Subject: **Water Rate Structure Review**

File Number: ACS2025-FCS-REV-0004

Report to Joint Agriculture and Rural Affairs Committee and Environment and Climate Change Committee on 20 May 2025

and Council 28 May 2025

Submitted on May 8, 2025 by Joseph Muhuni, Deputy City Treasurer, Revenue, Finance and Corporate Services Department

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Ward: Citywide

Objet : Examen du barème des redevances d'eau

Numéro de dossier : ACS2025-FCS-REV-0004

Rapport présenté au Comité de l'agriculture et des affaires rurales et au Comité de l'environnement du changement climatique le 20 mai 2025

et au Conseil le 28 mai 2025

Soumis le 8 mai 2025 par Joseph Muhuni, Trésorier municipal adjoint, Recettes, Direction générale des finances et des services organisationnels

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REPORT RECOMMENDATIONS

That the joint Agriculture and Rural Affairs Committee and Environment and Climate Change Committee recommend that Council approve revisions to the Water, Wastewater and Stormwater Services Rate Structure, as described in this report and including the following:

1. **The stormwater rate structure based on impervious surface area, referred to as the "Blended option" in this report, for the properties within the Official Plan urban boundary to be implemented in 2027.**
2. **The stormwater rate structure based on impervious surface area, referred to as the "Blended option" in this report, for properties within the villages of Manotick, Richmond and Carp to be implemented in 2027.**
3. **A roadside ditch maintenance special area levy for all other properties within the Official Plan rural boundary, except the villages of Manotick, Richmond and Carp, governed by Agriculture and Rural Affairs Committee to be implemented in 2027.**
4. **Approve the establishment of a Rural and Urban roadside ditch maintenance capital program as part of the 2026 budget process.**
5. **Approve the funding allocation to Rural and Urban roadside ditch maintenance capital program as outlined in this report starting 2027.**
6. **The transfer of funding for culverts from the stormwater program to the City's general levy to be implemented in 2027 with the new urban and village stormwater rate structure.**
7. **The water and wastewater rate structure for drinking water services and wastewater services, referred to as the "Made-To-Measure" option in this report, with fixed charges and separate tiered structures for residential, multi-residential and non-residential properties to be implemented in 2027.**

8. **The consolidation of the Fire Supply Fund into the overall Water Fund with the implementation of the new water and wastewater rate structure.**

9. **Increase the proportion of total water and wastewater revenues recovered from fixed fees from 20 per cent to 35 per cent with the implementation of the new water and wastewater rate structure.**

10. **A wholesale water rate, referred to as the "High-Volume Consumer Rate" in this report, with the implementation of the new water and wastewater rate structure.**

11. **A bulk fill water rate to be implemented in 2026.**

12. **Transfer the oversight of funds allocated toward rural ditch maintenance to the Agriculture and Rural Affairs Committee.**

RECOMMANDATIONS DU RAPPORT

Que le Comité mixte composé du Comité de l'agriculture et des affaires rurales et du Comité de l'environnement et du changement climatique recommande au Conseil d'approuver les révisions du barème de redevances des services d'eau, d'eaux usées et d'eaux pluviales comme décrites dans le présent rapport notamment :

1. **Le barème de redevances des eaux pluviales basé sur la superficie imperméable (désigné comme l'option « harmonisée » dans le présent rapport) pour les propriétés situées à l'intérieur des limites urbaines du Plan officiel sera mis en œuvre en 2027.**

2. **Le barème de redevances des eaux pluviales basé sur la surface imperméable (désigné comme l'option « harmonisée » dans le présent rapport) pour les propriétés situées dans les villages de Manotick, Richmond et Carp sera mis en œuvre en 2027.**

3. **Une cotisation spéciale pour l'entretien des fossés en bordure de route pour toutes les autres propriétés situées dans les limites rurales du plan officiel sera mise en œuvre en 2027, à l'exception des villages de Manotick, Richmond et Carp, régis par le Comité de l'agriculture et des affaires rurales.**

4. **Approuver l'intégration d'un programme d'entretien des fossés dans les secteurs rural et urbain dans le processus budgétaire de 2026.**

5. **Approuver l'affectation de fonds au Programme d'entretien des fossés dans les secteurs rural et urbain dès 2027, comme l'indique le présent rapport.**

6. **Le transfert des ponceaux financés par le programme des eaux pluviales à la taxe générale de la Ville sera mis en œuvre en 2027 avec le nouveau barème de redevances des eaux pluviales pour les régions urbaines et les villages.**

7. **Le barème de redevances de l'eau et des eaux usées pour les services d'eau potable et d'eaux usées (désigné comme l'option « sur mesure » dans le présent rapport) avec des frais fixes et un régime distinct de tarification à niveaux pour les propriétés résidentielles et non résidentielles et les immeubles à logements multiples sera mis en œuvre en 2027.**

8. **Le fonds d'eau-incendie sera intégré au fonds global de la gestion de l'eau à la suite de la mise en œuvre du nouveau barème de redevances de l'eau et des eaux usées.**

9. **Augmentation de la part des recettes totales de l'eau et des eaux usées provenant des frais fixes de 20 % à 35 %, avec la mise en œuvre du nouveau barème de redevances pour l'eau et les eaux usées.**

10. **Un tarif de gros de l'eau (désigné comme le « tarif pour les grands consommateurs » dans le présent rapport), avec la mise en œuvre du nouveau barème de redevances pour l'eau et les eaux usées.**

11. **Mise en place d'un tarif pour le remplissage en vrac d'eau en 2026.**

12. **Transfert de la supervision des fonds alloués à l'entretien des fossés ruraux au Comité de l'agriculture et des affaires rurales.**

EXECUTIVE SUMMARY

Assumption and Analysis

This report presents a comprehensive review of the City of Ottawa's water, wastewater, and stormwater rate structures, undertaken in response to Council direction (ACS2023-

FCS-REV-0006) to address challenges with the current structure related to fairness, transparency, and financial sustainability. Water, wastewater, and stormwater services are fundamental to public health, environmental protection, and economic stability across the City. These services are delivered through large, complex systems, and ensuring their well-maintained and financially sustainable operation is a key priority for the City.

The existing rate structure faces several challenges. Financially, the water and wastewater system's reliance on variable consumption-based fees (80 per cent of current revenue) creates instability, particularly as per-account water usage has declined despite significant account growth since 1998. This structure does not align well with the reality that approximately 90 per cent of the costs to deliver these services are fixed, related to maintaining extensive infrastructure regardless of consumption levels. Furthermore, the current fixed water and wastewater, and variable charges are not equitably distributed across different property types (residential, multi-residential, non-residential), leading to disparities in the cost per cubic metre paid.

Under the current structure increasing the proportion of revenues recovered from fixed costs would disproportionately affect residential clients who on average pay more than half their bill in fixed charges. For stormwater, the current structure, which uses property assessment for non-residential charges and exempts some properties (like vacant land and some farms), is inequitable and does not reflect the actual impact a property has on the drainage system. Impervious surface area (a property's total paved or other hard surface area which are considered highly resistant to water infiltration) is recognized as the industry standard and a more accurate metric for determining stormwater charges, as it directly correlates with runoff volume and demands on the system.

The review of the City’s water rate structure was guided by principles of fairness and equity, affordability, transparency, financial sustainability, supporting economic development, and promoting conservation. The proposed rate structure revisions aim to create a more equitable and stable funding model for all three services.

The recommendations from this review are revenue neutral, meaning that the City does not get any additional revenues from these changes. Key recommendations include:

- Transitioning the urban and village stormwater rate structure to an impervious surface area-based model.

- Implementing a special area levy for roadside ditch maintenance in rural areas, with culverts being funded through the general tax levy.
- Increasing the proportion of fixed cost recovery from 20 per cent to 35 per cent.
- Adopting a "made-to-measure" tiered rate structure with separate tiers tailored to residential, multi-residential, and non-residential consumption patterns.
- Consolidating the fire supply charge into the overall water rate for simplicity and transparency.
- Adopting special purpose rates for high-volume users and bulk fill water.

The proposed fixed charge percentage of 35 per cent places Ottawa within the mid-range compared to other large Ontario municipalities, balancing financial stability with conservation incentives. Benchmarking indicates that using impervious surface for urban stormwater billing and adopting a declining tier for non-residential water use aligns with or provides a competitive edge compared to peer municipalities.

The proposed changes are expected to result in a more equitable distribution of costs.

- In rural areas, vacant land properties and some farms would begin contributing to stormwater costs, while most rural residential properties would see a decrease in their stormwater fees.
- In urban areas, implementing impervious-based billing shifts costs from multi-residential properties to non-residential properties will better reflect the distribution of impervious surfaces.
- For water and wastewater, the "made-to-measure" model will ensure a fairer balance of fixed and variable charges and cost per cubic metre across all property types, providing relief for lower consumption users.

Overall, the combined impact analysis indicates that the majority of ratepayers (89 per cent) will experience a billing change of plus or minus 10 per cent compared to the current structure, with a small percentage seeing larger increases or decreases. The average multi-residential property will see no change, the average residential property will see a slight 2 per cent decrease and an average non-residential property will see a 5 per cent increase as a result of these recommendations.

Roadside ditch maintenance has been a topic of importance for in recent years for Rural and Urban residents alike. The report proposes allocating $5.68 million towards rural

roadside ditch maintenance and an allocation of $1.045 million towards urban roadside ditch maintenance to ensure sustainable ditch maintenance works.

Affordability remains a key consideration. Analyses using Environmental Protective Agency's Financial Capability Assessment guidance, and the 2024 BMA Municipal Study indicate that Ottawa's current and proposed water and wastewater rates are relatively affordable compared to median household income and peer municipalities. Existing financial assistance programs are available for low-income households, and efforts will focus on increasing awareness and access to these programs.

Implementation of the new water rate structure is expected to take approximately 21 months, involving necessary IT system modifications to support the new billing models, extensive public education and communication campaigns, development of an online portal for residents to view impervious surface data and manage appeals, and temporary staffing increases to support the transition and handle increased customer inquiries. A clear dispute resolution process for stormwater billing challenges will be established. Performance metrics will be monitored to ensure the long-term success of the revised structure against objectives like cost recovery, revenue stability, and customer satisfaction.

Financial Implications

The proposed rate structure revisions directly address the financial challenges identified in the current system, particularly the misalignment between fixed infrastructure costs and revenue dependence on variable consumption. By increasing the fixed portion of water and wastewater revenues and implementing a more equitable stormwater funding model, the recommendations aim to enhance financial stability and predictability, providing a stronger foundation for funding the operations, maintenance, and necessary capital investments in the City's water, wastewater, and stormwater infrastructure as outlined in the Long-Range Financial Plan.

Implementation of the recommended changes will require initial investments in IT system modifications, data acquisition and processing, and public communication efforts, with estimated costs detailed in the report's discussion section. Long-term, the structure is designed to support full cost recovery and sustainable asset management.

Public Consultation/Input

Extensive public and stakeholder consultations were integral to the rate structure review process. This included a city-wide online survey that garnered nearly 40,000 responses, four in-person community engagement sessions in rural wards with approximately 700

participants, and sector-specific meetings with representatives from small businesses, large commercial enterprises, educational institutions, healthcare, non-profits, multi-residential stakeholders, the Township of Russell, and federal organizations. Feedback received highlighted key concerns and priorities, including the importance of affordability, the need for greater transparency in billing, and the desire for a fairer distribution of costs. Public input specifically influenced the recommendation to increase the fixed percentage of water and wastewater charges, with survey respondents on average suggesting 48 percent of their bill being fixed for water and wastewater charges was reasonable given the infrastructure costs. Consultation also underscored the need for tailored solutions for rural stormwater management and accessible tools for residents to understand and challenge proposed charges. The "made-to-measure" water and wastewater tier structure, with separate tiers for different property types, was strongly supported by 74 per cent of survey respondents over maintaining the existing structure. The feedback gathered throughout the consultation process directly informed the development and refinement of the proposed rate structure recommendations. A detailed summary of the consultation process and findings is provided in Document 1 - What We Heard Report.

