that are over three stories or have a footprint over 600 m^2 (or 6,458 ft^2). Low density residential properties are deemed to be a minor risk and will not be included in the program.

[2] Severe hazard: any type of cross connection or potential cross-connection involving water that has additives or substances that, under any concentration, can create a danger to health (CSA B64.10).
[3] Moderate hazard: any minor hazard connection that has a low probability of becoming a severe hazard (CSA B64.10).
[4] Estimates are based on information from the City's Water Billing System, and include City facilities.

Program requirements for severe and moderate risk properties are summarized below:

1. **Site survey**: properties connected to the City's water system will be surveyed every five years to identify risks and confirm backflow prevention requirements.
2. **Backflow device installation**: a premise backflow device will be installed on a water service to prevent contaminants from entering the City's water supply.
3. **Annual testing**: backflow devices will be tested every year to make sure they are functioning properly. Test results will be submitted to the City for review.

Document 2 provides additional detail on the site survey building analysis, backflow device installation and testing requirements for the City, property owners and testers. Property owners are responsible for the costs associated with the program requirements.

Implementation Plan

The proposed implementation plan establishes timelines for these property owners to complete site surveys, install backflow prevention devices, and undertake annual testing as outlined above.

Implementation timing was a key concern raised during stakeholder consultation. Stakeholders were asked to comment on the then-proposed four-year implementation timeline from 2017 to 2020. The majority of internal and external stakeholders advised that there is not enough industry capacity to conduct site surveys and device installations or enough City resources to meet this timeframe. Some property owners also indicated that they would need additional time to plan and budget for this work.

Other municipal backflow prevention programs were reviewed to benefit from their experience and apply lessons learned to Ottawa's new program. The research focused on implementation timelines, backflow device requirements, administrative processes and approaches to enforcement and compliance. The implementation timelines range from nine to 20 years in the other municipalities that were reviewed.

A 10-year implementation plan is proposed to provide impacted stakeholders with adequate time to plan and budget for the implementation of backflow devices while mitigating risk to the drinking water system and learning from the challenges identified by other municipalities. Document 3 presents the proposed timelines that seek to

address severe risks by 2020 and moderate risks by 2025. The final two years of the plan will focus on any outstanding compliance issues, so all risks are addressed by 2027. This plan follows a risk based approach to balance implementation constraints with the need to address backflow risks to the City's water supply in a timely and responsible manner.

Qualified Persons

The Backflow Prevention Program will require that property owners ensure site surveys, backflow device installations and testing be completed by persons who have the necessary qualifications and training. Acceptable qualifications are established in the CSA B64.10 standards. The Ontario Building Code also establishes requirements for the selection and installation of backflow devices for new construction or changes in use. These requirements will be applied to the installation of devices in existing buildings, as prescribed by the site survey.

Document 4 describes how these requirements will be applied to the City's Backflow Prevention Program and outlines the steps surveyors, installers and testers must take in order to submit information on their qualifications and training to the City. Testers will also be required to submit testing equipment calibration results. This will allow staff to verify that qualified persons are completing the necessary work to install backflow devices.

The City recognizes that industry capacity to complete this work needs to be considered. In an effort to support impacted property owners, the City will communicate the required qualifications and direct property owners to existing resources that maintain a list of certified testers, such as the Ontario Water Works Association and the Professional Engineers of Ontario. The City will not maintain a list of qualified persons.

Program Delivery, Administration and Costs

Roles and responsibilities to deliver the Backflow Prevention Program are illustrated in the process diagram in Document 5 and summarized below:

- Public Works and Environmental Services (PWES) will oversee program administration, provide information and outreach, review site surveys and backflow device test results, and conduct compliance audits.

- Building Code Services will issue permits for backflow and inspect the device installations.
- Revenue Service will provide property and water billing account data.
- Finance will administer fees on behalf of the City.

