

Subject: Residential Stormwater Retrofit Pilot Program: Rain Ready Ottawa

File Number: ACS2024-PRE-EDP-0016

**Report to Environment and Climate Change Committee on 16 April 2024
and Council 1 May 2024**

**Submitted on April 3, 2024 by David Wise, Director, Economic Development and
Long Range Planning, Planning, Real Estate and Economic Development
Department**

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Ward: Citywide

**Objet: Programme pilote de modernisation des installations de gestion des
eaux pluviales résidentielles: Parés pour la pluie Ottawa**

Dossier: ACS2024-PRE-EDP-0016

Rapport au Comité des finances et des services organisationnels

le 16 avril 2024

et au Conseil le 1 mai 2024

**Soumis le 3 avril 2024 par David Wise, Directeur, Développement économique et
planification à long terme, Services de la planification, des biens immobiliers et
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Quartier: À l'échelle de la ville

REPORT RECOMMENDATIONS

That the Environment and Climate Change Committee recommend that Council:

1. Receive the findings of the review of the Rain Ready Ottawa pilot program as summarized in this report and further described in Document 1;
2. Approve the implementation of Rain Ready Ottawa as a permanent residential stormwater retrofit program as outlined in this report to support the long-term objectives of the Pinecrest Creek/Westboro and Eastern Subwatersheds retrofit plans, and to mitigate the impacts of stormwater on local watercourses elsewhere in the city;
3. Approve the proposed changes to the priority area boundaries as per Figure 3;
4. Delegate authority to the General Manager of Planning, Real Estate, and Economic Development, or designate, to implement the program as outlined in this report and to negotiate, enter into, execute and amend any agreements associated with this program.

RECOMMANDATIONS DU RAPPORT

Que le Comité de l'environnement et du changement climatique recommande ce qui suit au Conseil :

1. Prendre acte des conclusions de l'examen du Programme pilote de modernisation des installations de gestion des eaux pluviales résidentielles : *Parés pour la pluie Ottawa* qui sont résumées dans le présent rapport et décrites plus en détail dans le Document 1;
2. Approuver la mise en œuvre du programme *Parés pour la pluie Ottawa* à titre de programme permanent de modernisation des installations de gestion des eaux pluviales résidentielles, tel que décrit dans le présent rapport, afin d'appuyer les objectifs à long terme des plans de modernisation de la gestion des eaux pluviales des sous-bassins hydrographiques de l'Est et du ruisseau Pinecrest/Westboro et d'atténuer les répercussions des eaux pluviales sur les cours d'eau locaux ailleurs dans la ville;
3. Approuver les modifications proposées aux périmètres des secteurs prioritaires conformément à la figure 3;

- 4. Déléguer au directeur général de la Direction générale de la planification, de l'immobilier et du développement économique ou à son mandataire le pouvoir de mettre en œuvre le programme décrit dans le présent rapport et de négocier, de conclure, de réaliser et de modifier toute entente liée à ce programme.**

EXECUTIVE SUMMARY

The goal of the Rain Ready Ottawa pilot was to develop and test a program that promotes the adoption of lot-level home stormwater management practices and can be scaled to meet the long-term 50-year targets established in the Council-approved Stormwater Management Retrofit Plans. Supporting the retrofitting of residential properties is needed to address current and forecasted stormwater volumes and to improve the health of local watercourses that drain into the Ottawa and Rideau rivers. Rain Ready Ottawa was approved by Council in February 2021 ([ASC2021-PIE-EDP-0008](#)) and launched in Spring 2021 as a pilot program.

Staff reviewed the existing pilot program and evaluated the success of the six program components, as presented in this report. As a result, staff recommend the implementation of a permanent Rain Ready Ottawa program based on 1) lessons learned from the three-year pilot program and other City of Ottawa incentive programs (Document 1); 2) a comprehensive review of 68 similar programs in North America (Document 1); and 3) consultation with internal and external stakeholders, residents who have participated in the current pilot program, and the public (Document 2).

The proposed permanent Rain Ready Ottawa program will include:

- Information and resources for all residents through eLearning, in person learning opportunities, access to trained and certified professionals, and other Rain Ready Ottawa resources through [Ottawa.ca/rain](#).
- Training and certification to landscape industry professionals.
- Financial incentives for priority stormwater areas, proposed to be expanded to urban areas that drain directly into smaller open watercourses before reaching the Ottawa or Rideau rivers.
- Revised Home Assessment program to focus on low-rise condominium and cooperative housing complexes within the priority area boundaries,
- New rebate stream targeting low-rise condominium and cooperative housing complexes within the priority area boundaries.

The program is to be funded in 2024 and 2025 from existing funds (Stormwater Retrofit Account IO 909131) and then will be subject to budget request in 2026. Key performance indicators will be tracked and incorporated into annual program reporting on Ottawa.ca and the program will be reviewed every five years with a report to Committee and Council.

RÉSUMÉ

L'objectif du programme pilote *Parés pour la pluie Ottawa* était d'élaborer et de mettre à l'essai un programme qui favorise l'adoption de pratiques de gestion des eaux pluviales résidentielles au niveau des terrains et qui peut être adapté pour atteindre les cibles à long terme (50 ans) établies dans les plans de modernisation de la gestion des eaux pluviales approuvés par le Conseil municipal. Il est nécessaire d'appuyer la modernisation d'éléments de gestion des eaux pluviales sur les terrains résidentiels pour gérer les volumes d'eaux pluviales actuels et prévus et améliorer la santé des cours d'eau locaux qui se déversent dans la rivière des Outaouais et la rivière Rideau. Le programme pilote *Parés pour la pluie Ottawa* a été approuvé par le Conseil en février 2021 ([ASC2021-PIE-EDP-0008](#)) et a été lancé au printemps 2021.

Le personnel a examiné le programme pilote existant et a évalué le succès de ses six volets, tel que présenté dans le présent rapport. Le personnel recommande en conséquence de mettre en œuvre de façon permanente le programme *Parés pour la pluie Ottawa* compte tenu 1) des leçons tirées du programme pilote de trois ans et d'autres programmes incitatifs de la Ville d'Ottawa (Document 1); 2) de l'examen exhaustif de 68 programmes similaires en Amérique du Nord (Document 1) et 3) de la consultation d'intervenants internes et externes, de résidents ayant participé au programme pilote actuel et du public (Document 2).