RÉSUMÉ

Hypothèse et analyse

Le présent rapport fait état d'un examen exhaustif du barème de redevances pour l'eau, les eaux usées et les eaux pluviales de la Ville d'Ottawa, qui a été mené en réponse à la consigne du Conseil (ACS2023-FCS-REV-0006) visant à régler les problèmes que pose le barème actuel en termes d'équité, de transparence et de viabilité financière. Les services d'eau, d'eaux usées et d'eaux pluviales sont fondamentaux pour la santé publique, la protection de l'environnement et la stabilité économique dans toute la ville. Ils sont fournis par le biais de réseaux vastes et complexes, et la Ville s'est donné pour priorité clé de s'assurer qu'ils sont bien entretenus et exploités d'une manière financièrement viable.

Le barème de redevances existant est confronté à plusieurs défis. Du point de vue financier, la dépendance du réseau d'eau et d'eaux usées à des redevances variables basées sur la consommation (80 pour cent des recettes actuelles) crée une instabilité, d'autant plus que la consommation d'eau par compte a diminué en dépit d'une augmentation significative des comptes depuis 1998. Cette structure ne cadre pas bien avec la réalité selon laquelle environ 90 pour cent des coûts pour fournir ces services sont fixes, reliés à l'entretien d'une vaste infrastructure, peu importe les niveaux de

consommation. De plus, les redevances fixes actuelles pour l'eau et les eaux usées, et variables ne sont pas réparties équitablement entre les différents types de propriétés (résidentielles, à logements multiples, non résidentielles), ce qui entraîne des disparités au niveau du coût par mètre cube payé.

Selon le barème actuel, le fait d'augmenter la proportion de recettes tirées des coûts fixes toucherait d'une manière disproportionnée les clients résidentiels dont les frais fixes représentent en moyenne plus de la moitié de leur facture. Pour les eaux pluviales, le barème actuel, qui utilise l'évaluation foncière pour les redevances non résidentielles et exempte certaines propriétés (comme les terrains vacants et certaines fermes), est inéquitable et ne reflète pas l'incidence réelle d'une propriété sur le système de drainage. La surface imperméable (surface totale pavée ou toute autre surface dure d'une propriété qui est considérée comme hautement résistante aux infiltrations d'eau) est reconnue comme la norme de l'industrie et une mesure plus exacte pour déterminer les redevances pour les eaux pluviales, car elle est directement liée au volume des eaux de ruissellement et à la demande exercée sur le réseau.

L'examen du barème des redevances d'eau de la Ville a obéi aux principes de justice et d'équité, d'abordabilité, de transparence, de viabilité financière, de soutien du développement économique et de promotion de la conservation. Les révisions proposées du barème de redevances visent à créer un modèle de financement plus équitable et plus stable pour les trois services.

Les recommandations découlant de cet examen sont neutres du point de vue des recettes, ce qui veut dire que la Ville ne tire pas de recettes supplémentaires de ces changements. Les principales recommandations consistent à :

- remplacer le barème de redevances pour les eaux pluviales urbaines et villageoises par un modèle basé sur la surface imperméable;
- instaurer une cotisation spéciale pour l'entretien des fossés en bordure de route dans les secteurs ruraux, les ponceaux étant financés par la taxe générale prélevée;
- augmenter la proportion de recouvrement des coûts fixes de 20 à 35 pour cent;
- adopter un barème de redevances « sur mesure » comportant des paliers distincts adaptés aux habitudes de consommation des propriétés résidentielles, à logements multiples et non résidentielles;

- intégrer la redevance pour l'eau-incendie dans la redevance d'eau globale dans un souci de simplicité et de transparence;
- adopter des redevances à usage spécial pour les grands consommateurs et le remplissage d'eau en vrac.

Le pourcentage de tarif fixe proposé de 35 pour cent place Ottawa dans la fourchette intermédiaire par rapport aux autres grandes municipalités de l'Ontario, faisant ainsi la part entre la stabilité financière et les incitatifs pour la conservation. L'analyse comparative montre que l'utilisation de la surface imperméable pour la facturation des eaux pluviales urbaines et l'adoption d'un niveau dégressif pour la consommation d'eau non résidentielle s'aligne sur les municipalités comparables ou fournit un avantage concurrentiel sur celles-ci.

Les changements proposés devraient se traduire par une répartition plus équitable des coûts.

- Dans les secteurs ruraux, les terrains vacants et certaines fermes commenceraient à contribuer aux coûts liés aux eaux pluviales, tandis que la plupart des propriétés résidentielles rurales constateraient une diminution de leurs redevances pour les eaux pluviales.
- Dans les zones urbaines, la mise en place de la facturation en fonction de la surface imperméable transfère les coûts des propriétés à logements multiples aux propriétés non résidentielles, ce qui reflètera mieux la répartition des surfaces imperméables.
- Pour l'eau et les eaux usées, le modèle « sur mesure » assurera un équilibre plus juste des redevances fixes et variables et du coût par mètre cube pour tous les types de propriétés, ce qui apportera un allègement à ceux qui consomment moins.

Globalement, l'analyse des retombées montre que la plupart des contribuables (89 pour cent) constateront un changement de facturation de plus ou moins 10 pour cent par rapport au barème actuel, et qu'un petit pourcentage constatera des augmentations ou des baisses plus importantes. Ces recommandations n'entraîneront aucun changement pour une propriété à logements multiples moyenne, et se traduiront par une légère baisse de 2 pour cent dans le cas d'une propriété résidentielle moyenne et par une augmentation de 5 pour cent dans le cas d'une propriété non résidentielle moyenne.

L’entretien des fossés a été un sujet important ces dernières années pour les résidents ruraux et urbains. Le rapport propose d’affecter 5,68 millions de dollars à l’entretien des fossés ruraux et 1,045 million de dollars à celui des fossés urbains afin d’en assurer l’entretien durable.

L’abordabilité demeure une considération essentielle. Les analyses qui suivent les directives de l’Environmental Protective Agency’s Financial Capability Assessment (en anglais seulement) et l’étude municipale de BMA (en anglais seulement) montrent que les redevances actuelles et proposées d’Ottawa pour l’eau et les eaux usées sont relativement abordables par rapport au revenu moyen des ménages et aux municipalités comparables. Il existe des programmes d’aide financière pour les ménages à faible revenu, et on va s’attacher à accroître la sensibilisation et l’accès à ces programmes.

La mise en œuvre du nouveau barème de redevances pour l’eau devrait prendre environ 21 mois, ce qui impliquera des modifications nécessaires des systèmes informatiques pour soutenir les nouveaux modèles de facturation, des campagnes d’information et de communication à grande échelle pour le public, la création d’un portail en ligne pour permettre aux résidents de consulter les données sur la surface imperméable et de gérer les appels, et des augmentations temporaires des effectifs pour soutenir la transition et traiter les demandes de renseignements accrues des clients. Un processus clair de règlement des différends pour les problèmes de facturation des eaux pluviales sera établi. Les mesures du rendement seront surveillées pour assurer la réussite à long terme de la structure révisée en fonction d’objectifs comme le recouvrement des coûts, la stabilité des recettes et la satisfaction de la clientèle.

Implications financières

Les révisions proposées du barème de redevances répondent directement aux défis financiers relevés dans le système actuel, en particulier la non-concordance entre les coûts d’infrastructure fixes et la dépendance des recettes à la consommation variable. En augmentant la portion fixe des recettes liées à l’eau et aux eaux usées et en instaurant un modèle de financement des eaux pluviales plus équitable, les recommandations visent à améliorer la stabilité et la prévisibilité financières, ce qui fournira des bases plus solides pour le financement des opérations, de l’entretien et des investissements nécessaires dans les infrastructures d’eau, d’eaux usées et d’eaux pluviales de la Ville, comme énoncé dans le Plan financier à long terme.

La mise en œuvre des changements recommandés nécessitera des investissements initiaux dans les modifications des systèmes informatiques, l'acquisition et le traitement de données, et les efforts de communication avec le public, dont les coûts estimatifs sont détaillés dans la section du rapport portant sur l'analyse. À long terme, le barème est conçu pour soutenir le recouvrement complet des coûts et la gestion durable des actifs.

Consultation et commentaires du public

Les vastes consultations du public et des intervenants ont fait partie intégrante du processus d'examen du barème de redevances. Elles comprenaient notamment un sondage en ligne à l'échelle de la ville qui a obtenu près de 40 000 réponses, quatre séances de mobilisation communautaire en personne dans les quartiers ruraux ayant attiré environ 700 participants, et des réunions spécifiques aux secteurs avec des représentants de petites entreprises, de grandes entreprises commerciales, d'établissements d'enseignement, d'organismes de soins de santé et à but non lucratif, d'immeubles à logements multiples , du canton de Russell et d'organismes fédéraux. La rétroaction reçue a mis en évidence les principales préoccupations et priorités, dont l'importance de l'abordabilité, le besoin d'une plus grande transparence dans la facturation et le désir d'avoir une répartition plus équitable des coûts. Les commentaires du public ont spécifiquement influencé la recommandation d'augmenter le pourcentage fixe des redevances d'eau et d'eaux usées, les répondants au sondage ayant suggéré en moyenne qu'une proportion fixe de 48 pour cent de leur facture pour les redevances d'eau et d'eaux usées était raisonnable étant donné les coûts d'infrastructure. La consultation a également souligné le besoin d'avoir des solutions sur mesure pour la gestion des eaux pluviales rurales et des outils accessibles pour que les résidents puissent comprendre et remettre en question les changements proposés. Le barème « sur mesure » pour l'eau et les eaux usées comportant des paliers distincts pour les différents types de propriétés a été fortement appuyé par 74 pour cent des répondants, qui ont préféré cela au maintien du barème existant. La rétroaction recueillie tout au long du processus de consultation a directement éclairé l'élaboration et le perfectionnement des recommandations proposées pour le barème de redevances. Un résumé détaillé du processus de consultation et des conclusions est fourni dans le document 1 – Rapport « Ce que nous avons entendu ».

BACKGROUND

The Importance of Water, Wastewater and Stormwater Services

Water is an essential resource for residents, businesses, and institutions across the City of Ottawa. Reliable access to clean drinking water, efficient wastewater treatment, and effective stormwater management is critical to public health, environmental sustainability, and economic stability. Ensuring these services are well-maintained and financially sustainable is a key priority for the City.

According to a survey conducted as part of the Water Rate Structure Review:

- 98 per cent of respondents identified City water as their main water source, reinforcing the importance of maintaining a high-quality and reliable water supply.
- 94 per cent of respondents indicated that disruptions to the water supply would significantly impact their daily tasks, including drinking, cooking, hygiene, and business operations.

This strong reliance on municipal water underscores the necessity of a well-structured and adequately funded water system.

Overview of the City’s Water, Wastewater and Stormwater Systems

The City of Ottawa provides drinking water, wastewater and stormwater services to residents, industrial, commercial and institutional (ICI) organizations, as well as bulk water services to the Township of Russell and Flusher Hydrant permit holders.

The City of Ottawa's water, wastewater and stormwater systems are large and complex. Factors contributing to this complexity include:

- The City covers a large geographic area with significant rural, suburban and urban communities, each with different infrastructure profiles and needs.
- Most infrastructure feeds into either the two water treatment plants or the single wastewater treatment facility.
- Ottawa's natural features include an extensive network of rivers and streams, including portions of four major rivers (the Rideau, South Nation, Mississippi and Ottawa Rivers), and four major tributaries (the Carp, Jock, and Castor Rivers and the Bear Brook), which need protection.
- Over 32,400 households and 5,800 businesses receive their drinking water from private wells, making groundwater protection critical.
- Much of the City’s infrastructure was constructed by the 12 former municipal governments that make up the amalgamated City of Ottawa, meaning

infrastructure was built over an extended period of time to different standards, with different levels of investment and maintenance.

There are three types of water systems that the City of Ottawa manages: drinking water, stormwater and wastewater.

Drinking Water

Drinking Water Services ensure that over 265,000 households and businesses in the serviced areas of the City have clean, high-quality drinking water on demand. It is a 24-hour a day, 7-days a week, 365 days a year operation, with many safeguards and quality assurance processes.

The system at a glance includes:

- 3,356 km of watermain pipes, 2 treatment plants, 265,000 water meters, and 36 drinking water facilities including elevated storage tanks, pumping stations, reservoirs, communal well systems and administrative buildings.
- 2025 total budget of $211.6 million; 2025 capital budget is $68.7 million (with an additional $68.5 million for integrated water and wastewater services, all for renewal of assets).

Wastewater

Wastewater Services take care of the City's sanitary sewers, making sure that wastewater, and, with combined sewers, stormwater, is properly cleaned and treated before it is discharged into the Ottawa River.

