

**CITY OF HAMILTON
PERFORMANCE AUDIT REPORT 2015-07
HAMILTON WATER – PROTECTIVE PLUMBING PROGRAM**

INTRODUCTION

The City of Hamilton experienced frequent and severe storms from 2004 – 2009 that resulted in overloading of segments of the wastewater collection system, sanitary backups and basement flooding. A total of \$4.85 million in compassionate grants was distributed to flood victims under the Residential Municipal Disaster Relief Assistance Program between July 2005 and August 2009. The heavy rain event which occurred on July 26, 2009 accounted for \$3.1 million or 65% of these compassionate grant payments.

In response to this heavy rain event, the compassionate grant program was adjusted to include the installation of a backwater valve for those properties that have experienced multiple basement flooding events. Homeowners who do not undertake corrective plumbing measures may be ineligible for compassionate grants made available in the future.

In October 2009, the City implemented the Protective Plumbing Program (3P) in an effort to reduce the need for compassionate grants, minimize the potential impact of severe weather events and support property owners affected by sanitary backups.

3P provides grants and loans up to \$2,000 each to residential property owners to undertake plumbing measures to protect their home from sewer backups. After a closed circuit television (CCTV) inspection is performed of the home's internal drainage system, the property owner may choose to install an approved backwater valve, install a new sump pump and pit (in conjunction with a backwater valve) and/or disconnect downspouts under this program. The property owner is reimbursed for required building permits in addition to the grant or loan.

The following chart summarizes the main requirements of the program and responsibilities of City staff, the property owner and the contractor:

Function	Responsibility of:		
	City Staff	Property Owner	Contractor
Provide program information and distribute forms.	✓		
Obtain written quotations from three contractors.		✓	
Complete forms and submit documents to the City.		✓	
Approve the 3P grant and/or loan amount.	✓		
Select a contractor to perform the improvements.		✓	
Obtain required building permits.		✓	✓
Perform CCTV inspection and recommend improvements.			✓
Select which eligible improvements will be performed.		✓	
Perform plumbing improvements.			✓
Perform inspection under the building permit.	✓		
Pay the contractor for work performed.		✓	
Approve and distribute 3P grant and/or loan payments.	✓		
Monitor compliance with program requirements.	✓		
Administer the program and maintain records.	✓		

The 3P program has evolved since it was first implemented in 2009. The following provides an overview of some of the more significant changes approved by Hamilton City Council:

- July 2011 – 3P was expanded to all residential property owners. Previously, only properties that experienced chronic sewer flooding were eligible to participate.
- July 2011 – The City introduced the Sewer Lateral Management Program and removed sewer lateral repairs from the list of eligible 3P improvements.
- January 2012 – The Hamilton building code was revised to make the installation of a backwater valve mandatory for all new residential homes.
- February 2013 – 3P was revised requiring property owners to submit three contractor quotations with their application, and basing the approved grant or loan amount on the lowest quote. Previously, quotes were not required and the property owner submitted the contractor's invoice for reimbursement.
- March 2013 – A Community Improvement Plan was created to expand the program to registered residential rental properties.

From October 1, 2009 to April 16, 2015, the City paid out \$15.2 million in 3P grants which includes improvement, CCTV inspection and permit costs. These grants funded the installation of 7,080 backwater valves and 35 sump pits, the disconnection of downspouts at 126 properties and the repair of three sewer laterals. In addition, the City distributed \$7,780 in 3P loans to five property owners for the same period of time.

Both 3P grant and loan availability continues to be subject to funding as approved by Hamilton City Council and may be discontinued at any time without notice.

On October 31, 2012, the General Issues Committee discussed 3P funding and requested that Audit Services conduct a value-for-money audit of the program. At that time, the recruitment for performance auditors was underway and Audit Services did not have the resources to carry out this request. Subsequently, this audit was included in the 2015-16 Performance Audit Work Plan approved by the Audit, Finance and Administration Committee on March 9, 2015.