Le programme permanent proposé comprendra ce qui suit :

- renseignements et ressources à l'intention de tous les résidents par le truchement d'occasions d'apprentissage en ligne et en personne, de l'accès à des professionnels formés et certifiés et d'autres ressources du programme dans la page [Ottawa.ca/pluie](#);
- formation et certification des professionnels du secteur de l'aménagement paysager;
- incitatifs financiers dans les secteurs prioritaires pour les eaux pluviales qu'il est proposé d'élargir aux secteurs urbains qui se déversent directement dans de plus petits cours d'eau ouverts avant d'atteindre la rivière des Outaouais ou la

rivière Rideau;

- révision du programme d'expertise à domicile afin de cibler les copropriétés de faible hauteur et les coopératives de logement situées dans les limites des secteurs prioritaires;
- exploration d'un volet de remises de l'impôt foncier résidentiel ciblant les copropriétés de faible hauteur et les coopératives de logement situées dans les limites des secteurs prioritaires.

Il est prévu de financer le programme en 2024 et en 2025 à l'aide de fonds engagés (compte 909131 pour la modernisation d'installations de gestion des eaux pluviales) et de présenter ensuite une demande dans le cadre du processus budgétaire en 2026. Les principaux indicateurs de rendement feront l'objet d'un suivi à des fins de présentation dans le rapport annuel sur le programme publié dans Ottawa.ca. Il est également prévu de réviser le programme tous les cinq ans et de transmettre à la même fréquence un rapport sur le programme au Comité et au Conseil.

BACKGROUND

The need for a residential private property lot-level program emerged from the Pinecrest Creek/ Westboro ([ACS2011-IC-PGM-0114](#)) and Eastern Subwatersheds Stormwater Retrofit Studies ([ACS2019-PIE-IS-0002](#)), which were part of the Council approved Ottawa River Action Plan (ORAP) ([ACS2010-ICS-EDS-007](#)). ORAP seeks to reduce the impacts of stormwater on the Ottawa River and its watershed within Ottawa. In the Pinecrest Creek/Westboro and Eastern Subwatersheds, a lack of stormwater management infrastructure has contributed to poor water quality, unhealthy ecosystems, flooding, erosion and beach closures.

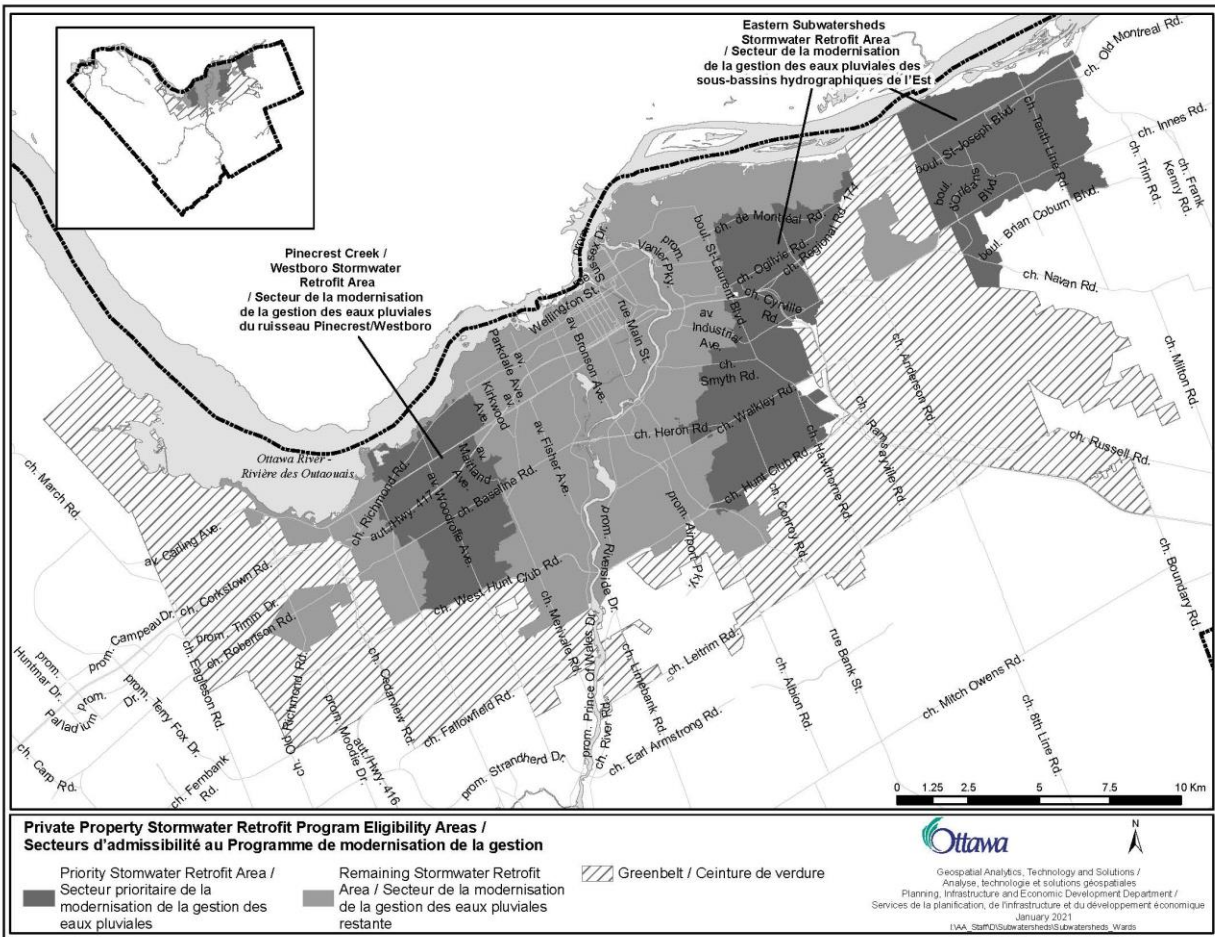
To address these issues and meet the long-term goals, both retrofit studies recommended creating education resources and incentives for lot-level actions by private property owners and set 50-year targets for specific actions (Table 1). They identified a balanced private-public approach as the best strategy in terms of impact and financial sustainability.