The system at a glance includes:

- Over 3,132 km of collection pipes, collectors, forcemains and trunk sewers, 75 facilities including sanitary sewage and storm water pumping stations, combined sewage regulators/storage facilities (including the Combined Sewage Storage Tunnel), odour control facilities and ROPEC.
- 2025 total budget of $184.2 million; 2025 capital budget is $79.0 million (with an additional $51.6 million for integrated water and wastewater services, all for renewal of assets).

Stormwater

Stormwater Services manage the safe transportation of rain and meltwater runoff throughout the City to protect roads, properties, and local waterways from flooding and erosion and help with groundwater protection. This is a capital-intensive service with approximately 70 to 75 per cent of the funding requirement reflecting a contribution to capital each year for the renewal of assets.

The system at a glance includes:

- 3,154 km of collections and conveyance including 2,303 outfalls, 277 stormwater management facilities including interceptors, infiltration, underground storage, oil and grit separators, wet ponds, low impact developments, dry ponds, wetlands, in-line pipes, flow monitoring, flow control and pumping stations.
- 2025 total budget of $103.4 million; 2025 capital budget is $33.8 million (with an additional $42.4 million for integrated water and wastewater services, all for renewal of assets).

The remainder is allocated to the operations and maintenance of the stormwater system. These operational costs include maintenance of the linear network, surface water quality management, stormwater management, drainage services, engineering services, business services, infrastructure upkeep, water quality monitoring and erosion monitoring.

Given the significant financial investment required, balancing costs and revenues remains a challenge for the City's stormwater program.

Historical Development of Water, Wastewater and Stormwater Rate Structures

Period from 2001 to 2015 (Legacy Structure)

The history of water, wastewater, and stormwater rate structures in Ottawa from 2001 to 2016 is rooted in the amalgamation of 12 local governments into the City of Ottawa. To facilitate this transition, the Ottawa Transition Board engaged Hemson Consulting to analyze and recommend a unified tax, levy, and fee structure.

Key developments during this period:

1. The Hemson Report (January 2001) highlighted the complexities of merging different municipal funding models for water, wastewater, and stormwater services.
2. At the time, various municipalities used a combination of general levies and local sewer surcharges to fund stormwater and sanitary services.
3. Water rates and sewer surcharges varied significantly across municipalities, with some municipalities unable to fully cover costs through these mechanisms.
4. The Hemson Report recommended establishing separate rural and urban stormwater levies, arguing that stormwater management was more closely related to road, park, and open space programs than to water consumption.
5. The Ottawa Transition Board ultimately decided to fund both stormwater and sanitary sewer services entirely through the sewer surcharge.

6. In March 2001, City Council received the report Financing Methods - Funding City Services (ACS2001-CRS-FIN-0009) which recommended harmonizing the sewer surcharge.
7. This recommendation was approved on July 11, 2001, removing storm and sanitary sewer costs from property tax bills and incorporating them into the sewer surcharge rate on water bills.

As a result of these recommendations:

- Properties not connected to City water, that did not receive a water bill, stopped paying for stormwater.
- Property taxes decreased by an average of $43 in former urban and suburban municipalities.
- Property taxes decreased by $18 in former rural municipalities.
- When first implemented in 2001, the combined sanitary and stormwater surcharge was set at 166 per cent of the water bill.

Over time, the combined sanitary and stormwater surcharge decreased to 117 per cent of the water rate, continuing to cover both sanitary and stormwater services. Water services remained charged on a uniform consumption basis, with customers paying a set amount per cubic metre of metered water usage.

2016 Review

In 2016, Council approved a new water rate structure (ACS2016-CSD-FIN-0008), which was a combination of fixed and variable charges, replacing the previous model that relied entirely on consumption-based fees.

Key features of the 2016 rate structure model:

- A fixed component was added to reflect that most costs related to delivering reliable drinking water and sewer services are fixed, regardless of water usage.
- The variable component was included to encourage water conservation and reduce costs for low users.
- The fixed fee was introduced at only 20 per cent fixed revenue to minimize impact on the average residential consumer.
- Stormwater charges were separated from the sewer surcharge and introduced as a standalone fixed fee.
- The stormwater fee was phased in over four years for properties not connected to the City's wastewater system.

- Stormwater charges for non-residential properties were based on property assessment.
- Although impervious surfaces were discussed as a basis for stormwater billing, the lack of readily available data led to using property assessment for non-residential properties.
- Council directed staff to explore a billing system based on impervious area in future reviews.

Overview of Current Water Rate Structure

All of the City of Ottawa's water services are currently funded on a full cost-recovery basis through a user fee paid by those residents and businesses that are directly connected to the City's water and wastewater pipe and treatment systems.

The specific fees are determined by:

- **Rate Budget**: Approved by City Council every year based on the Long-Range Financial Plan requirements, determining how much the City will spend on these services.
- **Rate Structure**: A mathematical formula used to determine the share of the budget that each user will pay on their water bill.

Water and Wastewater Components

The City's current water and wastewater rate structure consists of both fixed and variable charges:

- Fixed charges (20 per cent of total revenue):
    - Based on meter size
    - Divided into three components: water, wastewater, and fire supply charges
- Variable charges (80 per cent of total revenue) follow a single set of inclining tiers designed to encourage conservation:
    - Tier 1: Applies to consumption up to 6 cubic metres (lowest rate)
    - Tier 2: Covers usage between 7 and 25 cubic metres
    - Tier 3: Applies to usage between 26 and 180 cubic metres
    - Tier 4: Any usage exceeding 180 cubic metres (highest rate category)

This tiered structure is intended to ensure that higher water users pay a progressively higher rate while maintaining affordability for those with lower consumption levels.

Stormwater Component

The current stormwater fee structure includes a basic rate with discounted rates for those not connected to City services. Charges are based on three main criteria:

- Property type: residential or non-residential
- Service area: urban or rural
- Service type: connected or non-connected to wastewater services

Each fee is either tiered or discounted to reflect the cost of service received by each property type as accurately as possible.

Residential properties:

- Connected single and semi-detached homes pay the base rate.
- Connected townhouses and apartments receive a 50 per cent discount from the base rate.
- Urban non-connected properties receive a 30 per cent discount from the base rate.
- Rural non-connected properties receive a 50 per cent discount from the base rate.

Non-residential properties (Industrial, Commercial, Institutional - ICI):

- Divided into eight tiers based on assessed property value.
- The stormwater charge is a flat fee calculated using the current year's assessed value as determined by MPAC.
- Rural ICI properties not connected to City wastewater services: 30 per cent reduction from the equivalent connected property stormwater charge.

Vacant land and some Farm properties are exempt from charges, despite benefiting from overall stormwater management.

Figure 1: Current Stormwater Rate Structure

Residential/Multi-Residential		
Urban/Rural	**Connected/Not Connected**	
	Single/Semi	Townhouse/Apt

Non-Residential								
Urban/Rural	**Connected/Not Connected**							
	$0-$300k	$300k-$1M	$1M-$5M	$5M-$20M	$20M-$50M	$50M-$100M	$100M-$150M	$150M+

The Need for a Rate Structure Revision

In response to identified concerns, the City initiated a review of the existing rate structure to address challenges related to fairness, transparency, and financial sustainability. The review aims to ensure that all users contribute equitably to the cost of water, wastewater, and stormwater services while maintaining affordability and promoting conservation.

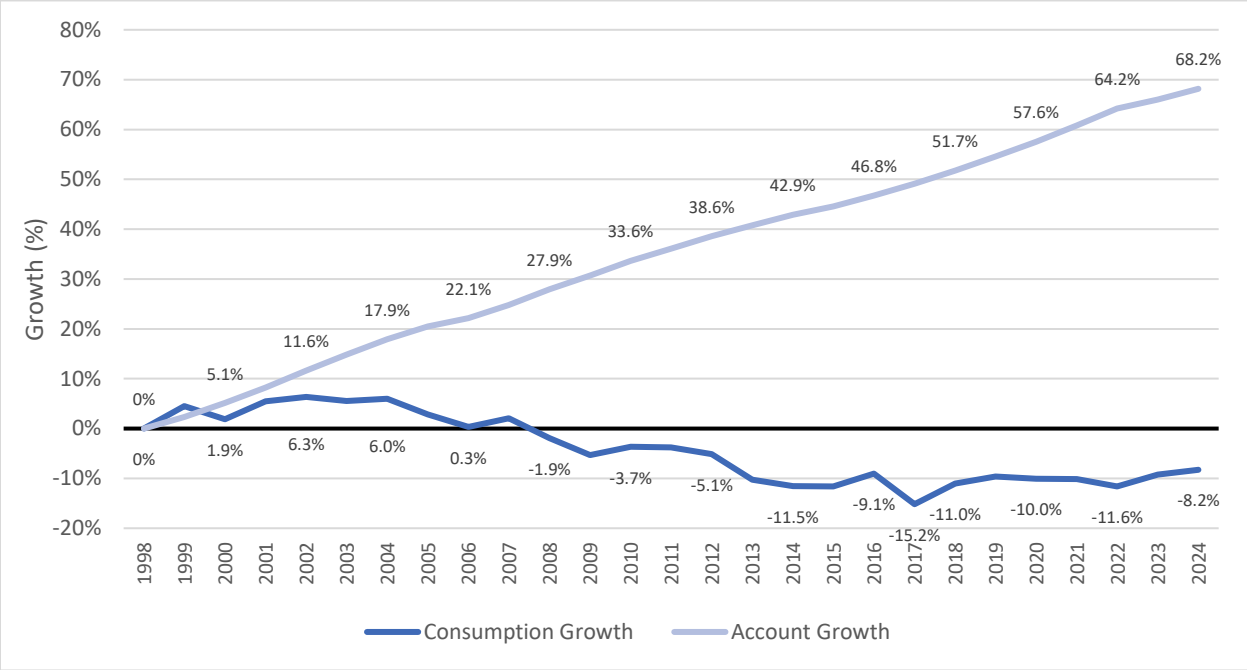
Financial Stability

Approximately 90 per cent of the costs to deliver water, wastewater, fire supply, and stormwater services are fixed, reflecting the size, age, and complexity of the infrastructure rather than individual water usage.

There are three main challenges with the current structure:

- The system expands each year due to new developments and population growth.
- Maintaining financial stability requires recovering a greater proportion of infrastructure maintenance costs through fixed fees.
- Under the current rate structure, only 20 per cent of revenue is recovered through fixed fees, despite 90 per cent of costs being fixed.

Graph 1: Cumulative Account and Consumption Growth since 1998



Graph 1 illustrates the risk of heavily relying on water consumption as a metric for water and wastewater billing, including:

- The number of accounts has grown by 68.2 per cent from 1998 to 2024.
- Total water consumption has declined, with periods where consumption fell as much as 15 per cent below 1998 levels.

This trend highlights the success of conservation efforts and a decline in per-account water usage.

With 80 per cent of the City's water and wastewater revenue tied to variable consumption-based fees, this creates financial instability. A billing model dependent on declining and unpredictable consumption makes it difficult for staff to set reliable budgets, increasing financial risk and limiting the City’s ability to fund critical infrastructure and service delivery.

Equity for Stormwater Billing

At the time of the 2016 review, stormwater charges for non-residential properties were based on property assessment due to the lack of impervious surface data. Assessed property value is not an equitable measure of impervious area, or the level of stormwater services required. Recognizing the limitations of this approach, Council directed staff to explore a billing system based on impervious area in future reviews.

Impervious space refers to the total paved or other hard surface area of a property, like building and structure rooftops, which are considered highly resistant to the infiltration of water. Total imperviousness provides a representative measure of the demand that a given property places on the City's stormwater system.

Impervious surface as a billing metric is:

- Widely used by municipalities to determine stormwater rates.
- Considered the industry standard when measuring the strain, a property has on the stormwater system.
- A more accurate, timely and cost-effective method for City staff with the recent advancements in aerial imagery and artificial intelligence technology.

Council Direction for Second Rate Review

In December 2023, Council approved the Water Rate Structure Review Framework and Update report (ACS2023-FCS-REV-0006) directing City staff to develop a stormwater rate structure for consideration, that considers impervious area as the basis for fee calculation, incorporating guiding principles and a consultation process with the public and stakeholders.

Following this approval, Revenue Services continued reviewing the existing rate structure, following Council's direction to address challenges related to fairness, transparency, and financial sustainability. The review aimed to ensure that all users contribute equitably to the cost of water, wastewater, and stormwater services while maintaining affordability and promoting conservation.