AUDIT OBJECTIVES AND SCOPE

The purpose of this audit was to identify potential opportunities to achieve greater value for money and improve process efficiency, and evaluate the achievement of program objectives.

The audit included all completed 3P improvements undertaken through the grant program from January 1, 2014 to April 30, 2015. As required, Audit Services used more current or historical information to carry out specific audit procedures. In addition, some analyses focused on backwater valve installation only as this is the most popular 3P improvement.

METHODOLOGY

The work performed by Audit Services included:

- A. **Documenting 3P grant and loan processes** based on employee interviews and observations. Process descriptions include main activities such as assessing documentation; approving 3P grant and/or loan amounts; and preparing payments for disbursement.
- B. **Analyzing documentation for a sample of 3P grants to determine whether grants are assessed and paid according to stated program requirements.**

(Note – Audit Services analyzed 3P grants approved for payment from September 1, 2014 to April 30, 2015. No 3P loans were approved during this time period.)

- C. **Analyzing property level improvements to determine whether any properties received duplicate or multiple 3P grants** since the inception of the program.
- D. **Analyzing a sample of quotations where work was performed by select contractors to investigate whether one contractor provides quotes from different companies.**

(Note – Audit Services received an anonymous letter from a 3P grant recipient indicating that one contractor provided quotes from three different companies. To verify whether this practice was occurring, Audit Services analyzed quotes submitted for properties where work was completed by the contractor named in the letter, as well as three additional contractors previously identified by Hamilton Water as exhibiting similar behaviour.)

- E. **Analyzing 3P grant payments, backwater valve costs and CCTV inspection costs to determine whether the three quote requirement is generating competition and deriving greater value** for budgeted 3P funds.
- F. **Reviewing other municipalities' and regional governments' funding structures** of protective plumbing programs to compare and identify opportunities to generate additional value for money from budgeted 3P funds.
- G. **Calculating how long it took staff to process documentation for a sample of paid 3P grants and comparing to expected timelines** to determine how efficiently the City processes applications and payments.
- H. **Identifying opportunities to utilize resources (e.g. people, processes, systems) more efficiently** so that 3P grants and loans are approved and paid in accordance with program requirements in a timely manner at the lowest possible cost.
- I. **Calculating uptake of the program** amongst property owners with previous flood experience and those that installed a backwater valve as a proactive measure.
- J. **Calculating the number of properties that experienced at least one sewer lateral backup after a backwater valve was installed** as part of 3P to determine whether backwater valves have prevented future flooding.
- K. **Analyzing a sample of properties with a history of flooding and receipt of multiple compassionate grants to determine whether 3P has reduced the number of repeat recipients of the City's compassionate grant program.**

(Note – Property owners who have experienced multiple basement flooding events and refuse to undertake protective plumbing measures may be ineligible for future compassionate grants. In order to assess whether this direction was considered by management, Audit Services focused on properties impacted by heavy rain events and received more than two compassionate grant distributions that occurred after July 26, 2009.)

(Note – Risk Management oversees the compassionate grant program which is administered by the City's external adjuster. Neither Risk Management nor the external adjuster were able to provide Audit Services with a complete list of compassionate grants paid out from the July 26, 2009 heavy rain event to present. In comparison to compassionate grant payments contained in report PW11056c provided to the General Issues Committee on February 6, 2013, payment information for approximately \$1.6 million of compassionate grants was not readily available and was excluded from the data provided to Audit Services. The analysis performed by Audit Services was based upon the incomplete compassionate grant data received from Risk Management.)

- L. **Assessing whether program objectives are being achieved.**

FINDINGS

Compliance with Program Requirements

Overall, Hamilton Water is doing an excellent job verifying program requirements before 3P grants are approved and distributed to property owners. Audit Services was unable to identify significant violations that would indicate that 3P grants should not have been paid to property owners or that more than one grant was issued to a single property.

Audit Services identified the following opportunities to improve controls within the 3P process to reduce the potential risk of inappropriately assessing future grant and loan applications.