In order to effectively track qualified persons and installations taking place within the implementation timeline, technical solution is deemed to be of value in order to successfully administer the program and provide timely information to impact property owners who are required to meet the City's timelines.

The technical requirements are listed in Document 5, and are summarized below:

- Operate and maintain an online application and database that can be accessed by owners, testers and the City via the internet using a variety of devices.
- Manage information on site surveys, backflow device installations and annual testing, as well as the qualifications of testers and their equipment.
- Communicate program requirements to property owners and backflow device testers through the online database and notification letters.
- Administer the payment of site survey and test fees.

Public Works and Environmental Services staff have reviewed several technical solution options and conducted market research. Based on this analysis and research, the City will enter into an agreement with an external service provider for a hosted technical solution. This is the lowest cost option, which has been accounted for within the operating costs of the program, and can meet the implementation timelines.

Program Costs

As per approved of the 2015 report, Council has directed that the Backflow Prevention Program be cost recoverable. Program administration costs include communications and outreach, backflow device management, licensing and training costs. The cost to deliver the program is estimated to be $3.01 million over 11 years. On average, it will cost approximately $274,034 per year to be recovered through program fees.

In order to recover costs and to support the administration of the Backflow Prevention Program, the City will establish a $33 Backflow Prevention Program fee (subject to annual inflationary increases) for review of site surveys and store backflow test results. It is anticipated that an additional $20 fee will be imposed by the external service provider that will offer the technical solution to support the program, which amounts to an estimated combined fee of $53 per site survey and test result. Building Code Services administration costs will be recovered separately through the minimum $80 building permit fee.

Although the City and the Province are not able to offer any financial assistance to property owners for the program fees, the City is partnering with local businesses and institutions to make a long-term investment in our shared-water resources. Local business and institutions will benefit as participants in the Backflow Prevention Program by reducing their liability for backflow incidents; thereby, protecting themselves from potential financial costs – as well as reputational risks – in the future.

As the owner of severe and moderate risk buildings, some City departments and agencies will incur costs to bring City facilities into compliance with the program. These costs are not included in the program administration costs. The costs to Public Works and Environmental Services, Recreation, Cultural and Facility Services and Transportation Services to install and test devices in their facilities were estimated to be $3 million in the October 2015 report to Committee and Council and will be included in the future budget processes.

Communications and Outreach

As outlined by Environment Committee members in 2015, consultation and communications are an important part of the Backflow Prevention Program, and staff have been working with their partners in Public Information and Media Relations to develop a Consultation and Communications Plan that will guide communications and outreach efforts during the program implementation, starting in late 2017. The key objectives are highlighted below:

- Raise public awareness about the program and the need to safeguard our drinking water supply.

- Inform industrial, commercial, institutional and select multi-residential property owners about the program requirements and encourage them to comply.
- Inform qualified persons, including plumbers, engineers and other industry trades people and professionals about their roles and responsibilities under the program.

Information on the City's website will be updated and the backflow prevention email address will remain available for all stakeholder to use.

Enforcement and Compliance

As the City is committed to working with impacted property owners to support investments that protect Ottawa's drinking water, the City's approach to compliance will focus on efforts to inform property owners of their responsibilities under the Backflow Prevention Program. These outreach efforts will also stress the importance of addressing risks to the City's water supply in order to protect the system and reduce public health risk.

One of the recommendations before Council within this report is to amend the *Water By-law* in order to allow staff the flexibility to engage and collaborate with businesses that are working towards complying with the requirements as set-out in the Backflow Prevention Program to adjust timelines or other program requirements if it is determined that the impacted property owner is making every attempt to achieve compliance. This was a main concern from stakeholders during consultation and one of the most important elements to the long term success of the program.

While the City's first step will be to work with impact property owners, there may be instances where the City must follow a progressive approach to enforcement as currently outlined in the *Water By-law*, starting with fines and ultimately shutting off the water as a last resort.