Review Framework and Guiding Principles

The 2023 report outlined the methodology and objectives of the rate review, aiming to ensure fairness, equity, and environmental responsibility in the water, wastewater, and stormwater rate structure The rate structure review is governed by six guiding principles and two primary frameworks.

Guiding Principles

The rate structure review is guided by the following six key principles:

- **Fairness and equity** ensure that services are paid for in proportion to the benefit received, leading to an improved distribution of stormwater billing.
- **Affordability** ensures that basic water consumption remains accessible to all residents.
- **Transparency** aligns with industry best practices to provide clarity for the public

and ease of administration for the City.

- **Financial sustainability** aims to recover full operational costs while maintaining infrastructure in good repair and ensuring sufficient fixed-cost recovery.
- **Supporting economic development** keeps Ottawa's rates competitive with similar Ontario municipalities.
- **Promoting conservation** encourages the reduction of impervious surfaces and water consumption to effectively manage system demand.

Water, Wastewater, and Fire Supply Review Framework

The Water, Wastewater, and Fire Supply Rate Review Framework includes the following key elements:

- Maintains separate fees for each service to enhance transparency and accountability.
- Retains both fixed and consumption-based charges, balancing financial sustainability with conservation incentives.
- Aligns cost recovery with incurred costs to ensure transparency.
- Discourages a full fixed-cost model that would reduce conservation efforts.
- Adjusts the variable component to maintain overall financial neutrality for average users.
- Develops a model that provides property owners with control over their charges, incentivizing conservation.
- Harmonizes fire supply meter size billing ratios with those used for water and wastewater fees.
- Explores special purpose rates, such as flusher hydrant rates and bulk water sales, to enhance simplicity and operational efficiency.
- Considers perimeter metering for private developments to reduce revenue loss and administrative costs.

Stormwater Review Framework

The Stormwater Rate Review Framework approved by Council includes the following elements:

- An equitable rate structure that accounts for property differences, prioritizing impervious area as the key factor in stormwater fee calculations.
- All properties contribute fairly, recognizing that stormwater management is a shared infrastructure benefiting the entire community.

- Differentiation between rural and urban properties to reflect unique service needs and requirements.
- Revenue collection is aligned with funding needs to improve financial sustainability.
- The feasibility of stormwater credits is assessed for residential and commercial properties to incentivize on-site stormwater management.
- Property owners are enabled to influence their stormwater charges by reducing impervious surfaces and runoff impacts.

DISCUSSION

2025 Water Rate Structure Review

The City of Ottawa's water rate structure review aims to address challenges with the current billing system related to fairness, transparency, and financial sustainability, including ensuring that all users contribute equitably to the cost of water, wastewater, and stormwater services while maintaining affordability and promoting conservation. A central focus of the review is transitioning stormwater charges to an impervious surface-based model, ensuring a more equitable billing system for all properties.

To achieve these objectives, staff:

1. Conducted broad consultation with residents and stakeholders based on the guiding principles and review framework.
2. Conducted an options analysis to evaluate various methodologies, including potential adjustments to the existing structure.
3. Performed financial impact and sensitivity analyses to assess implications for residents and user groups.
4. Vetted proposed options against the rate structure's guiding principles and structured framework outlined in this report.

The proposed modifications to the City's water, wastewater, and stormwater rate structure are fundamentally **revenue-neutral**, designed to reallocate costs more equitably across all three utility services without increasing the total funds collected by the municipality. These changes will not generate additional income for the City's general fund; rather, they represent a recalibration of how the existing financial burden for water, wastewater, and stormwater services is distributed among ratepayers. While individual consumers may experience modest increases or decreases in their utility bills depending on their usage patterns, size and property characteristics, the aggregate revenue target remains unchanged—the same amount of money will flow into our

integrated utility system, just through slightly different channels and proportions than before.

Stakeholder Consultation Process

To ensure a comprehensive and inclusive review, the City engaged in extensive public consultations:

- **City-wide survey**: Conducted from February 14 to July 31, 2024, receiving nearly 40,000 responses, providing key insights into public concerns and priorities related to the billing of water, wastewater and stormwater rates.
- **Rural community engagement**: Four in-person sessions held in the rural wards of Ottawa between May and June 2024, with approximately 700 participants.
- **Sector-specific meetings**: Conducted from July through October 2024, involving representatives from:
    - Small businesses
    - Large commercial enterprises
    - Educational institutions
    - Healthcare providers
    - Non-profits
    - Multi-residential stakeholders
    - Federal organizations
    - Wholesale customer (Township of Russell)

See attached Document 1 - What We Learned Summary Report for more information.

Stormwater Rate Structure Review

Impervious Surface-Based Billing

One of the primary concerns with the current rate structure is its inequity in stormwater billing because the current rate structure does not account for impervious footprints. This means that some properties benefit from stormwater services without contributing to their costs, and properties that generate significant runoff, such as commercial developments with large, paved areas, do not necessarily contribute proportionally to stormwater funding.

The 2016 rate structure used property assessments as a proxy for determining charges for non-residential properties. However, it has been recognized that impervious surfaces

are a more accurate metric for stormwater billing, since impervious surfaces directly impact runoff volume, water quality, and drainage infrastructure demands.

Impervious space refers to a property's total paved or other hard surface area, such as building and structure rooftops, which are considered highly resistant to water infiltration.

Table 1: Surface Impacts on Stormwater

Surface Impacts on Stormwater	
"Hard" surfaces (impervious)	**"Soft" surfaces (pervious)**
• Increase volume and speed of stormwater runoff • Cause erosion of streambeds • Reduce groundwater infiltration • Deliver many pollutants and sediment downstream	• Decrease volume and speed of stormwater runoff • Allow water to seep into the ground • Recharge the water table • Filter out many pollutants and sediment before it arrives downstream

Because impervious surface has a direct correlation with the **amount, quality, and rate** of stormwater runoff, transitioning to an impervious-based billing model would ensure that funding contributions align more closely with actual stormwater impact.

Technological advancements, particularly AI-driven data analysis combined with Geographic Information System (GIS) property overlays, can provide accurate measurements of impervious surfaces city-wide. The GIS Right of Way Heritage and Urban Design (ROWHUD) unit requires annual funding for aerial imagery collection and data processing to support these analyses. Implementing AI-enhanced vector mapping for impervious surface assessments would necessitate an additional budget allocation, but it would improve billing accuracy and fairness.

Figure 2: Impervious Surface Vector Mapping

Source: https://www.ecopiatech.com/resources/blog/impervious-surface-mapping

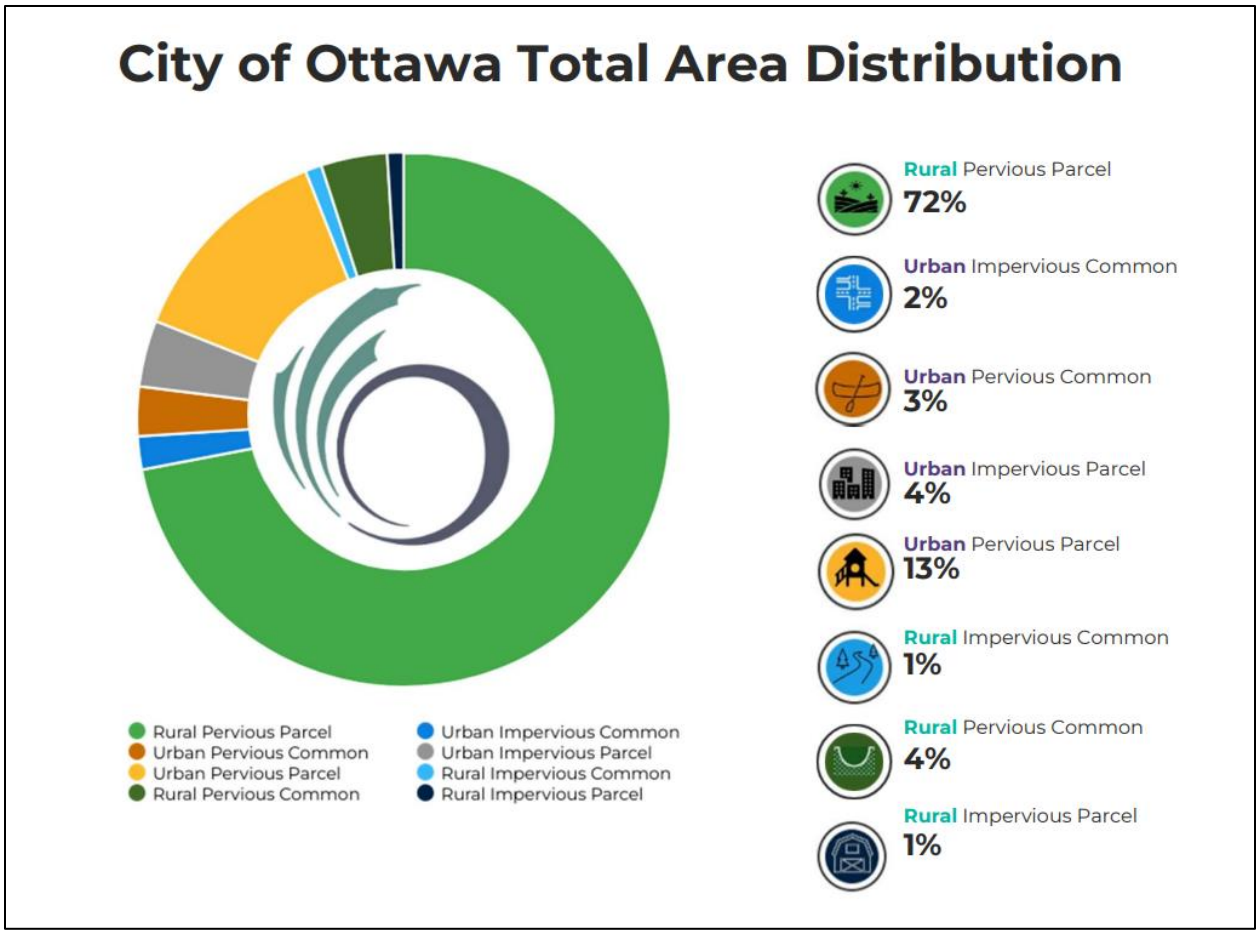
To obtain and bill on impervious surface data, the process begins with acquiring aerial imagery via aircraft in either the spring or fall to ensure clear images without snow or foliage coverage. Once the imagery is delivered to the City, the Geospatial Analytics, Technology and Solutions (GATS) team performs internal quality assurance checks to validate the data and ortho-triangulation to overlap the aerial images with existing mapping data. The refined imagery is then sent to a geospatial AI vendor, which analyzes the images and identifies and labels impervious surfaces, generating an impervious surface layer. This processed data is subsequently returned to the City, where it is joined with parcel data and delivered to the Revenue department for billing purposes. This streamlined workflow ensures accurate and efficient assessment of stormwater charges based on actual impervious surface coverage.

The City uses its Official Plan to classify properties as urban or rural and based on the first capture of impervious data:

- The urban area is 75 per cent pervious space and 25 per cent impervious.
- The rural area is 97 per cent pervious and only 3 per cent impervious.

The chart below shows the impervious and pervious area distribution within the urban and rural areas of the city, as well as the distribution between common areas and parcel (assessed) areas.