- Licensed contractors – From a sample of 25 grant files, Audit Services identified four instances where Hamilton Water accepted quotations from contractors that held inappropriate or expired licenses. Hamilton Water's current process of only verifying the licensing status of new and unfamiliar contractors is not adequately detecting contractors with expired licenses.
- Loan application assessment – From discussions with staff, it is unclear whether Hamilton Water verifies eligibility with program requirements or approves the loan application before loan documentation is sent to Finance. Only five loan applications have been processed since 3P commenced in 2009.
- Loan permit verification – From discussions with staff, Finance does not verify that the building permit is closed before issuing a loan payment. Finance requests that the property owner submit an inspection certification to confirm that the contractor's work was approved by a City inspector; however, no such inspection certificate exists.

Opportunities to Achieve Greater Value for Money

Hamilton City Council revised 3P in February 2013 requiring property owners to submit three contractor quotations with their application and basing the approved 3P grant or loan amount on the lowest submitted quote. The intent was to increase the long-term financial sustainability of the program and derive greater value from funds by ensuring that the cost of improvements was established through a competitive process without increasing the City's costs or risk.

The three quote requirement has been unsuccessful in driving down overall costs. On average, the City paid \$2,138 to each 3P participant from September 1, 2014 to April 30, 2015 for improvement, CCTV inspection and permit costs. This average payout is comparable to the maximum \$2,216 and \$2,220 grant reimbursements available during that period of time. The average 3P grant payment has remained at approximately 95% of the average maximum grant reimbursement since the three quote requirement was introduced. Before the three quote requirement came into effect, the average 3P grant payment was approximately 96% of the average maximum grant reimbursement. Therefore, improvement costs have not declined significantly and parallel the maximum funding provided by the City.

Lack of price variability may be attributable to collaboration amongst contractors. Audit Services observed trends which support the allegation that one contractor provided three quotes from three different companies during one visit with the property owner. For example:

- 42 of 50 properties selected for testing obtained quotes from the same combination of three contractors. In all cases, the same contractor consistently quoted the lowest cost.
- Quotes were prepared on copied forms that were pre-signed by the contractor. The representative visiting the property only had to write the property owner's name and address on the form. For some properties, the handwriting on each of the three quotes appeared similar, if not identical, as indicated by letter formation and unusual spelling errors.
- Some businesses in the identified contractor combinations shared similar licensing information (e.g. licenses were held by individuals with the same surname and/or address). This may indicate a closer relationship that would facilitate a single contractor obtaining pre-signed quotes from two other companies.

In contrast to overall costs, the prices of individual services provided by contractors vary significantly. The prices of a CCTV inspection and backwater valve installation ranged from \$100 to \$500 and \$350 to \$2,781, respectively.

The City has no appetite to enter into a competitive process to negotiate an approved vendor list or improvement pricing. Hamilton Water investigated the option of entering into a competitive procurement process to secure the services of a contractor to undertake 3P eligible works. Report PW11056c was provided to the General Issues Committee on February 6, 2013 outlining the results of this analysis. City staff and Council agreed that the potential risks and liabilities associated with undertaking improvements on private property either with municipal staff or contractors contracted by the City outweighed related cost savings.

Reducing the 3P grant and subsidizing a portion of improvement costs may create a financial incentive for property owners to seek out the best price for services and stimulate competition amongst contractors. A subsidy-type approach has been taken by several other municipalities as a way to help control spending in their respective protective plumbing programs. Hamilton funds 100% of improvement costs for all properties throughout the City, regardless of previous flooding history. In contrast, Toronto, Windsor, London, Halton, Sudbury and Vaughan subsidize 50%, 75% or 80% of improvement costs up to stated maximums. For backwater valves, the maximum subsidies provided in these municipalities are less generous than the maximum \$2,000 grant provided by the City of Hamilton. The chart on the following page summarizes the funding structures for other municipalities:

Municipality	Backwater Valve	
	Share	Subsidy
Hamilton	100%	\$2,000*
Toronto	80%	\$1,250
Windsor	80%	\$1,000
London	75%	\$ 825
Halton	50%	\$ 675
Sudbury	50%	\$1,000
Vaughan	50%	\$ 750

* Represents the maximum subsidy to perform a CCTV inspection and install a backwater valve. Does not contain the \$220 building permit fee.