Table 1: 50 year retrofit targets in the Pinecrest Creek/Westboro and Eastern Subwatersheds

Pinecrest Creek/Westboro Subwatershed Targets		
Measure	Number of Installations	Percentage of Homes
Downspout Redirections	2,639	70 % of the total roof area needs to drain to permeable or pervious surfaces
Permeable Pavement	16.2 ha or 161,600 m ²	15 % of driveway surfaces.
Soakaway Pits and Infiltration Trenches	942	5 % of properties.
Rain Barrels	9,425	25 % of properties need at least 2.
Rain Gardens	1,885	10 % of properties
Eastern Subwatersheds Targets		
At least one of the above	14,700	30 % of properties

Rain Ready Ottawa was approved by Council in February 2021 ([ASC2021-PIE-EDP-0008](#)) and launched in June 2021 as a pilot program. The goal of the Rain Ready Ottawa pilot was to develop and test a program that promotes the adoption of lot-level home stormwater management practices and can be scaled to meet the long-term 50-year targets established in the Council-approved Stormwater Management Retrofit Plans. Areas where the retrofit studies had been completed were established as the program's priority areas given the specific targets that had been set in the retrofit plans and the importance of the Rain Ready Ottawa initiative in terms of meeting those targets. Those areas that were planned to have future retrofit studies became the program's secondary areas (see Figure 1).

Figure 1: Rain Ready Ottawa Pilot Priority and Secondary Areas



The Rain Ready Ottawa (RRO) pilot utilized a multi-faceted approach to engage and incentivize residents and to build capacity within the landscaping industry to design, install, and maintain lot-level stormwater management features on private property. The program was targeted to property owners in the Pinecrest Creek/Westboro and Eastern Subwatersheds, termed the RRO priority retrofit areas, with information and education available broadly across the city. Six program components were utilized to reduce barriers to implementation, increase project installation numbers, and improve the quality and impact of projects.

1. Residential Home Assessments
2. Industry Training for Landscape Professionals
3. eLearning Education Program
4. Community Engagement Initiatives

5. Financial Incentives

6. Demonstration Projects

This multifaceted approach allowed for the trialing of multiple methods to determine the most cost effective and impactful approaches to getting lot-level stormwater management projects in the ground.

Rain Ready Ottawa was developed and administered by the City using one temporary FTE and external support for the home assessment and Fusion Landscape Professional programs.

DISCUSSION

This report responds to Council direction to undertake a review of the three-year pilot Rain Ready Ottawa program and to make recommendations for a continued program.

Rain Ready Ottawa Review and Outcomes

The Rain Ready Ottawa pilot has succeeded in its goal of trialing approaches that promote the adoption of lot-level home stormwater management practices by private property owners. Results achieved through the six program components are summarized in Figure 2. A description of the program components, results, and the lessons learned follows with more detail in Document 1.

Figure 2: Summary of Rain Ready Ottawa Results



1. Home Assessments

The residential home assessment program sought to educate and support homeowners by providing them with a list of recommendations specific to their

property and needs. Utilizing trained professionals, home assessments promoted best practices to homeowners through one-on-one custom consultations. Home assessments were provided to properties located in either the priority retrofit areas or the secondary retrofit areas.

Since June 2021, Rain Ready Ottawa (RRO) has delivered 416 home assessments. Demand for home assessments has been consistently high and distributed across the priority and secondary stormwater retrofit areas of Ottawa. Demand for home assessments quickly surpassed expectations and the allocated budget, with a waitlist of over 800 households by the end of 2022. Additional funding was re-allocated to allow 150 home assessments a year to be delivered in 2022 and 2023.

Home assessments have resulted in over 200 projects being installed, including 13 projects installed at a single townhouse condominium complex. These were typically either downspout redirections or rain barrel installations. Home assessments, however, have not translated into the anticipated number of rebate applications and were the costliest of the program streams trialed through the pilot.

Significant additional funding would be needed to address the remaining backlog and the ongoing high demand. In addition, home assessments are not meeting the demand of non-single family home property types. As a result, home assessments are proposed to be focused on low-rise condominium and cooperative housing for the next phase of RRO. The benefit of re-introducing a modified home assessment program will be re-evaluated as a part of the next program review. This may potentially include a fee-for-service model.

2. Industry Training

The Fusion Landscape Professional (FLP) program is an existing landscaper training and certification program offered by Landscape Ontario (LO). Rain Ready Ottawa (RRO) brought FLP to Ottawa to build industry knowledge and capacity, create buy-in with private industry for the program, and create a list of certified contractors for homeowners to use to complete their projects. Through RRO, the City subsidized the cost of training for local companies and actively promoted FLP companies.

The Fusion Landscape Professional program has been one of the most successful and cost-effective aspects of the pilot program. A total of 57 industry professionals have taken the training, with 37 completing the certification.

This collaboration with LO on FLP certification has allowed the City to leverage private industry to maximize the reach and impact of Rain Ready Ottawa (RRO), and positions Ottawa well to meet the long-term retrofit targets. Certified FLPs have been responsible for 80 applications and 126 projects through the rebate program. The subsidized training and rebates have helped build a positive relationship with the landscaping industry and has turned many into ambassadors for the City, this program, and our stormwater management goals. Outside of the 80 rebate applications, many FLPs have stated that they now incorporate some element of fusion landscaping into all of their landscape installations. This leads to additional on-site stormwater management projects being installed and demonstrates the structural change FLP training and RRO is leading to.

3. eLearning

To address excess demand for the home assessment program, an online education program was designed and launched in 2023 to equip homeowners with the knowledge and skills needed to understand the value of stormwater management and how they could make changes to it on their property.

Residents could access online educational courses on the following topics:

- Introduction to stormwater management
- How to redirect your downspout
- How to install a rain garden
- How to install a soakaway pit or infiltration trench

Users who lived within a priority area for the program were able to become eligible for the rebate program by completing the eLearning courses.

Since launching in the spring of 2023, RRO's eLearning platform has had 275 users register for over 700 courses, with 225 course completions as of December 2023. It is succeeding in addressing the backlog of demand for home assessments by providing a cost-effective alternative for learning about solutions to stormwater management issues. eLearning provides an avenue for residents who were not interested in getting a home assessment, unable to get one due to the waitlist, or unsure if they needed to hire an Fusion Landscape Professional to access financial support for projects. Additionally, eLearning can be accessed as

a resource all residents living across Ottawa who are interested in gaining more skills in stormwater management and implementing it around their home.