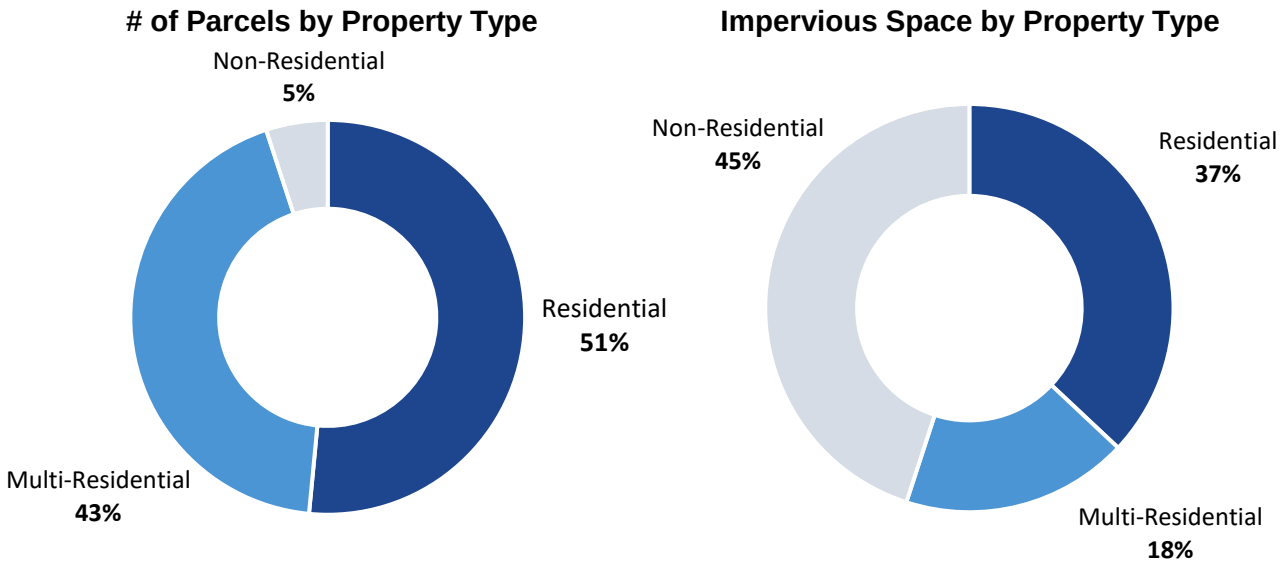
Graph 2: Land Type Distribution in Urban and Rural Areas



In the urban area:

- Residential properties make up 95 per cent of all property parcels, but only constitute 55 per cent of the total impervious space.
- Non-residential properties only make up 5 per cent of all property parcels but represent 45 per cent of the total impervious area.

Graph 3: Urban Area Overview of Parcels and Impervious Space by Property Type



Stormwater Funding Allocation and Audit Considerations

The level of service and type of infrastructure in rural areas differ significantly from those in urban settings. Rural stormwater infrastructure primarily consists of ditches and culverts, which are less complex than the infrastructure in urban areas but spread over a larger geographic area with fewer residents. The cost of maintaining rural stormwater infrastructure is notably higher per capita due to the vast areas that need to be covered.

Table 2: Stormwater Program Allocation Costs vs Revenue Collected

Area	Stormwater Program Allocation	Revenue Collected
Urban	85%	95%
Rural	15%	5%

Table 2 indicates that 15 per cent of the stormwater program's allocation is currently spent in rural areas, while only 5 per cent of the revenue is collected from rural properties. The majority of spending in rural areas is directed towards the maintenance of culverts and ditches. This discrepancy in cost allocation led to discussions on equitable funding models that ensure fair contributions from all property owners while recognizing the differences in service levels between rural and urban areas.

The November 2019 Audit of City Estimates included two recommendations related to stormwater rate structure and costs:

- Recommendation #4: In addition to Council's direction on October 26, 2016 to review the new stormwater rate structure in future long-range financial plans, the City should review the processes used to identify stormwater costs.
- Recommendation #13: During the identification of stormwater costs, the City should ensure the rationale supporting the departments' allocations are corroborated and documented.

The audit emphasized the need for clearer distinctions in cost allocations to prevent potential cross-subsidization between urban and rural property owners. A key issue identified in the audit was the absence of periodic assessments of the methodology used to estimate stormwater costs.

Given the complexity of stormwater cost allocation, continuous improvement in this area is necessary to enhance accuracy and fairness. Since stormwater services operate on a rate-supported basis, accurate estimation of stormwater operating and capital costs is essential to ensure ratepayers are charged appropriately and services remain sustainable.

Stormwater Rate Review Overarching Recommendations

In reviewing the stormwater rate structure there are four general overarching recommendations being proposed that impact the stormwater funding, governance and the rate structure.

1. Unique Solutions for Urban and Rural Areas

Unique solutions are recommended for urban and rural cost recovery. The development of different rate structures for rural and urban properties, recognizes that properties and services in rural and urban areas are different and each have unique characteristics that must be taken into account to develop an equitable solution. The drainage needs in the rural area look very different than stormwater management needs in the urban areas. Equally impervious area plays a less significant role in the rural areas in comparison to the urban areas which have a significantly higher proportion of the area that is impervious. A single rate structure to address both Rural and Urban properties would create concerns in fairness and equity. The Stormwater By-law will be updated to ensure the urban-rural area boundaries reflects the official plan.

2. Transition of $15 million Culvert Funding from Stormwater to Tax Funding

A total of $15 million in stormwater funding currently supports the drainage culvert program. Culverts are an integral component of the City's road infrastructure, providing essential drainage to prevent flooding and road damage. Culverts in the rural area also play an important part is physically supporting the road structure in essence acting as tiny bridges. Given their importance in the road network, staff recommend that the $15 million in culvert funding be transitioned from stormwater to the general levy on the property tax bill paid for by all properties City-wide to align it with road funding. This change would recognize that all road users benefit from properly maintained culverts, regardless of their location. Effective culvert management reduces flooding risks, extends road lifespans, and enhances overall transportation safety. By consolidating culvert maintenance under a City-wide program, funding and maintenance efforts can be streamlined, ensuring consistent service levels across all areas.

3. Rural Ditching Oversight and Rural Roadside Ditch Maintenance Levy to be under the purview of the Agriculture and Rural Affairs Committee

Rural stormwater infrastructure primarily consists of ditches. Of the 6,800 km of ditches in Ottawa, 5,400 km are in the rural area. Given the predominantly rural nature of ditches and their critical role in agricultural and rural stormwater management, staff recommend that the:

- Oversight of funds allocated toward rural roadside ditch maintenance be transferred to the Agriculture and Rural Affairs Committee (ARAC).
- Governance of the Rural Roadside Ditch Maintenance levy to be transferred to ARAC.

ARAC is well-positioned to oversight the allocated rural roadside ditch maintenance funding, maintenance, and policy development for roadside ditch maintenance. This shift would align decision-making with rural-specific needs and ensure that resources are allocated in a manner that reflects the unique requirements of rural stormwater management.

4. Village Stormwater Rate for the Villages of Manotick, Richmond, and Carp

Staff recommend treating the villages of Manotick, Richmond, and Carp similar to urban due to their stormwater infrastructure characteristics. Table 3 shows that these villages have more than 50 metres of stormwater pipe per hectare and impervious surface coverage exceeding 15 per cent, which aligns more closely with urban conditions.

When total impervious area of each of the rural villages of Carp, Manotick and Richmond is compared against the impervious area within the urban or rural boundaries, it is evident that:

- The impervious area as a percentage of the total area is much more similar to that in the urban area.
- Comparing stormwater pipe density within these three villages against the urban or rural areas shows a more comparable stormwater pipe density to that in the urban boundary.

These similarities support that these three villages should not pay the Rural rate, but instead pay a village stormwater rate that would be equal to the urban rate.

Table 3: Rural Village Comparison of Stormwater Infrastructure and Impervious Surfaces

Area Boundary	Stormwater Pipe Density (m/ha)	Impervious Per Cent of Total Area
Urban Area	**58.96**	**25.0%**
Rural Area	0.4	3.0%
Manotick	**54.6**	**21.2%**
Richmond	**54.0**	**18.4%**
Carp	**53.1**	**22.2%**
Osgoode	10.0	19.0%
Navan	9.4	17.6%
Cumberland	8.1	15.7%
Metcalfe	7.5	14.7%
Greely	5.0	18.6%
North Gower	4.8	8.9%
Constance Bay	0.2	9.9%

Rural Stormwater Options

Consultations in rural communities have highlighted that an impervious-based billing model may not be suitable for rural properties. Many rural stakeholders argue that they should not be required to pay for stormwater services at the same rate as urban properties due to differences in infrastructure and runoff characteristics. Alternative approaches, such as tax-based assessments, have been suggested as more appropriate solutions for rural stormwater funding.

Staff considered the following four rural stormwater options and are recommending Option 4: Rural Roadside Ditch Maintenance Levy because it directly links funding to the necessary maintenance of roadside ditches, which play a crucial role in managing rural stormwater runoff.

Rural Option 1: Status Quo

Option 1 would retain the current rate structure which includes the following challenges:

- Transparency: Many rural residents don't believe they should pay for stormwater and expressed in the consultations that the City should be transparent as to what it bills rural residents for.
- Equity: Rural residents asked the City to explore this equity as a charge on their tax bill based on property assessment since impervious area is a negligible factor in the drainage of the rural areas due to the vast swarths of pervious land.
- Fairness:
    - Not all properties pay for stormwater despite benefiting from services such as roadside ditch maintenance in the Rural areas.
    - Fee discounts are given to properties that do not have a wastewater connection and are not relevant to stormwater management and infrastructure.

Rural Option 2: True Cost Recovery Model

Option 2 considers stormwater fees for rural properties based on a special area levy rather than impervious area calculations, which are seen as inappropriate for rural regions. The levy would reflect the cost of all stormwater funded services including roadside ditch maintenance and culverts spent in the rural area.

Key features of the True Cost Recovery Model:

- Funds stormwater management in rural areas through a levy calculated in the same manner as other tax levies.
- Uses assessment ratios approved annually by City Council.
- Aims to recover the actual expenses incurred for rural stormwater infrastructure, specifically roadside ditch maintenance and culvert maintenance.

In 2024, $1.8 million was allocated for roadside ditch maintenance plus $12.73 million for rural culverts (85 per cent of the City's total culvert costs) for a total of $14.5 million in stormwater expenditure.

The financial impact of this model means:

- The average rural residential home would pay $344 compared to the $105 they pay in 2024 (a 228 per cent increase).
- Urban properties would see a 12 per cent decrease in fees as a result of the shifting.
- Farm properties (currently exempt) would begin paying an annual fee of $85 under this model.

Rural Option 3: Rural Exemption Approach

Some rural property owners advocated for a complete exemption from stormwater fees, arguing that the predominantly pervious nature of rural land negates the necessity for such charges.

The key features a Rural Exemption Approach include:

- The stormwater fees for rural properties would be entirely removed.
- The financial burden would be shifted solely onto urban property owners who would see a four per cent increase in urban stormwater fees.

Option 3 is not considered an equitable approach since rural properties benefit from stormwater management services, including roadside ditch maintenance, culvert maintenance, and overall drainage improvements. Shifting all costs to urban ratepayers does not reflect the shared responsibility for stormwater infrastructure.

Rural Option 4: Roadside Ditch Maintenance Levy

The key features of the Roadside Ditch Maintenance approach include:

- $15 million in culvert funding would be moved from stormwater funding to the tax funding under the road budget, ensuring all properties City-wide contribute to their maintenance through the general tax levy.
- Rural properties would specifically fund roadside ditch maintenance through a special area levy.
- The existing $1.8 million rural ditch maintenance funding would be increased by an additional $2 million, bringing total funding for to $3.8 million.

The financial impact on different property types:

- Urban properties would see a 15 per cent decrease in stormwater fees.
- Rural residential properties would see an 11 per cent decrease in stormwater fees.

- Typical rural properties would pay $93 annually compared to the current rate of $105.
- Farms would begin contributing at a rate equivalent to 20 per cent of the rural residential charge (annual levy of $23 for a farm assessed at $510,000).
- Carp, Richmond and Manotick properties will pay a village stormwater rate comparable to the urban rate due to their stormwater pipe density and impervious surface area being comparable to urban or suburban neighborhoods

Rural Stormwater Structure Recommendation

Staff recommend the Rural Roadside Ditch Maintenance Levy (Option 4) because it directly links funding to the necessary maintenance of roadside ditches, which play a crucial role in managing rural stormwater runoff. This approach creates transparency, accountability and ensures a sustainable revenue source for rural stormwater infrastructure while fairly distributing costs among rural property owners who benefit from the maintenance of these drainage systems. By applying a levy specifically for roadside ditch maintenance, this model avoids cross-subsidization issues while ensuring that stormwater management in rural areas remains effective and financially viable.

Urban Stormwater Options

Both City staff and Council recognized that impervious surfaces would be a more appropriate metric allocating stormwater charges. Because impervious surface has a direct correlation with the amount, quality, and rate of stormwater runoff, staff explored the following four rate structure options based on impervious surface area within the urban boundary.

Staff considered the following four urban stormwater options and are recommending Option 4: Blended Rate Structure for urban properties because it offers the best balance of equity and feasibility, and accounts for differences between residential and non-residential properties by applying a mix of flat fees and impervious area-based charges, among other advantages.