Additional value for money may be generated if the City changes their funding structure to subsidize a portion of 3P improvement, CCTV inspection, and permit costs. On average, the City's current \$2.5 million annual 3P budget may provide assistance to 1,125 properties. As shown in the chart below, subsidizing 50% to 80% of improvement costs will permit the City to assist an additional 280 to 1,125 properties with the same 3P budget. Alternatively, the City may realize \$0.5 million to \$1.25 million in cost savings if a cap is placed on assisting 1,125 properties in a given year.

Subsidy Rate	Subsidy Amount (maximum per property)	Savings (continue to fund 1,125 properties per year)	Service Enhancement within the Existing \$2.5M Annual Budget (in addition to the existing 1,125 properties)
50%	\$1,110	\$1,250,000	1,125 additional properties
75%	\$1,665	\$ 625,000	375 additional properties
80%	\$1,775	\$ 500,000	280 additional properties

Higher uptake of the program may have a significant financial impact on the City. It would cost \$17.9 million over seven years in 3P grant funding to install backwater valves in the 8,100 properties that previously experienced a sewer backup but have not yet participated in 3P. Alternatively, not taking into account the effect of inflation, it would cost \$260 million over 105 years with the current \$2.5 million annual budget to fund 3P improvements in all eligible households across the City. As a result, it is important to consider the long-term financial sustainability of the program and opportunities to derive greater value from 3P funds.

Process Efficiencies

A significant portion of the 3P grant process involves City staff analyzing and assessing grant documentation. After submitting an application and quotations, property owners must wait for Hamilton Water to confirm the grant amount before hiring a contractor. After the work is completed and the contractor is paid, property owners must submit additional documentation and wait to receive a reimbursement cheque from the City. As a result, timely processing of paperwork is an important service feature.

Overall, Hamilton Water and Finance are processing paperwork and issuing cheques in a timely manner and within established timelines. Collectively, Hamilton Water and Finance assess submitted documents and process a reimbursement within 24 calendar days, which is better than the four to six week timeline published in the 3P information brochure. Although targets are being achieved, the following opportunities exist for improvement.

- On average, Hamilton Water assesses a 3P application and mails out a grant confirmation to the property owner within six calendar days, which is equivalent to the average attainable target developed with management for the purpose of this analysis. Although Hamilton Water processed 14 of the 25 applications selected in fewer than six days, this target was exceeded for the other 11 properties.
- On average, Hamilton Water spent 15 calendar days processing documentation and approving the grant payment, which is nine days greater than the average attainable target of six days developed with management.
- On average, it took Finance ten days to process payments. This is two days longer than the average attainable target of eight days developed with management for this analysis.

Audit Services was unable to identify the root cause for the majority of these delays due to lack of information. Although time data is collected in both the Hansen and PeopleSoft systems, neither Hamilton Water nor Finance measure or monitor timelines to assess how well City staff are processing 3P grants and payments. Monitoring and investigating deviations from timeline targets may provide management with opportunities for continuous process improvement.

Audit Services identified the following opportunities to improve the efficiency of the 3P process by utilizing the Hansen system to eliminate manual data entry; and clarifying roles to remove duplicate approval checkpoints, reduce the volume of paper copies and streamline the processing of 3P grants.

- Duplicate approval checkpoints – Hamilton Water performs a thorough review of all grant documents for accuracy and to ensure compliance with program requirements before approving and sending the payment request to Finance. Finance performs a similar review before processing the 3P grant payment. Given that the maximum 3P grant payment is \$2,220, one review and approval checkpoint is appropriate. The secondary review performed by Finance is unnecessary.
- Paper copies – Hamilton Water retains a copy of the application form, assessment form, building permit and receipt, contractor invoice and payment request form. Original documents are sent to Finance. As a secondary review by Finance is unnecessary, copies of such documents are no longer required. Eliminating paper copies not only saves paper and printing costs but also frees up time for Hamilton Water staff and reduces the burden on interoffice mail.