The eLearning courses have succeeded in increasing the number of rain ready projects installed and the number of rebate applications submitted.

Approximately one in two eLearning users report making a stormwater management improvement to their property, with the most common being a downspout redirection. eLearning is also leading to a notable increase in the number of rain garden installations. eLearning is equipping residents with the skills they need to undertake some stormwater management projects as do-it-yourself (DIY) projects. As of December 2023, 12 rebate applications have been submitted leading to 22 projects installed or underway as a result of eLearning.

4. Community Engagement

Outreach, engagement, and communications activities successfully built relationships with local communities, interest groups, and organizations, and leveraged those to directly interact with thousands of residents on the issues of stormwater management and how they could take action and get support to do so.

Rain Ready Ottawa's outreach activities focused on informing residents on the benefits of changing how they manage their stormwater at both the individual and community scale, and how this can help meet stormwater retrofit plan targets as well as support climate resiliency, sustainability, and flood preparedness. Promotion of RRO was done using dedicated program social media channels and through City social media channels. Promotional information was frequently shared with and promoted through Councillor communications.

RRO utilized a diverse selection of activities to engage the community. This included in-person booths, participation in trade shows, online information sessions, online and in-person education sessions, online advertising, resident contests and various newsletters. Engagement events have been an important driver for traffic to RRO materials and are proposed to remain an integral part of the program moving forward to continue building awareness and driving behavior changes to meet the long-term retrofit targets.

5. Financial Incentives

As a grants and contributions program, Rain Ready Ottawa offered a set of incentives to property owners in priority stormwater areas (See Figure 1) to

reduce the financial barriers to the implementation of stormwater management practices on residential properties. Financial incentives were limited to a maximum for each practice and could not exceed a combined maximum of \$5,000 per property.

Financial incentives were provided for the following practices:

- Downspout Redirections (up to \$750)
- Rain Gardens (up to \$2,500)
- Soakaway Pits (up to \$2,500)
- Permeable Hardscapes (up to \$5,000)
- Certified Landscape Design (up to \$500)

The practices supported follow the [Low Impact Development Stormwater Management Planning and Design Guide](#) and [Fusion Landscape Design](#) principles, which were developed by a consortium of leading Ontario Conservation Authorities. Since 2021, Rain Ready Ottawa approved 101 rebate applications, with installation complete or underway on a total of 157 projects. Rebates have also been given for 40 fusion landscape designs. Over \$340,000 in rebates have been allocated and leveraged a total private investment of \$1.45 million. Rebated projects are larger in scope and more complex than the “DIY” projects that typically occurred as a result of a home assessment or eLearning with no rebates. Rebated projects often also incorporated multiple project types. A summary of rebate types is provided in Table 2.

Table 2: Summary of Project Types supported through rebates.

Rebate	Number of Rebates	Percentage of all Rebates
Downspout Redirection	63	36%
Rain Gardens	14	6.5%
Soakaway Pits	13	7%
Permeable Pavement	67	32%
Fusion Design Rebate	39	19%
Total Rebates	196	100%

The average cost of a project was \$18,141 comprised of an average City funded rebate of \$3,519 and average private investment of \$14,621, a funding ratio of approximately one to four. In total, \$1.8 million has been invested in lot-level

stormwater management since 2021, which is helping to mitigate the impacts of urban runoff on downstream watercourses and beaches. The volume and value of annual installations has increased significantly over every year of the pilot program, and it is anticipated that this shall continue as the private sector is increasingly leveraged and promotion of Rain Ready Ottawa continues. A summary of rebate applications and values is provided in Tables 3 and 4.

Table 3: Program applications by year, 2021-2023.

Year	Applications	Year over Year Increase	Number of Projects	Year over year Increase
2021	22	-	27	-
2022	32	+45%	41	+52%
2023	51	+60%	89	+117%

Table 4: Total investment by year, 2021-2023.

Year	Total Rebate Value	Year over Year increase	Total Project Value	Year over Year Increase
2021	\$72,179	-	\$351,922	-
2022	\$109,690	+50%	\$587,215	+66%
2023	\$162,982	+49%	\$838,851	+40%

Similar to home assessments, rebates have been successful at addressing the needs of single-family homes but are not currently structured to meeting the needs of other residential housing types within the retrofit area, most notably low-rise condominiums or cooperative residential properties due to their shared ownership structures. It is proposed that a separate rebate stream be developed for these property types for approval in a future report.

6. Demonstration Projects

To promote Rain Ready Ottawa and rain gardens as a stormwater management solution for homeowners, the City of Ottawa worked with EnviroCentre to design

and install three demonstration rain gardens in the Eastern Sub-watershed and the Pinecrest Creek/Westboro stormwater retrofit areas.

The rain gardens were designed in collaboration with a fusion certified professional, City staff, Councillors and the local community. They were installed at Margaret Rywak Community Building, Manordale Park, Pierre Rocque Community Centre, and Aquaview Park Community Centre. These new community assets effectively manage stormwater on City sites while providing an education opportunity for local residents to learn about rain gardens.

Aside from the program promotion and community improvement benefits, demonstration projects also contribute to meeting the public targets of the City's stormwater management retrofit plans and demonstrate City leadership on addressing stormwater management issues in a sustainable way.

Lessons Learned

The following key lessons were learned during the pilot program:

- Program participants were highly satisfied and supportive of Rain Ready Ottawa (RRO). See Document 2 for additional details on participant feedback.
- While popular, Home Assessments were costly to administer and resulted in simpler measures such as rain barrel installation or downspout redirection.
- eLearning is resulting in similar project installations as home assessments and is more cost effective.
- Rebates are succeeding in getting residential stormwater projects installed and incentivizing investment by property owners at a ratio of one to four.
- Supporting industry training has allowed RRO to effectively leverage private industry to increase project installations and influence behaviour change.
- Outreach activities are successfully reaching residents and leading to engagement with RRO resources and behaviour change, as reflected in the positive trend in RRO engagement metrics.
- Demonstration projects build community awareness and support for the objectives of RRO and contribute to public property retrofits.