Urban Option 1: Status Quo

Option 1 would retain the current urban stormwater structure which has some advantages as it is a stable model and residents would not see any changes in how they are billed today. However, the status quo option includes the following challenges:

- Equity: Non-residential properties are billed based on property assessment which is not the best metric to assess the strain that a property puts on the stormwater system. This means that some properties subsidize others.
- Conservation: There is no direct link between charges and impervious area means there is no financial incentive for conservation or improvements in stormwater management.
- Fairness:
    - Not all properties pay for stormwater despite benefiting from stormwater services in the Urban areas.
    - Fee discounts are given to properties that do not have a wastewater connection and is not relevant to stormwater management and infrastructure.

Urban Option 2: Exact Measurement Approach

Option 2, the Exact Measurement Approach charges all properties based on a cost per square metre based on their exact impervious surface area measurement. Each property, whether residential or non-residential, is billed according to its exact impervious area.

To determine the stormwater charge:

- The total stormwater budget is divided by the total impervious area in the city to determine the rate per square metre.
- Uses the 2024 budget requirement and impervious area measurement, which equates to a rate of 0.67/m².

Figure 3: Exact Measurement Urban Stormwater Rate Structure

All Properties
Impervious Area **x** $0.67/m2 **=** Stormwater Charge

The financial Impact on different property types:

- Typical residential single-family home (average impervious area of 252m²): $168 per home, a decrease of about 20 per cent from the current fee.
- Average multi-residential unit (impervious space of 55m²) will pay about $37, a decrease of 65 per cent from the current rate.
- The impact to non-residential properties will vary depending on the size of the impervious space on the property relative to their current assessed values.

- Properties with large impervious areas and a lower assessed value will likely see an increase.
- Properties with a small impervious footprint but high assessment could see a decrease.

The Exact Measurement Approach is equitable, as properties that contribute the most stormwater runoff pay the highest fees. However, given that about 90 per cent of the City's properties are residential, massive amounts of frequent appeals challenging minor discrepancies in impervious area measurements would make this method expensive to administer.

Urban Option 3: Tiered Methodology

Option 3, Tiered Methodology groups properties into tiers based on impervious area ranges, categorized into residential and non-residential groups.

The key features of the Tiered Methodology include:

- Each tier corresponds to a defined range of impervious surface area.
- Properties within the same tier are charged the same flat rate.
- The rate is calculated by multiplying the average impervious area in each tier by the per-square-metre rate.
- Properties exceeding a certain threshold of impervious area are charged an exact rate.

Figure 4: Tiered Methodology Urban Stormwater Rate Structure

Residential/Multi-Residential					
Green	**XS**	**S**	**M**	**L**	**XL**
<15m^2	15-147m^2	147-227m^2	227-286m^2	286-500m^2	>500m^2

Non-Residential					
Green	**XS**	**S**	**M**	**L**	**XL**
<15m^2	15-250m^2	250-1,000m^2	1,000-3,000m^2	3,000-10,000m^2	>10,000m^2

The financial Impact on different property types:

- A typical single-family detached home in the medium residential tier would pay a $170 fee a 19 per cent decrease from the current rate.
- A multi-residential unit or condo in the extra-small residential tier would pay a $49 fee a 53 per cent decrease from the current rate.
- An average non-residential property (just over 3,000m² of impervious area) would fall into the large non-residential category, about $3,700 (over double the current fee).

The tiered model achieves a balance between equity and administrative feasibility by grouping properties into ranges, reducing the number of exact calculations required and the risk of appeals. However, it does have its challenges as well. To maintain fairness, numerous tiers would be needed, especially for non-residential properties which have a very large spectrum of impervious space, increasing complexity of the billing structure. Properties near tier boundaries may file appeals to qualify for a lower tier. Finally, smaller properties in each tier effectively subsidize larger properties within the same range. This model is most suitable for non-residential properties, while residential properties would be better classified by property type.

Urban Option 4: Blended Rate Structure

Option 4, the Blended Rate Structure includes different rate structures for different property types.

Residential properties are:

- Grouped into fixed categories (detached, semi-detached, townhouse, and apartment/condo).
- Charged a flat rate, except for those exceeding 500 m² of impervious area, which are charged an exact rate.
- Categorized based on the MPAC assigned property code.

The charge for each residential category is calculated based on the average impervious surface area of properties in each category. This allows each property type to pay a more equitable stormwater fee. An advantage is that the use of property codes to categorize residential properties allows the City to begin billing stormwater fees once the property information is received from MPAC.

Non-residential properties are:

- Charged an exact fee of $0.67/m² of impervious space (rate based on the 2024 budget), as they have highly variable impervious areas.
- Calculated using the per-square-metre impervious area rate.

A minimum annual base charge of $10 is proposed for properties with less than 15 m² of impervious area.

Figure 5: Blended Urban Stormwater Rate Structure

Residential/Multi-Residential				
Fixed Groupings				Exact
Single Family Detached	Semi-Detached	Townhouse	Condo/Apartment	XL Res (>500m^2)

Non-Residential	
Fixed	Exact
XS (<15m^2) base charge	>15m^2

The financial impact on different property types:

- A residential single-family home (average impervious area of 252 m²) would pay about $168 per home, a decrease of about 20 per cent from the current fee.
- A semi-detached home (average impervious area of 167 m²) would pay about $111, a 47 per cent decrease from the current fee.
- A townhouse (average impervious area of 127 m²) would pay about $85, a 19 per cent decrease from the current fee.
- A multi-residential or condo unit (impervious space of 55 m²) would pay about $37, a decrease of 65 per cent from the current fee.
- Non-residential property charges would vary depending on the size of the impervious space on the property relative to their current assessed value.
    - Properties with large impervious areas and a lower assessed value will likely see an increase.
    - Properties with a small impervious footprint but high assessment could see a decrease.

The Blended Structure option offers the best balance of equity and feasibility. By using impervious area as the basis for fee calculation, it encourages property owners to reduce stormwater runoff. Larger residential properties contribute proportionally based on their impervious footprint, while non-residential properties are charged according to their precise stormwater impact. Additionally, vacant landowners are required to contribute, as they benefit from stormwater management services. Implementation and application will require annual aerial imagery collection, data updates, and vector mapping.

Urban Stormwater Structure Recommendation

Staff recommend the Blended Rate Structure (option 4) for urban properties because it accounts for differences between residential and non-residential properties by applying a mix of flat fees and impervious area-based charges. This model ensures that properties contribute equitably to stormwater management based on their impact while minimizing the administrative burden of exact calculations. Residential properties are categorized by type, which simplifies billing, while larger residential and non-residential properties are charged based on their actual impervious area, promoting fairness. Additionally, the blended model encourages stormwater conservation efforts by linking fees to impervious surface reduction strategies.

Rural and Urban Roadside Ditch Maintenance Allocations

In response to the feedback obtained from the rate structure review consultations and issues emphasized at the City's 2024 Rural Summit, staff are recommending dedicated funds for ditch maintenance in both rural and urban areas.

Rural Roadside Ditch Maintenance

Staff recommend an allocation of $5.678 million, up from the current $3.6 million. The rural ditch funding will consist of:

- Replace the existing $1.8 million from stormwater funding with $3.8 million from the Rural Roadside Ditch Maintenance Levy. With approximately 5,264 kilometres of rural roadside ditches outside the villages of Manotick, Richmond, and Carp, this equates to about $722 per kilometre.

- $1.8 million in city-wide tax funding that's currently included in the budget for rural roadside ditch maintenance. Staff recommend making this funding permanent, as roadside ditches support drainage and protect road infrastructure, benefiting the entire city. Total funding would increase to $5.6 million in 2027 once the roadside ditch maintenance levy is implemented.

- $78,000 from stormwater funding to service the 110 kilometres of roadside ditches within the villages of Manotick, Richmond, and Carp. This additional allocation will come into effect when the Village Stormwater Rate is implemented in 2027, bringing the total rural roadside ditch maintenance fund to approximately $5.68 million.

Urban Roadside Ditch Maintenance

Staff recommend an allocation of $1.045 million from urban stormwater program funding coming into effect in 2027 when the revised Urban Stormwater Rate is implemented. Urban roadside ditches, span approximately 1,447 kilometres and based on the same metric used in the rural area of $722, an equitable allocation would equate to $1.045 million.

Both rural and urban allocations will be indexed annually based through the budgetary process. Staff will continue to monitor the efficacy of these allocations. To establish clear, sustainable and transparent funding, staff recommend that an urban and rural roadside ditch maintenance capital program be established through the 2026 Budget process

Stormwater Recommendations Align with the Guiding Principles

In summary, the Rural and Urban Stormwater recommendations achieve the following:

- **Ensures fairness and equity** because all properties with impervious area contribute to stormwater, and properties with a bigger impact will contribute more.
- **Improves Financial stability** because impervious surfaces are a more stable and predictable basis of calculation than property assessment value.
- **Increases Transparency** by separating rural roadside ditch maintenance, stormwater and culvert funding.
- **Maintains affordability** by being financially neutral for the average resident and majority of property owners.
- **Supports economic development** by encouraging infrastructure investments in stormwater mitigation and ditch maintenance.
- **Promotes conservation** by incentivizing the use of pervious surfaces to minimize runoff in urban areas and acknowledges rural pervious surfaces.

The proposed rate structure for urban stormwater considers differences in property types and prioritizes impervious area, while limiting the administrative burden and risk of

appeal. In addition, it allows property owners some control over their charges. The development of different rate structures for rural and urban properties, recognizes that properties and services in rural and urban areas are different and unique, while also ensuring that all properties contribute.

Stormwater Benchmarking

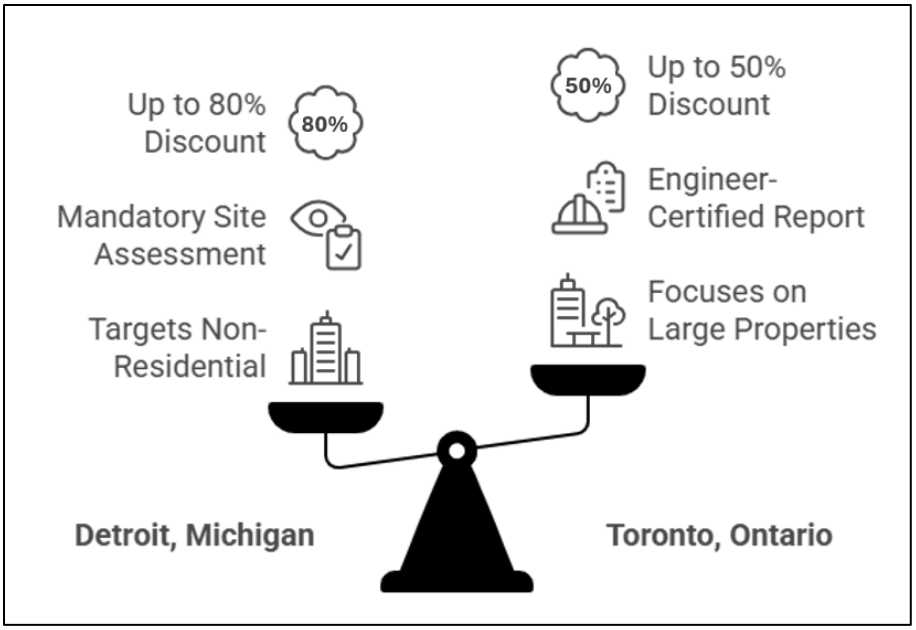
To ensure that the proposed stormwater rate structure aligns with industry best practices and maintains regional competitiveness, staff conducted a benchmarking review using data from the 2024 BMA Municipal Study. A key innovation in the proposed structure is the transition to stormwater billing based on impervious surface area for urban properties. This method, which directly ties charges to a property's contribution to runoff, is increasingly used in Ontario. Municipalities such as Ajax, Brampton, Guelph, Kitchener, and Mississauga have implemented impervious area-based billing models or ERU (Equivalent Residential Unit) systems. Ottawa's use of advanced aerial imagery and AI-driven analysis positions the City as a leader in applying technology to enhance billing equity and environmental accountability. The proposed impervious surface rate of $0.67 per square metre compares favourably to peer municipalities that use a similar metric. For example, Brampton and Mississauga use individually assessed impervious area rates with effective ERU-based charges translating to higher annual average costs for medium-density properties. The proposed rate is competitive in maintaining affordability while supporting full cost recovery and incentivizing sustainable stormwater management practices.