- Manual data entry – Finance manually enters the property owner's details and grant amount from the payment request form into an Excel spreadsheet, which is uploaded into the PeopleSoft Finance System for the next cheque run. Information on the payment request form is automatically populated from 3P data captured by Hamilton Water in the Hansen system. The amount of manual data entry performed by Finance may be significantly reduced if a payment report could be produced directly from Hansen. Limiting the amount of manual data entry not only saves time but also reduces the risk of human error in the payment process.

Program Objectives

Audit Services identified the following objectives associated with 3P:

Objective #1:

Provide guidance and financial assistance to property owners seeking to undertake improvements to their homes that will reduce the potential for basement flooding due to sewer surcharge.

This objective has been achieved. Hamilton Water provides property owners with a 3P brochure and process guide containing guidance about the program and plumbing improvements. In addition, Hamilton Water's call centre is available for more personalized assistance. Grants and loans available to property owners provide financial assistance to undertake eligible 3P improvements.

Objective #2:

Assist property owners to reduce recurrent basement flooding as well as the number of repeat recipients of compassionate grants under the City's Residential Municipal Disaster Relief Assistance Program.

This objective has not been achieved. Uptake of the program is low amongst properties that have flooded in the past. There are no targets in place related to uptake from properties with previous flooding. Of the 10,785 households that reported experiencing at least one sewer lateral backup, only 2,722 properties (25%) participated in 3P and installed a backwater valve. Lack of awareness may be contributing to low uptake. Several Hamilton Water survey respondents commented they were unaware of 3P and heard about it from neighbours and contractors.

Approximately 260 properties reported experiencing at least one sewer lateral backup after a backwater valve was installed as part of 3P. This represents 3.5% of all properties that installed a backwater valve since the inception of the program. Subsequent flooding may have occurred as a result of improper installation, inadequate maintenance, inappropriately sending waste into the sewer when the valve is engaged or ground water seeping into the property owner's basement where the valve was installed.

Hamilton Water does not investigate these incidents or monitor the percentage of 3P participants that experienced a sewer backup after installing a backwater valve. As a specific root cause of subsequent flooding cannot be determined, Audit Services was unable to assess whether value was achieved from installing a backwater valve.

3P may not be reducing the number of repeat compassionate grant recipients. Nine of the 16 properties selected by Audit Services flooded more than two times and received a subsequent compassionate grant. One property experienced six flooding events before a backwater valve was installed and five properties flooded three or more times and a backwater valve was not installed. In both of these cases, management should have factored previous flooding history into the compassionate grant assessment. An additional three properties received compassionate grants even though a backwater valve was already installed. In these cases, the backwater valve should have prevented the flooding event which led to receiving the compassionate grant. Risk Management has indicated that a property's history of flooding events was not factored into prior compassionate grant assessments due to the volume of applications received.

Objective #3:

Allow the property owner to acquire sewer backup coverage (where they previously had not been able to do so) or access cheaper premiums, higher limits and/or lower deductibles for sewer backup coverage.

This objective cannot be measured. Property owners do not provide personal insurance information to Hamilton Water as part of, or follow up to the 3P process.

RECOMMENDATIONS

The implementation of the following seven recommendations may result in opportunities to improve controls over the assessment of future grant and loan applications, improve customer service and make the 3P process more efficient.

1. That Hamilton Water verifies the licensing status of contractors when quotations and invoices are submitted by the property owner.