- Additional approaches will need to be trialed in order to more effectively support action amongst other housing types such as condominiums and cooperative housing.

The pilot has identified a series of successful activities that could be continued and scaled up within a permanent Rain Ready Ottawa program to meet the 50-year stormwater retrofit targets. Approximately 440 lot-level projects will need to be retrofitted annually to meet the long-term targets in Pinecrest/Westboro and Eastern Subwatersheds. Currently RRO activities have supported the installation of 150 projects annually.

As a testament to the success of its diversified approach, Ottawa has begun to attract attention from other municipalities across Canada who are looking to replicate the approach that Rain Ready Ottawa has taken in dealing with issues related to stormwater management and runoff, such as Edmonton and the Region of Durham.

Program Renewal Options

As part of the pilot review, staff reviewed three renewal options for the future of Rain Ready Ottawa. These options are presented below.

Option 1: End the program. Not Recommended.

The City has made significant progress in raising awareness, building industry capacity and encouraging and incentivizing action that is leading to project installations. Residents have expressed high satisfaction and support for Rain Ready, as has private industry. Ending the Rain Ready Ottawa program would negatively impact the City's ability to achieve the goals of the Ottawa River Action Plan and 50-year stormwater retrofit targets of the completed Stormwater Retrofit program.

Option 2: Extend the pilot program. Not Recommended.

Extending the pilot period is one option to continue to trial existing and new program activities. However, maintaining RRO as a pilot will limit the ability of the City to use longer-term behavioural change strategies to engage residents and industry and limit the scaling of program activities. This would also compromise the City's commitment to achieving the 50-year retrofit targets established in the approved retrofit plans. For industry, a program with a limited timeline may impact their decision to transition their business model to promoting RRO practices. Similarly, homeowners, may be less inclined to make the needed investments in lot-level stormwater management.

Option 3: Establish a permanent program. Recommended.

A permanent program will provide the long-term stability needed to meet the 50-year stormwater retrofit targets by facilitating the installation of a critical mass of lot-level stormwater management measures and using long-term outreach and engagement strategies. A permanent program with permanent staffing will allow for the retention of high-quality staff and integration with complementary City homeowner programs. For industry, a permanent program would provide stability and encourage more to transition their business models to align with RRO's goal and objectives.

Building off the achievements and lessons from the pilot, staff recommend establishing a permanent Rain Ready program to scale up the successful aspects of the pilot program while continuing to identify new approaches to achieve the long-term stormwater retrofit targets.

Proposed Updates to the Program

The following updates are recommended:

Program Goal and Objectives

- Goal:
 - Scale up the pilot to meet the long-term residential stormwater retrofit targets of the stormwater management retrofit plans to improve conditions in local watercourses, improve resiliency City-wide and, position the City to respond to any new targets that may be established for future retrofit planning areas.
- Objectives:
 - Build homeowner awareness of stormwater management practices and provide the information required to undertake lot-level improvement projects.
 - Build industry capacity to implement projects and normalize home stormwater management practices.
 - Reduce financial barriers to action in the priority stormwater retrofit areas through an incentive program.
 - Encourage uptake in the priority stormwater retrofit areas through targeted community outreach.

E-Learning

- Continue to promote and expand the e-learning modules as a cost-effective way for all homeowners to learn about residential stormwater management, and for homeowners in priority areas to become eligible for rebates.

- Conduct site visits at randomly selected eLearning projects before rebates are issued to verify proper installation and identify any issues.

Industry Training

- Continue collaboration with Landscape Ontario to offer and subsidize Fusion Landscape Professional (FLP) training and certification for Ottawa-based companies.
- Work with Landscape Ontario to reduce barriers to certification including streamlining the registration process, improving the course content, improving the training pass rate, and developing re-certification criteria.
- Provide information about certified Ottawa-based companies to residents.
- Identify other relevant industry certifications that would qualify companies to provide homeowners access to rebates.

Home Assessments

- Offer targeted home assessments to low-rise condominium and cooperative housing complexes within the program priority areas.
- Stop providing home assessments for single-family homes. Re-assess the value of re-introducing home assessments for single family homes as part of the next program review including potentially as a fee-for-service.
- As an alternative, develop a self-led home assessment process for single family homeowners as an eLearning or other training module.

Financial Incentives

- Maintain the existing eligibility criteria, existing rebate projects, and funding amounts. Improve clarity around application requirements and modify eligible expenses including:
 - Adding rain barrels installed in conjunction with a downspout diverter as an eligible expense within the downspout redirection rebate.
 - Adding a requirement to the permeable pavement rebate of approval of a Private Approach permit for a project with driveway widening.
- Modify the general rebate agreement between the City and applicants to allow the City to document projects and use them for program advertising and outreach, including installation of promotional signage for a certain period of time in front of properties with completed projects.

- Explore the development of a residential rebate program for low-rise condominium and cooperative housing complexes within the program's priority areas to reduce the stormwater impacts associated with these housing types and report back to Committee and Council with a recommendation.

Demonstration Projects

- Continue to lead the installation of demonstration rain gardens. Develop long term maintenance agreements with community groups where feasible.
- Identify opportunities to install other types of demonstration projects permeable walkways and soakaway pits in collaboration with other City departments.

Outreach, Engagement, and Communications

- Expand the reach and number of outreach and engagement activities. Identify new approaches to engaging residents that could lead to behavior changes and project installations.
- Undertake the development of improved marketing materials and resources to support promotion campaigns and resident education.
- Align RRO outreach and engagement activities with complimenting City programs including the Better Homes Ottawa Loan Program and Residential Protective Plumbing Program to maximize RRO awareness and deliver the best results for residents.