Incentives and Grants for Stormwater Mitigation

While exploring the possibility of a stormwater mitigation credit system, staff sought to ensure it met three crucial criteria: advancing stormwater management objectives, ensuring cost-effectiveness and administrative feasibility, and aligning potential credits with measurable and verifiable benefits. Staff examined existing credit systems in other municipalities, including Toronto and Detroit, to understand the diverse approaches and potential challenges.

Detroit's stormwater mitigation credit system targets non-residential property owners and requires a mandatory site assessment. Formulas are used to calculate runoff retention and volume stored, with discounts on stormwater fees offered up to 80 per cent. Toronto's proposed credit system focuses on properties over one hectare and requires an engineer-certified stormwater management report. A scoring system evaluates the effectiveness of proposed mitigation efforts, with potential discounts on stormwater fees up to 50 per cent.

Figure 6: Stormwater Incentive Program Comparison



In collaboration with the Infrastructure and Water Services Department (IWSD) and the Planning, Development and Building Services Department (PDBS), Revenue Services recognizes that stormwater mitigation broadly falls into two categories:

1. Mandated mitigation efforts (since approximately 1990):
    - Designed to limit stormwater runoff to pre-development levels.
    - Primarily addresses peak flow rates.
    - Might not significantly impact the total runoff volume -- the key metric for an impervious surface rate structure.
    - Already incentivized through development regulations.
    - Would not be the focus of a credit system.
2. Voluntary mitigation efforts beyond mandated requirements:
    - Includes permanent stormwater retention storage, bioretention infrastructure, and permeable pavement.
    - Efforts that would ideally be incentivized through a credit program.

Currently, staff lack the necessary expertise and capacity within Finance and Corporate Services to implement a stormwater mitigation credit system, and IWSD faces challenges in hiring for this specialized skill set. Furthermore, as IWSD and PDBS indicate, stormwater mitigation requirements through development review will expand in

the coming years. This potential overlap could diminish the effectiveness and necessity of any credit program established today. Finally, evaluating benefits at a property-specific level presents significant challenges. The City's diverse landscape includes areas with varying flood risks and ecological priorities. Therefore, two properties reducing runoff by the same amount might have vastly different impacts on the overall stormwater system and environment. Given these challenges, staff do not recommend implementing a rate supported stormwater credit program at this time.

The City of Ottawa currently offers two stormwater-related programs that encourage water conservation best practices:

1. Rain Ready Ottawa:
    - Provides financial incentives to property owners in priority stormwater retrofit areas.
    - Supports implementation of measures such as rain gardens, soak away pits, and permeable pavements.
    - Offers education and resources to help residents understand and adopt stormwater management techniques that reduce runoff and improve water quality.
2. Ottawa Rural Clean Water Program:
    - Provides funding for projects that protect surface water and groundwater quality.
    - Available to eligible property owners in the rural area.

By continuing to promote and expand these initiatives, the City can support effective stormwater mitigation without the administrative complexities of a formal credit system.

Water and Wastewater Rate Structure Review

Challenges with the Existing Water and Wastewater Rate Structure

While the City's current water and wastewater rate structure is simple, consisting of fixed and variable charges, it does not fully account for the diverse needs of different property types.

Fixed charges are intended to provide financial stability but are unevenly applied across property categories.

- On average, residential properties pay 39 per cent of their bill through fixed charges.

- The average multi-residential and non-residential properties contribute only 4 to 5 per cent in fixed fees.
- The average residential property pays 7 per cent more per cubic metre of water compared to multi-residential properties and 8 per cent more than non-residential properties.

Table 5: Average Bill by Account Type under Current Rate Structure

	Current Rate Structure		
	Residential	**Multi-Residential**	**Non-Residential**
Average Usage	28m^3/60 days	416m^3/30 days	277m^3/30 days
Average Bill Amount	$125	$1,737	$1,213
Per cent Fixed Charges	39%	4%	5%
Cost Per Cubic Metre	$4.48	$4.18	$4.13

Variable Charges within the current tiered structure do not effectively align with typical consumption patterns.

- Residential properties use an average of 14 cubic metres per 30-day billing period, placing most customers in Tier 2 pricing.
- To remain within the lowest-cost Tier 1, an average household would need to reduce consumption by over 50 per cent, an unachievable goal, meaning there is no real price incentive for the average user to conserve water.
- Multi-residential properties receive the same tiered pricing benefits regardless of the number of units served, leading to inequities in cost allocation.
- The highest-consuming properties (such as large commercial or industrial users) often exceed the 180-cubic-metre Tier 4 threshold, meaning they do not benefit from any lower-tiered pricing and have little financial incentive to reduce consumption.

The issues with both the fixed and variable charges underscore the need for a revised water and wastewater rate structure that better reflect actual usage patterns, ensures fairness across all property types, and continues to promote conservation in a realistic and effective manner. Adopting a more balanced approach to water and wastewater charges, all property types could contribute equitably to the cost of maintaining water and wastewater infrastructure.

Water and Wastewater Rate Review: Overarching Recommendations

1. Consolidate the City's Fire Supply Charge and Water Charge

Staff recommend the consolidation of the City's Fire Supply Charge into the Water Charge. One of the key framework elements of the water rate review was to review how the City bills for Fire Supply Charges. As part of this process, staff examined the Fire Supply Charge to clarify its purpose and determine the best approach to maintaining transparency. The review revealed that while the Fire Supply Charge is meant to recover costs associated with ensuring sufficient water availability for firefighting, it is difficult to define as a distinct expense. The revenue from this charge is directed toward the overall maintenance and operation of the water system, including investments in upsizing transmission and distribution systems, reservoirs, pumping stations, fire hydrants, and sprinkler connections. This ensures that adequate water flow is available in the event of a fire, but the funds are not earmarked exclusively for firefighting-related infrastructure.

Currently, revenues collected through the fire supply charge are added to the general water fund and used to finance the broader costs of the water system. Given this current practice, staff recommend consolidating fire supply charge revenue into the overall water revenue. This consolidation of charges simplifies the rate structure, ensures that costs incurred are more directly aligned with the costs recovered, and eliminates confusion about a separate fire-related charge, particularly since fire protection is already funded in part through property taxes. Additionally, this approach aligns Ottawa with other Ontario municipalities, as only Ottawa and London currently maintain a separate charge for water used in fire protection. By integrating fire supply costs into the general water rate structure, the City can improve clarity for ratepayers while maintaining financial sustainability.

2. Increase Fixed Fee Recovery to 35 per cent

Staff recommend increasing the percentage of the total water and wastewater revenues recovered from fixed fees from 20 per cent to 35 per cent. One of the key framework elements of the water rate review was to seek ways to increase the component of revenues recovered from fixed fees while adjusting the variable fee to ensure that most residents are not affected by the change.

One of the primary financial challenges facing the City's water and wastewater system is the growing number of water accounts and the corresponding increase in infrastructure costs, coupled with flat or declining water consumption (see graph 1).

Current situation:

- Approximately 90 per cent of the costs associated with providing water, wastewater, and stormwater services are fixed, which reflect the costs of maintaining and upgrading infrastructure regardless of usage levels.
- 80 per cent of the City's water and wastewater costs are recovered through variable, consumption-based charges and the remaining 20 per cent through fixed charges.
- Consumption patterns can fluctuate due to conservation efforts, weather conditions, and other external factors such as the recent COVID-19 pandemic.
- This high reliance on consumption, which continues to decrease or flat line year over year while the City continues to grow, presents a risk to financial stability.

As part of the water rate review public consultations, the online public survey asked respondents what portion of their bill they believed should be collected through fixed charges, given that 90 per cent of system costs are fixed. The average response suggested that 48.5 per cent of the average bill should be derived from fixed charges, significantly higher than the current 20 per cent.

Based on consultation feedback and a thorough financial analysis, staff recommend increasing the share of water and wastewater revenue recovered through fixed charges from 20 per cent to 35 per cent. This adjustment strikes a balance between financial stability and customer control over their bills, ensuring that conservation remains incentivized while better reflecting the true cost of maintaining the system. This shift will help mitigate revenue volatility, enhance long-term planning capabilities, and align Ottawa’s rate structure more closely with industry best practices.

A fully fixed cost structure is not recommended as it would eliminate the incentive to conserve water, while a fully variable structure is not recommended as it is unstable and does not reflect the nature of the high fixed costs to deliver these services.

3. Updated Fixed Charge Ratios

A portion of both water and wastewater rates is derived from a fixed component based on the size of the water meter. This approach was introduced as part of the 2016 rate structure changes and will remain a key element of the rate model regardless of the water and wastewater option selected.

The recommendation to increase the portion of revenue recovered from fixed costs to 35 per cent provides an opportunity to reassess how fixed charges are allocated to each meter size to ensure fairness and accuracy in cost distribution.

Current approach:

- The City employs the American Water Works Association (AWWA) meter factor size ratios to determine fixed charges.
- The AWWA method calculates a ratio for each meter size based on its maximum possible flow capacity. For example, a 20mm meter can supply 1.5 times the amount of water as a 15 mm meter and, therefore, is charged 1.5 times the fixed rate.

A review of the impact of different rate structures on various meter sizes revealed that the AWWA method does not evenly allocate fixed charges across meter sizes based on actual usage patterns.

To address the uneven allocation of fixed charges within the AWWA method, staff are recommending ratios that reflect the average consumption at each meter size instead of the maximum flow requirement, while considering the effects of tiered rate changes. This change will ensure that the average user at each meter size pays a consistent cost per cubic metre especially where larger meters are under-utilized.

Table 6: Preferred Option Fixed Water and Wastewater Ratios

	Made-to-Measure
Meter Size	**Ratio**
15mm	1.0
20mm	3.2
25mm	8.7
40mm	21.8
50mm	53.7
75mm	117.1
100mm	125.3
150-300mm	250.2

Note: Displayed rates are modelled using 2024 consumption and budget requirements. Final ratios and rates will be set during implementation using updated consumption and budgetary requirements.

During this analysis, it became evident that large meters at 150mm and higher exhibit similar consumption patterns, despite variations in size. These larger meters are often sized based on non-consumption factors such as fire flow requirements and water pressure rather than actual water use.

To simplify the rate-setting process and avoid penalizing property owners for factors beyond their control, staff recommend grouping the fixed charge for all meters 150mm and larger into a single category for fixed charge calculations. This adjustment ensures that fixed charges remain equitable while maintaining a rate structure that reflects actual usage patterns and infrastructure requirements.

Water and Wastewater Rate Structure Review Options

As part of the rate review process, the following three water and wastewater rate structure options were considered to determine the most equitable and financially sustainable approach for all account types. Staff recommend adopting option 3, the "made-to-measure" model as it best aligns with the guiding principles and review framework, ensuring equity, financial sustainability, transparency, and conservation incentives.

Option 1: Status Quo

The first option was to maintain the status quo but increase the fixed charge recovery to 35 per cent. However, as previously discussed, the existing structure results in:

- Inequities between residential, multi-residential, and non-residential properties.
- Residential properties paying a disproportionately higher share of fixed charges and are disproportionately impacted by the increase in fixed charge recovery.
- A higher per-cubic-metre rate for residential properties than other account types.

Figure 7: Status Quo Tier Structure

The financial impact on different property types:

- An average residential property (28m^3/60-days) would see a 2 per cent increase on their bill, which would be 52 per cent fixed charges, and result in a per cubic metre cost of $4.57.
- An average multi-residential property (416m^3/30-days) would see a decrease of 13 per cent overall, with 11 per cent of their bill being fixed charges, and a cost per cubic metre of $3.63.
- An average non-residential property (277m3/30-days) would see a decrease of 15 per cent, with 16 per cent of their bill being fixed charges, and a cost per cubic metre of $3.73.

Option 2: Humpback

To address the financial disparities of the current water and wastewater while keeping overall structural changes minimal, the City explored a "humpback" rate structure.

Key features:

- Tier 1 is expanded to 15 cubic metres to align with the average residential user's consumption.
- Tier 2 rates are increased to encourage conservation.
- Tiers 3 and 4 are slightly reduced to offset the impact of higher fixed charges.