Management Response – Hamilton Water:

Disagreed. The purpose of the three quotes is to determine the grant amount. The homeowner may choose any "qualified and licensed" contractor they desire; however the grant amount will be based on the lowest quote. Hamilton Water verifies the licensing status of the contractors at the time of final submission/payment. Staff believe that the increase in time to verify all three contractors for each quote at the time of quote as well as verifying the final contractor's licensing at the time of payment is inefficient and would add very little value. Contractors could be properly licensed at the time of quote but not at the time of payment which is the actual requirement.

- 2. That Hamilton Water and Finance review and revise the loan process to better align responsibilities held by each group. Hamilton Water should verify program requirements and approve distribution of the loan, while Finance should disburse the loan and administer annual loan repayments.**

Management Response – Hamilton Water:

Agreed. Hamilton Water staff are able to update our processes and procedures to reflect this change if Finance is in agreement. Completion date: Q1 2016.

Management Response – Finance:

Agreed. The 3P process documentation will be reviewed in conjunction with Hamilton Water staff to better reflect the roles and responsibilities of Finance staff. Completion date: Q1 2016.

- 3. That Finance no longer performs a secondary review of 3P grant documentation for compliance with program requirements and accuracy. Finance should only ensure completion and approval of the payment request form in order to process a payment. Hamilton Water should only send Finance a copy of the payment request form.**

Management Response – Hamilton Water:

Agreed. Hamilton Water staff are able to update our processes and procedures to reflect this change if Finance is in agreement. Completion date: Q1 2016.

Management Response – Finance:

Agreed. The role of Finance should be to review the payment request documentation only for completeness, including verifying the account distribution and signing authority. Completion date: Q1 2016.

- 4. That Hamilton Water creates a performance measure to monitor how long it takes to process 3P applications against established targets. Management should investigate significant delays and amend internal processes or reallocate internal resources as required.**

Management Response – Hamilton Water:

Agreed (in part). Hamilton Water will develop KPI's to monitor our processing times. The efficiencies in processing will be looked at however; reallocation of resources to this program may or may not be feasible depending on other operational requirements. Completion date: Q2 2016.

- 5. That Hamilton Water and Finance develop a process to measure how long it takes to process a 3P reimbursement and compare actual results to the four to six week target set by management on a monthly basis. Management should work collaboratively to investigate significant delays and amend internal processes or reallocate internal resources as required.**

Management Response – Hamilton Water:

Agreed. Hamilton Water will develop a KPI for our portion of the process and monitor against our targets. Again the reallocation of resources to this program may or may not be feasible depending on other operational requirements. Completion date: Q2 2016.

Management Response – Finance:

Agreed: Staff will work to develop an appropriate KPI. Completion date: Q2 2016.

- 6. That Hamilton Water and Finance investigate the feasibility of generating an approved payment report from the Hansen system that can either be uploaded directly into the PeopleSoft Finance system or used to reduce the volume of manual entry required in the payment process.**

Management Response – Hamilton Water:

Agreed. Hamilton Water will provide the necessary support to pull the appropriate data from Hansen to be used by finance. Overall responsibility for this recommendation should rest with Finance. Completion date: Q2 2016.

Management Response – Finance:

Agreed. Finance will work with Hamilton Water staff to investigate the feasibility of developing an interface between Hansen and PeopleSoft to reduce the volume of manual entry required in the payment process. Completion date: Q4 2016.

- 7. That Hamilton Water revises the 3P brochure to include the risks associated with property owners accepting three quotes provided by the same contractor.**

Management Response – Hamilton Water:

Agreed (in part) Hamilton Water agrees that some additional communication related to obtaining three quotes would be beneficial. The exact format of that communication will need to be investigated. This may be in the form of a revision to the brochure as suggested or some other form as deemed appropriate by staff. Completion date: Q2 2016.

The implementation of the following recommendation may result in an opportunity to achieve greater value for money within the program.

- 8. That Hamilton Water provides Council with 3P funding options that reduce the maximum grant allocation and/or subsidize a portion of improvement costs. These options should include:**

- ***A subsidy that is comparable with other municipalities in the range of 50% to 80% of improvement, CCTV inspection and permit costs; and***
- ***Retain the loan portion of the program to assist property owners to afford improvement costs no longer covered by the 3P grant.***

Management Response – Hamilton Water:

Agreed. Hamilton Water can incorporate this recommendation when reporting back to Council based on direction received by Council. Completion date: Q1 2016.