Proposed changes to Program Priority Areas

Several options for expanding the scope of the eligible areas for rebates were explored in order to effectively meet the long-term targets established in the existing stormwater retrofit studies and support the adoption of residential lot level measures in other priority stormwater retrofit areas. Options were assessed considering the approved stormwater retrofit plan targets, anticipated benefits to local watercourses, as well as cost. The following options were assessed:

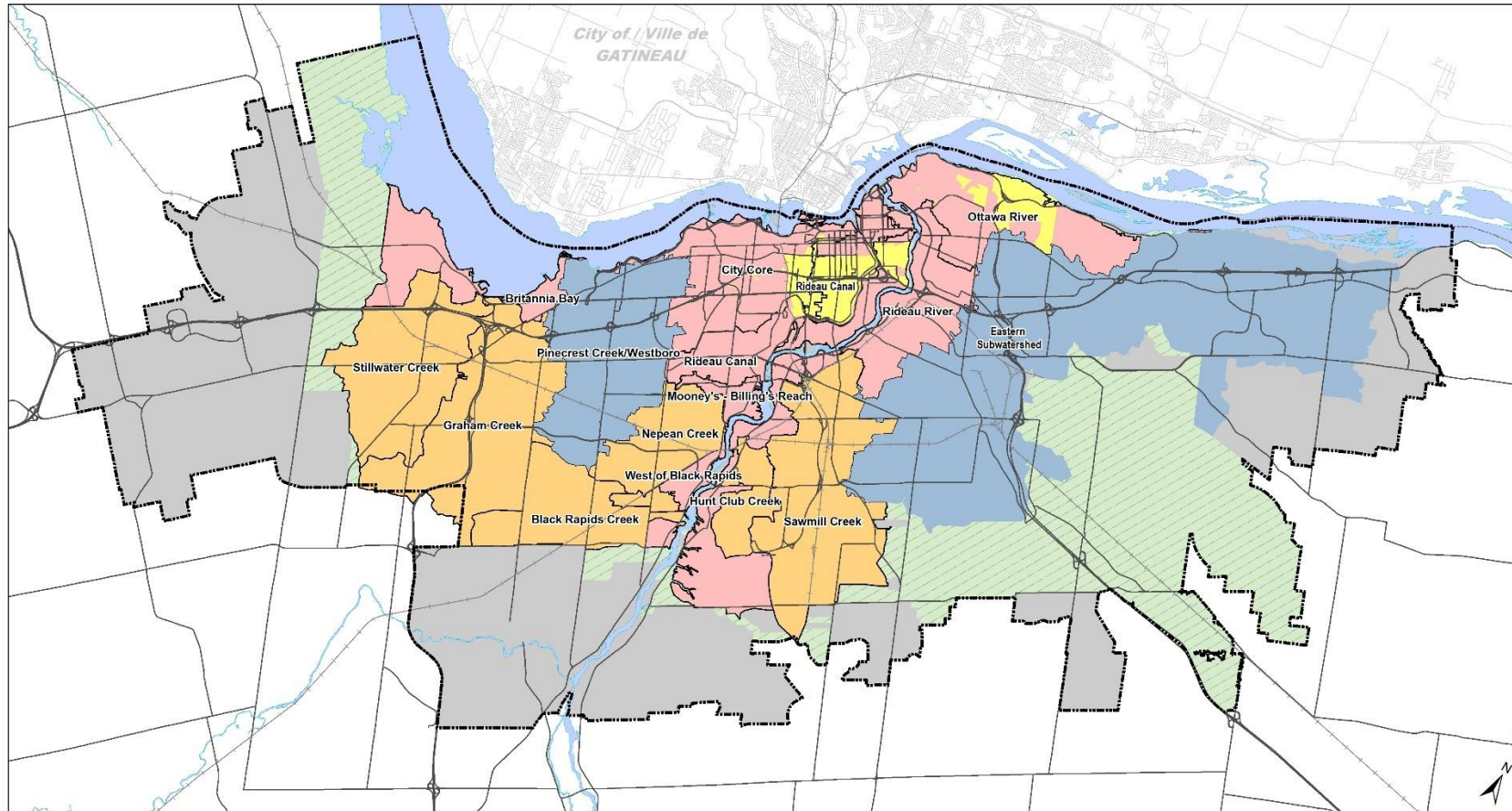
Option 1: Maintain the existing program priority areas (Pinecrest/Westboro and Eastern Subwatersheds) (blue areas on Figure 3). Completed stormwater retrofit studies for these areas have identified specific targets for residential lot level measures. **Not Recommended.**

Option 2: Expand the program priority areas to Stormwater Retrofit areas that drain into local open watercourses before reaching the Rideau or Ottawa rivers (blue and orange areas on Figure 3). Stormwater retrofit studies are prioritized for these areas.

Recommended.

Option 3: Expand the program priority areas to all Stormwater Retrofit areas including those that do not drain into local open watercourses before reaching the Rideau and/or Ottawa Rivers (blue, orange and pink areas on Figure 3). **Not Recommended.**

Figure 3: Stormwater Retrofit Priority Map



RETROFIT STUDY AREAS / AIRES DE L'ÉTUDE DES TRAVAUX DE RÉAMÉNAGEMENT

- Option 1: Completed Retrofit Studies / Option 1: Études de réaménagement achevées
- Option 2: Open watercourse / Option 2: Cours d'eau ouvert
- Option 3: Directly/Indirectly through storm sewers to Ottawa/Rideau River / Option 3: Écoulement direct ou indirect dans la rivière des Outaouais et la rivière Rideau en passant par les égouts pluviaux

- Areas largely built or to be built with modern stormwater management systems / Zones bâties avec des systèmes modernes de gestion des eaux pluviales
- Combined Sewer / Égouts unitaires
- Urban Boundary / Périmètre d'urbanisation
- Greenbelt / Ceinture de verdure

Rain Ready Ottawa Priority Area Expansion Options / Parés pour la pluie Ottawa - Options d'élargissement du secteur prioritaire



Planning, Infrastructure and Economic Development Department / Département des services urbains, des infrastructures et du développement économique
Section de la planification, de l'infrastructure et du développement économique, Analyse prospective, Technologie et Services

Staff recommend proceeding with Option 2: expanding the program priority area to include Stormwater Retrofit areas that drain to smaller open watercourses before reaching the Ottawa or Rideau River. Expanding to this area will allow Rain Ready Ottawa resources to be concentrated on areas where the program can have the greatest impact and alleviate the negative impacts of stormwater runoff on the health of smaller open watercourses. Focusing on these watercourses will also have beneficial downstream impacts on the Rideau and Ottawa Rivers.

This aligns with the recommended strategy in the draft Infrastructure Master Plan for completing the Stormwater Retrofit Master Plan, including the prioritization of efforts to achieve direct benefits to local watercourses. It is recommended that the areas described in Option 2 be eligible for the RRO program. Future Stormwater Retrofit studies, to be completed as part of the Stormwater Retrofit Master Plan, will set targets for lot level management on private properties as part of the evaluation of options. These targets will guide future RRO implementation.