Sections 31 and 32 of the *Water By-law* currently prohibit backflow from private water services into the City's distribution system and authorize the City to require the installation of a backflow prevention device. Section 33 authorizes the City to shut off the water supply if backflow is known to be occurring.

If an inspection of a property subject to the program reveals that the owner has not complied with the program requirements, a notice of violation will be issued to the property owner. Upon receipt of the notice, the owner will have 30 days to have the required site survey, device installation or testing completed and file all necessary documentation.

If the owner has not complied at the end of the 30-day period, enforcement staff may take the following enforcement actions:

1. Charge the owner under the Provincial Offences Act. If convicted the owner would be liable for a fine ranging from $500 to $100,000 for each day that the offence continues, in accordance with the current *Water By-law* provisions.

2. Shut off the water supply to the property until the owner complies with the program.

The *Water By-law* will be amended as required to support the implementation of the Backflow Prevention Program as outlined in this report. The proposed amendments include the establishment of set fines to address compliance issues and increased fines in response to backflow incidents as well as the requisite delegate authority allowing staff to make adjustments to the application of the program requirements; most notably, to alter compliance timelines and qualifications and to consider alternate solutions on a case-by-case basis if backflow objectives are being met.

Conclusion

Having conducted extensive stakeholder consultation, industry best practice research and analysis of existing programs in other municipalities, the City is now in a position to implement a Backflow Prevention Program that will protect Ottawa's drinking water from backflow incidents. The City will continue to work collaboratively with impacted property owners to support their compliance with the program requirements and timelines.

RURAL IMPLICATIONS

Property owners of industrial, commercial, institutional and some multi-residential buildings in rural areas will be impacted by the program if they are connected to the City's drinking water communal well system.

CONSULTATION

In February of 2016, staff launched a public consultation for the Backflow Prevention Program in accordance with the consultation strategy that was approved by Council in the 2015 report. The first step of the consultation was to create a Backflow Prevention Program website and email account (backflow@ottawa.ca) to facilitate an on-going dialogue throughout the consultation process.

Staff then developed a program proposal that they presented to stakeholders at two consultation sessions, which were held on March 8 and 10, 2016. Property owners, industry representatives and other stakeholders were notified about the consultation via a public service announcement, advertisements, social media and the City's website. An invitation was sent via email to approximately 1,000 property owners.

There were 134 participants in attendance at these sessions. Participants included representatives from Ottawa Community Housing (OCH), Building Owners and Managers Association (BOMA), Eastern Ontario Landlord Association (EOLA), federal government, schools and universities, hospitals, property managers, shopping malls, City staff, BPP installers, engineers and property owners.

As a follow-up to the consultation sessions, staff distributed a survey to ensure that property owners had a variety of outlets to solicit their feedback on the proposed program details to City staff. Twelve written submissions and completed surveys were received. The key issues raised during the consultation focused on implementation timelines, qualifications for surveyors, installers and testers and questions related to the program requirements.

Since consultation began in 2016, there have been over 2,900 visits to the Backflow Prevention Program web page, including over 2,300 unique visitors – driven largely by online newspaper and social media. Staff have provided two formal communications to stakeholders, providing them with updates to the program in summer 2016 and once again in spring 2017. They have also set-up additional meetings upon request from organizations to address specific questions and concerns. For example, City staff met with internal stakeholders – from PWED and RFCS and Transportation Services – on March 24, 2016 to get their feedback on the program.

Staff have maintained an open dialogue with stakeholders throughout the program's development. Document 6 provides additional details on the consultation and the feedback that was received from internal and external stakeholders.

COMMENTS BY THE WARD COUNCILLOR(S)

This is a City-wide issue.

LEGAL IMPLICATIONS

There are no legal impediments associated with Committee and City Council's receipt and approval of this report.

RISK MANAGEMENT IMPLICATIONS

Risks have been identified and explained in the report and are being managed by the appropriate staff.