The implementation of the following four recommendations may provide management with opportunities and tools to better achieve the objectives of 3P.

9. That Hamilton Water sends a letter to each property that experienced sewer backup in the past that has not participated in 3P. Management should inform property owners of the availability of the program and outline that future compassionate grants may be disallowed to flood-prone properties that have not yet installed a backwater valve.

Management Response – Hamilton Water:

Disagreed. Letters have already been sent to those property owners who have experienced flooding during storm events where the compassionate grant program was enacted that explains this. Property owners may experience sewer backups related to any number of reasons unrelated to storms. These could include tree roots and other blockages, or may be due to collapsed sewer laterals. In these cases a backwater valve would not solve their issue and may give them a false sense of security. Should there be future storm events where there is significant flooding and Council enacts the compassionate grant program these properties should receive a similar follow up notification.

Management Response – Risk Management:

Agreed. RMS will provide Hamilton Water with a listing of all flood claimants (both liability and compassionate) dating back 10 years. RMS can provide the listing at Hamilton Water's convenience. Completion date: Q1 2016.

10. That Hamilton Water measures and monitors the number of properties that experience a sewer backup after a backwater valve is installed. Management should set a threshold that would trigger an investigation or other actions if properties continue to flood after improvements are performed.

Management Response – Hamilton Water:

Disagreed. Hamilton Water has completed a number of investigations related to properties that have experienced flooding after installing a backwater valve. Staff found that in most cases this is caused by 1 or more of the 3 following issues:

- 1. The backwater valve functions properly and closes during a sewer lateral backup. The homeowner then uses water during this time, or still has a downspout connected causing water to back up from inside the home;*
- 2. Ground water infiltrates the area where the backwater valve was installed and overflows into the basement; and/or*
- 3. Failure to maintain the backwater valve and it becomes stuck open and does not close all the way. Hamilton Water undertakes as a proactive measure each spring to mail out to anyone listed in our records as having installed a backwater valve under the 3P program instructions on how to maintain their backwater valve. In addition Hamilton Water also provides a phone notification utilizing the Automated Notification System (ERMS) reminding them of the need to maintain their backwater valve and where they can get more information.*

11. That Hamilton Water and Risk Management develop a Hansen report listing properties that experienced sewer backups that may be used to assess future compassionate grants according to direction provided by City Council.

Management Response – Hamilton Water:

Agreed. Hamilton Water can provide a report to Risk Management for any properties who have experienced flooding should they decide it is necessary. The primary responsibility for this recommendation should rest with Risk Management to determine if they desire the report and what information is required. Completion date: Q2 2016.

Management Response – Risk Management:

Agreed. RMS will provide Hamilton Water with a listing of all flood claimants (both liability and compassionate) dating back 10 years to be cross referenced against Hansen by Hamilton Water. Completion date: Q1 2016.

12. That Risk Management provides direction to the external claims adjuster to incorporate flooding information provided by Hamilton Water into future compassionate grant assessments and deny compassionate grants to properties with a history of flooding events that have not undertaken 3P improvements.

Management Response – Risk Management:

Agreed. Appropriate wording will be incorporated into the Eligibility Criteria for the Residential Municipal Disaster Relief Assistance Program for Basement Flooding. Completion date: Q1 2016.

CONCLUSION

Grants and loans available under the Protective Plumbing Program play an important role in the City's plan and response to severe storm events. Property owners across the City continue to access 3P funding in order to proactively protect their homes from damage that may be caused by sanitary backups and basement flooding. While this program is well received and provides welcome financial assistance to citizens, opportunities exist to improve the financial sustainability and performance of the program. Additional investigations and actions are required by Hamilton Water, Finance and Risk Management before the merits of these opportunities can be achieved and measured.