Continuing to only offer rebates within the existing area as defined by Option one would limit the long-term successes that can be achieved with Option two. Option one limits RRO to focusing on only a select few open watercourses, which would limit the downstream impacts of private retrofitting.

Expansion of the RRO program into the additional areas described in Option three requires further study. There are different stormwater issues for these areas, including more intensification and more concerns about system capacity, and different kinds of stormwater management solutions are needed. The future potential expansion of RRO program into areas beyond those identified in Option two will be assessed during the retrofit strategy and opportunity screening phase of the Stormwater Retrofit Master Plan.

Urban areas outside of the stormwater retrofit area are not a priority for retrofitting as they have been largely built with modern stormwater management systems.

Residents residing in areas beyond the area described in Option two will still be able to access trained and certified professionals, eLearning, in person learning opportunities, and RRO online resources.

Costs and staffing requirements for these options were estimated using projections based on the current rate of demand for RRO program components and the average cost of retrofit projects (Table 4).

Table 4: Summary of Estimated costs for Expansion Options

Expansion Option	Household Count	Estimated Annual Program Cost	Impact on Watercourse Health (rank, 1 = highest)
1: Existing Areas	67,850	\$250,000	2
2: Drain to Local Open Watercourses	111,988	\$500,000	1
3: All Stormwater Retrofit Areas	252,850	\$1,000,000	3

The program is currently run by one temporary staff. Temporary funding is currently available until 2026, at which time a request will be made through the 2026 budget to convert the position to a permanent FTE, funded by stormwater reserves. Additional staff would be required for Option three.

Program Implementation

Program Administration

The program is currently managed by one temporary staff in the Climate Change and Resiliency Unit, PRED, in order to align with other City homeowner programs.

As stated above, one permanent staff will be required to provide the program with the management needed to achieve the 50-year targets, as per Option two. Additional support for industry training and community engagement activities will continue to be contracted as needed.

Proposed Annual Budget 2024-2029

To implement the recommended proposed permanent program and scale up to meet the 50-year residential targets, the following annual budget of \$610,000 in Table five is proposed starting in 2025, based on the recommended expansion Option two.

The budget is based on an estimated 200-250 stormwater management projects being installed each year through the rebate program. Community engagement, marketing, and communications activities will emphasize easy fixes that will generate additional project installations around downspout redirections and rainfall collection. Industry training activities will lead to more certified firms in Ottawa, which will further drive industry change and project installations not just within the priority areas, but across the

city.

Table 5: Proposed Annual Budget

Item	Amount
Residential Rebates	\$250,000
Community Engagement, Marketing, and Communications	\$150,000
Industry Training	\$25,000
Demonstration Projects	\$30,000
eLearning	\$20,000
Home Assessments for Condos and Coops	\$25,000
Internal Staff	\$110,000
Total	\$610,000

The program will be funded from the Stormwater Retrofit Program in Infrastructure and Water Services IWS (funded through rate). The proposed future RRO program can be funded in 2024 and 2025 from existing funds (existing Stormwater Retrofit Account IO 909131) and then will be subject to annual budget request in 2026.

Monitoring and Reporting

The Key Performance Indicators (KPIs) in Table 6 will be tracked and incorporated into annual program reporting on Ottawa.ca in order to monitor the ongoing progress of RRO in meeting the 50-year targets and determine if program modifications are required.

Table 6: Proposed Key Performance Indicators (KPIs)

Indicator	Target		
	2024	2025	2026-2028
Rebate Applications	75	100	125

Rebate Project Installations	150	200	250
Non-Rebate Project Installations	50	50	50
Industry Certifications	10	10	10
eLearning Sign Ups	100	200	300
Demonstration Project Installations	3	3	3

In addition to the above KPIs, RRO will track the total Directly Connected Impervious Area (DCIA) that is being managed by installed projects in order to track the volume of stormwater being managed through the program.

The program will be reviewed in five years and reports submitted to Committee and Council as needed in the interim if there are recommended program changes.

Risk Management

The proposed permanent program presents several risks including low uptake, high uptake, and installation quality. Table 7 provides more information on anticipated risks as well as planned mitigation actions.

Table 7: Risks and Mitigation

Risk Description	Planned Mitigation
Low program uptake prevents substantial implementation of stormwater management retrofits. Likelihood: L, Impact: M	The pilot has identified which approaches are effective at encouraging installations. If program uptake is significantly lower than expectations, investigations into the root cause of low uptake will be performed. Increased communications efforts, incentive rebate level adjustments, and a more streamlined enrollment process all might help boost program uptake. Adjustments will be made as feasible throughout this period of the program with more substantial recommendations brought forward for the next program review.
High program uptake exceeds the available program funding.	High program uptake would create a financial liability for the City and over-extend program

Likelihood: M, Impact: H	funds. To mitigate this risk a program cap on enrollment in eLearning and in the incentive, program are proposed. Uptake will be reviewed annually, and adjustments to funding caps of specific program measures introduced if needed.
Poorly installed resident-led stormwater practices exacerbate flood risks to their own or adjacent properties. Likelihood: L, Impact: M	Randomized verification of eLearning projects is proposed to ensure conformity with fusion and LID guidelines and to ensure conformity with City of Ottawa bylaws.
Limited contractor capacity to meet demand in the expanded priority areas.	The City will continue to offer professional training and certification to meet both industry and client demand. Additional training sessions will be offered as needed. The City is actively working with Landscape Ontario to improve course content and certification rates.

FINANCIAL IMPLICATIONS

The Rain Ready Ottawa residential stormwater retrofit program will be funded in 2024 and 2025 from existing funds in 909131 Stormwater Retrofit account. Starting in 2026, the funding will be brought forward through the annual budget process.

LEGAL IMPLICATIONS

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

COMMENTS BY THE WARD COUNCILLOR(S)

Through-out the pilot program Councillors from participating wards reported that the program was well received by residents. These Councillors were invited to provide additional feedback during the review.