ASSET MANAGEMENT IMPLICATIONS

The recommendations documented in this report are consistent with the City's Comprehensive Asset Management (CAM) Program (City of Ottawa Comprehensive Asset Management Program) objectives. The implementation of the CAM program results in timely decisions that minimize lifecycle costs and ensure the long-term affordability of assets. To fulfill its obligation to deliver quality services to the community, the City must ensure that assets supporting City services are managed in a way that balances service levels, risk and affordability.

The implementation of the Backflow Prevention Program, as described in this report, protects Ottawa's drinking water system and reduces public health risks. The multiyear phased approach and alignment with current practices in Ontario supports a forward looking approach to meet future challenges, including legislative requirements and environmental factors. By concentrating on 'severe' and then 'moderate' risk facilities, risks are managed by focusing on resources, expenditures and priorities while recognizing public safety is a priority.

FINANCIAL IMPLICATIONS

Initial program implementation operating budget funding was approved through the 2017 annual budget process, including compensation funding for 1.5 positions to implement the program. Any additional costs that may be required throughout the duration of the program will be put forward as part of future budget processes. The program is set up to be 100 per cent cost recoverable through the collection of a $53 administration fee, subject to annual inflationary increases.

The costs to Public Works and Environmental Services, Recreation, Cultural and Facility Services and Transportation Services to install and test devices in their facilities were estimated to be $3 million in the October 2015 report to Committee and Council and will be included in the future budget processes as required.

ACCESSIBILITY IMPACTS

The Backflow Prevention Program information and communications materials will comply with the *Accessibility for Ontarians with Disabilities Act*. There are no other accessibility implications associated with this report.

ENVIRONMENTAL IMPLICATIONS

The Backflow Prevention Program will protect the City's drinking water quality and reduce public health risks. Implementing this program will address recommendations made by the City Auditor General and the MOECC, demonstrating due diligence and legal compliance. Implementation will also align the City with current best practices for drinking water systems.

TECHNOLOGY IMPLICATIONS

Information Technology Services has worked in consultation with Public Works and Environmental Services to explore and document technical requirements and identify solution options to support this program. A summary of the technology options are as follows:

1. Purchase and deploy an online externally-hosted solution;
2. Develop an in-house custom solution that would integrate existing technologies, including Maximo, 311, and Smartguide;

3. Incorporate into the Water Billing project – technology solution not yet deployed in order to be considered for other program requirements and customizations

Public Works and Environmental Services has selected the hosted solution as their preferred approach. Information Technology Services staff has suggested that Public Works and Environmental Services pursue this option as a starting point for implementing the program with a planned review by Q1 2019 to re-evaluate possible synergies through integration with the new water billing system.

Challenges associated with external solutions are ensuring bilingual, security, and accessibility requirements are managed through the procurement process and that the final solution is compliant. Information Technology Services staff will work closely with Public Works and Environmental Services staff to ensure all technical requirements are met, and that future integrations and capabilities are considered through the procurement.

TERM OF COUNCIL PRIORITIES

The recommendations of this report support the 2015-2018 Term of Council Priority of Sustainable Environmental Services: ES1 – Support an environmentally sustainable Ottawa.

SUPPORTING DOCUMENTATION

(Previously distributed to all members of Council and held on file with the City Clerk.)

Document 1: Schedule "G" – Backflow Prevention Program

Document 2: Backflow Prevention Program Requirements

Document 3: Backflow Prevention Program Implementation Plan

Document 4: Backflow Prevention Program Qualified Persons

Document 5: Backflow Prevention Program Delivery

Document 6: Backflow Prevention Program Consultation Summary

DISPOSITION

Public Works and Environmental Services will work with City departments to implement the Backflow Prevention Program as described within this report, including the procurement process for the technical solution and the required Water By-law amendments.

Public Works and Environmental Services will provide an update to the Environment and Climate Protection Committee once during each term of Council until the program objectives are complete.