CONSULTATION

Current and past program participants were consulted in the review process, including individuals who received a home assessment, accessed the eLearning program, or

completed a project using the rebate program. Across all program streams, feedback was consistently positive, participants indicated an average satisfaction of the current program streams at over 80 per cent. Current gaps that were raised through this consultation included the need for additional educational supports, additional resources, increased and expanded incentives, and increased outreach and engagement to improve the participation of their neighbours.

The landscape industry was also consulted, with one-on-one interviews conducted with 12 Fusion Landscape certified individuals. Industry has been broadly supportive of the program, with the incentives singled as an important tool that has reduced financial barriers for clients and resulted in additional project installations. The rebate program has led to business growth and many directly promote Rain Ready Ottawa.

Public Engagement was conducted from February to March 2024 and Councillors were invited to provide their feedback on the existing program. Survey respondents indicated broad concern with regards to the impacts of stormwater on the watershed and their properties. Respondents demonstrated support for the Rain Ready Ottawa program, interest in implementing lot-level stormwater management techniques, and were supportive of the expansion criteria.

See Document 3 for further detail.

ACCESSIBILITY IMPACTS

All Rain Ready Ottawa program information is available in accessible formats.

ASSET MANAGEMENT IMPLICATIONS

Projects supported through the rebate program will be privately owned and maintained at the responsibility of the property owner.

Additional City assets in the form of public rain gardens will be maintained by the City either directly by RRO staff or through maintenance agreements under the direction of the RRO program. Relevant City departments and ward Councillors will be consulted before rain gardens are installed. Costs for ongoing maintenance is not considered significant.

Reducing stormwater runoff from private properties represents a significant component of the Council-approved plans for the City's priority stormwater retrofit areas. Over the long-term duration of these retrofit plans, the cumulative effects of on-site stormwater management will reduce the impacts on receiving water courses and city infrastructure, improving the health of our natural assets and extending the useful service life of the

City's physical assets. Stormwater management retrofits may also help manage capacity in existing stormwater infrastructure and reduce risk to local overland flooding in some areas.

CLIMATE IMPLICATIONS

Rain Ready Ottawa supports the climate adaptation and resiliency goals of the Climate Change Master Plan by equipping residents to better manage stormwater and protect their property from localized flooding in small events. The Climate Projections for the National Capital Region (2020) indicate there will be an increase in total annual precipitation by five per cent by 2030s and eight per cent by 2050s under a high emission scenario. Well-designed on-site stormwater management will contribute to Ottawa's preparedness for changing climate conditions and help alleviate the negative impacts of increased annual precipitation amounts and increased storm frequencies.

DELEGATION OF AUTHORITY IMPLICATIONS

It is recommended in this report that the General Manager, Planning, Real Estate, and Economic Development, or designate, be delegated the authority to negotiate, enter into, execute and amend agreements, which may be required to implement the program as approved by Council. Such agreements will be in accordance with the program requirements detailed in this report and Document 1 as approved by Council and in keeping if applicable City policies.

ECONOMIC IMPLICATIONS

Supports economic diversification by providing industry training to the City's landscaping industry. These small and medium enterprises (SMEs) constitute a component of the City's [urban services economic development area of focus](#). By supporting industry training, the City is supporting these businesses in transitioning their business models to be more sustainable. It helps them engage with the green economy by giving them the training and support needed to implement fusion landscaping techniques. Likewise, this training increases businesses client base by meeting the increasing demand from property and homeowners for environmentally friendly and sustainable landscapes. Business supports can be accessed from businesses located in the urban, suburban, or rural parts of Ottawa, providing equal opportunity for them to benefit from this program.

Supports economic growth by providing rebates for the installation of select stormwater management landscaping techniques, which increases demand for businesses who install and maintain landscapes with these assets. Supports growth in sales for

landscaping retail stores by rebating the cost of landscaping products to residents.

ENVIRONMENTAL IMPLICATIONS

The proposed program supports the goals of the Ottawa River Action Plan, Pinecrest Creek / Westboro Stormwater Management Retrofit Study and Eastern Subwatersheds Stormwater Management Retrofit Study. Better managing rainwater on residential property reduces stormwater runoff and thereby improves water quality and reduces erosion and flooding in receiving watercourses.

INDIGENOUS GENDER AND EQUITY IMPLICATIONS

Rain Ready Ottawa provides resources and supports to homeowners of all income levels. RRO has identified a variety of measures ranging from low cost, such as downspout redirections, to high cost that can all have significant impacts to private properties when properly implemented.

RISK MANAGEMENT IMPLICATIONS

The primary risks relate to excess program demand or low program demand. Likewise, there is a risk of lack of capacity to meet demand. Risk management strategies have been identified in the report, including adjusting promotion activities, incentive levels, or training. These approaches were successfully applied during the pilot to respond to excess demand for home assessments, and to promote greater uptake of certain projects like rain gardens.

RRO reduces risks to City infrastructure by reducing the volume of stormwater entering City systems, allowing for increased capacity during certain storm events.

RURAL IMPLICATIONS

Educational resources provided by Rain Ready Ottawa are available to residents living within the rural areas of Ottawa to assist them in improving stormwater management on their properties. Business training and certification provided by Rain Ready Ottawa is available to businesses located within the rural areas of Ottawa.

TECHNOLOGY IMPLICATIONS

Information Technology Services (ITS) has been consulted on the proposed updates to RRO's website, application tool, eLearning tool and projected future technological needs. ITS will work with the Climate Change and Resiliency team to implement solutions to meet these needs.

TERM OF COUNCIL PRIORITIES

Rain Ready Ottawa supports building a city that is green and resilient by supporting actions that can improve the health of Ottawa's watershed and natural environment. The actions promoted and supported by Rain Ready Ottawa can benefit residents by helping take actions that will better prepare them for the impacts of current and future rainfall events.

The program also supports building a city with a diversified and prosperous economy by provided training and support to companies that are seeking to engage new customer groups and transition their business models to be more sustainable.

SUPPORTING DOCUMENTATION

Document 1: Rain Ready Ottawa Program Review and Recommendations

Document 2: Summary of Participant, Stakeholder, and Public Engagement Feedback

DISPOSITION

Climate Change and Resiliency staff in PRED will implement the Rain Ready Ottawa program, as approved and in keeping with the City's Grants and Contribution Policy. A review of the program will occur in 5 years with reports to Committee and Council in the interim if there are proposed program improvements.