Figure 8: Humpback Tier Structure

The financial impact on different property types:

- An average residential property would see a 3 per cent increase on their bill, which would be 35 per cent fixed charges, and result in a per cubic metre cost of $4.61.
- An average multi-residential property would see a decrease of 3 per cent overall, with 27 per cent of their bill being fixed charges, and a cost per cubic metre of $4.04.
- An average non-residential property would see a decrease of 12 per cent, with 35 per cent of their bill being fixed charges, and a cost per cubic metre of $4.63.

While the humpback approach moves all account types closer to paying an equal share of fixed charges, it disproportionately impacts non-residential properties, leading to a 12 per cent increase in overall charges for this category.

Option 3: Made-to-Measure

Recognizing the need for a more tailored approach, City staff developed the Made-to-Measure model, which introduces separate tier structures for residential, multi-residential, and non-residential properties.

- **Residential structure**: An inclining two tier rate model with the first tier increased to 15 cubic metres to capture typical residential use, thereby incentivizing achievable conservation goals.
- **Multi-residential structure**: An inclining two tier rate model with the first tier expanded to 250 cubic metres, allowing properties with up to 30 units to stay within the lowest pricing tier.
- **Non-residential structure**: A declining two-tier rate model, designed to offset the increased fixed charges for large-meter users and provide competitive water consumption rates for high users thereby supporting economic development.

Figure 9: Made-To-Measure Tier Structure

The financial impact on different property types:

- An average residential property would see a 4 per cent decrease on their bill, which would be 36 per cent fixed charges, and result in a per cubic metre cost of $4.28.
- An average multi-residential property would see an increase of 3 per cent overall, with 23 per cent of their bill being fixed charges, and a cost per cubic metre of $4.32.
- An average non-residential property would see an increase of 3 per cent, with 36 per cent of their bill being fixed charges, and a cost per cubic metre of $4.26.

Table 7: Preferred Option Variable Water and Wastewater Ratios

	Made-to-Measure
	Ratio
Residential Tier 1	1.0
Residential Tier 2	1.3
Multi-Residential Tier 1	1.0
Multi-Residential Tier 2	1.5
Non-Residential Tier 1	1.0
Non-Residential Tier 2	0.9

Water and Wastewater Recommendation

Staff recommend adopting the Made-to-Measure model as it best aligns with the guiding principles and review framework, ensuring equity, financial sustainability, transparency, and conservation incentives. This model addresses the inequities in the current rate

structure by tailoring tiered pricing to the unique consumption patterns of residential, multi-residential, and non-residential users. It provides a more balanced approach to fixed and variable charges, maintaining affordability for low and very low water users while promoting fairness across all account types. Additionally, the Made-to-Measure model ensures financial stability by aligning revenue collection with cost distribution, reducing reliance on variable charges. Public support further reinforces this recommendation, with 74 per cent of consultation survey respondents favoring a separate residential and non-residential tier structures, while only 37 per cent supported maintaining the existing tier structure.

Water and Wastewater Benchmarking

To ensure that the recommended Made-to-Measure water and wastewater rate structure aligns with industry best practices and maintains regional competitiveness, staff conducted a benchmarking review using data from the 2024 BMA Municipal Study. The Made-to-Measure model uses inclining block rates for residential and multi-residential customers, with the goal of promoting water conservation by charging higher rates for higher consumption levels. This approach is used by a significant number of large municipalities in Ontario, aligning Ottawa with the majority of municipalities employing inclining rate structures for residential customers. Notable examples include Barrie, Brampton, Caledon, and Hamilton.

For non-residential customers, staff propose a declining block structure to support economic development by reducing per-unit costs for large-volume users. While this practice is used by some municipalities such as Belleville, Clarington, and Chatham-Kent, it is less common overall, placing Ottawa in a minority of municipalities offering declining tiers for non-residential customers. Most municipalities apply a uniform or inclining rate structure across the non-residential classes. This approach could provide a regional economic advantage for Ottawa by reinforcing its reputation as a business-friendly environment, particularly for high-consumption commercial and industrial users.

Table 8: Fixed Charges as a Per Cent of Total Charges for Major Ontario Municipalities

Fixed Charges as a Per Cent of Total Residential	
Vaughan	0%
Markham	0%
Toronto	0%
Kitchener	0%
Ottawa (Proposed)	**35%**
Mississauga	39%
Brampton	39%
Windsor	41%
London	42%
Hamilton	70%
Provincial Average	44%

Source: *2024 BMA Municipal Study*

The recommendation to set fixed charges at approximately 35 per cent of the total water and wastewater bill would place Ottawa near the middle of the distribution among large Ontario municipalities. According to the 2024 BMA Municipality Study, Ottawa would fall in the middle (within the 40th to 60th percentile range) in terms of fixed charge percentages. For example, Pickering, Oshawa, and Whitby also report fixed charges around the 34 to 35 per cent mark, while municipalities like Brampton and Mississauga are slightly higher at 39 per cent. At the higher end, municipalities like Windsor, London and Hamilton report fixed charges exceeding 40 per cent. Ottawa's position represents a balanced allocation that supports revenue stability while continuing to incentivize conservation through volumetric pricing.

While many municipalities in North America continue to utilize the American Water Works Association (AWWA) meter equivalency ratios to allocate fixed water and wastewater charges, there is a growing trend among North American utilities to reassess this approach in favor of models that better reflect actual consumption patterns and promote equity across customer classes. Several municipalities have explored or implemented alternative approaches in line with the recommendations in this report, for example:

- **Austin, Texas:** In its 2024 Cost of Service and Rate Design Study, Austin Water, evaluated its fixed charge allocation methodology. The study considered

customer usage patterns and the cost of providing service to different customer classes.

- **Hamilton, Ontario:** In a 2013 Water, Wastewater and Stormwater Rate Structure Review, the City of Hamilton studied various fixed rate ratios or meter equivalencies. It ultimately recommended implementing modifying the AWWA ratios, to ensure that costs were fairly apportioned to larger water meters and not unfairly burdened by small residential meter sizes. These examples illustrate a broader trend among North American utilities to refine fixed charge methodologies in pursuit of greater equity and alignment with actual consumption patterns.

Special Purpose Rates

Staff are recommending creating the following two special purpose rates in addition to the standard water and wastewater rates.

1. High-Volume Consumer Rate for Wholesale Customers

Wholesale customers are those whose water consumption is so high that traditional fixed and variable charges become impractical. These customers do not fit within the standard tiered rate structure, as they exceed the highest tier almost immediately within their billing cycle. The Township of Russell, Ottawa's only current wholesale customer, serves as a prime example. Under the existing system, 99.9 per cent of their bill comes from the highest tier (tier 4) charges. To simplify billing, provide greater predictability, and eliminate unnecessary fees, staff recommend a single flat variable charge for wholesale customers, called a High-Volume Consumer Rate. This charge would combine both fixed and variable components into one per cubic metre rate, calculated to ensure no change to the current average bill amount. Additionally, this rate structure would be extended to other accounts that meet a pre-determined consumption threshold, offering a more practical and transparent billing approach for very high-volume users.

2. Bulk Fill Special Rate (one fee) for the Flusher Hydrant Program

The City's Flusher Hydrant Program issues permit to businesses that require non-potable water for services such as street cleaning and pool filling.

Currently, program participants self-report their usage and are charged at the tier 4 water rate as well as a 15 per cent administration fee to cover program management costs. This rate does not fully account for the fact that some of the water used returns to the sanitary and stormwater systems.

Staff recommend a single unified bulk fill special rate that includes a 10 per cent wastewater and stormwater surcharge in addition to the 15 per cent administration fee. This single fee simplifies communication and staff administration while ensuring that all costs associated with providing and managing the program, including the impact on wastewater and stormwater systems, are more accurately reflected in the fees charged to users.

Comprehensive Impact Assessment

1. Stormwater Impact Assessment

Implementing the recommended stormwater funding models for Ottawa reveals varied changes for both urban and rural property owners. In rural areas, where properties would fall under the Rural Roadside Ditch Maintenance Levy model, vacant land properties would now contribute to the Ditch Maintenance Levy, resulting in over 3,700 properties experiencing a tax bill increase of more than 10 per cent. Conversely, 2,000 farm properties will see a decrease of more than 10 per cent or have no impact, while 2,500 farm properties will face an increase exceeding 10 per cent. These changes stem from the current rate structure exempting farm and vacant land properties from stormwater fees. Most rural residential properties will benefit from a decrease, though 20 per cent will see an increase on their tax bill. Non-residential properties will generally experience no impact or will received a decrease, while 12 per cent will see an increase.

Implementing an impervious-based funding model in the urban area, more equitably distributes stormwater charges which align with the impacts that properties have on the drainage system. The realigned cost distribution causes shifting between account different types. Residential properties generally contribute the same that is collected currently. However, implementing the preferred blended stormwater rate option sees multi-residential stormwater revenues decrease by 28 per cent and shift towards non-residential properties, which increase by 27 per cent. Overall, 61 per cent of properties will experience a plus or minus 10 per cent impact, 29 per cent will receive a greater discount, and only 10 per cent will see an increase of more than 10 per cent.

2. Water and Wastewater Impact Assessment

To assess the effectiveness of each water and wastewater rate model and determine which best aligned with the review's guiding principles and framework, staff conducted a comprehensive impact analysis from multiple perspectives. Given that residential properties account for 96 per cent of all water accounts, the first step was to evaluate how the proposed rate structures affected the average residential user, as well as those

in the lower consumption brackets—the 25th percentile (low residential user) and the 10th percentile (very low residential user).

Through this analysis, staff found that only the Made-to-Measure model:

- Ensured that the average residential user paid a fair balance between fixed and variable charges.
- Provided relief to lower consumption users by reducing their overall fixed charges.
- Reinforced affordability and rewarded conservation.

Table 9: Low User Impact Analysis

	Consumption	Fixed as a % of Total Charges (Current)	Fixed as a % of Total Charges (Proposed)
Average Residential	28m^3/60 days	50%	46%
Low Residential (25th Percentile)	16m^3/60 days	71%	62%
Very Low Residential (10th Percentile)	10m^3/60 days	83%	72%

Note: Fixed charges include water, wastewater, fire supply (current only) and stormwater.

Next, staff examined the financial impact across the three primary account types: residential, multi-residential, and non-residential. The Made-to-Measure model was the only approach that achieved parity in the proportion of fixed charges and the cost per cubic metre across these groups. To further validate staff's assessment, the impact on users with different meter sizes was reviewed, spanning from small residential properties to large-scale consumers such as hospitals and airports. By refining variable rates within the Made-to-Measure structure, staff ensured that users across all meter sizes paid a comparable rate per cubic metre at their respective average consumption levels.

Finally, to ensure a fair and balanced implementation, staff conducted a broad assessment of all accounts, including outliers, to measure the degree of change relative to the current rate structure. The findings demonstrated that under the Made-to-Measure model:

- 90.4 per cent of accounts experienced a billing change of 5 per cent or less.
- 93.5 per cent remained within 10 per cent of their current bill amount.

These results confirm that the model meets the objectives of fairness, equity, and financial sustainability while maintaining stability for the vast majority of account holders.

Table 10: Bill Impact Stability by Rate Model Option

	Option 2: Humpback	Option 3: Made-to-measure
% of bills <±5% change over status quo	49.2%	90.4%
% of bills <±10% change over status quo	79.4%	93.5%
% of bills <±100% change over status quo	98.3%	99.0%

3. Combined Impact Assessment

To fully assess the equity and affordability of the proposed rate structure, it is important to consider the cumulative impact of the recommended changes across all three service areas: water, wastewater, and stormwater. When viewed together, the combined effects present a balanced and measured shift in cost distribution that aligns with the goals of fairness, financial sustainability, and environmental accountability.

A comprehensive analysis of property-level impacts when stormwater, water, and wastewater rates are considered together reveals that the majority of ratepayers will experience minimal change in their bills. Staff estimate the following impacts:

- 89 per cent of properties would see an impact of plus or minus 10 per cent compared to the current structure, which demonstrates that the overall model is stable for the vast majority of customers.
- 6 per cent of properties would experience a reduction of more than 10 per cent.
- 5 per cent of properties would see an increase greater than 10 per cent.

These results reflect the City's efforts to minimize undue burden on any single customer class while aligning charges more closely with system usage and impact.

Table 11: Bill Impact of Proposed Changes over Status Quo

Change Over Status Quo	Water & Wastewater	Stormwater	Combined
Increase >10%	4%	8%	5%
Between +10% and -10%	94%	77%	89%
Decrease <-10%	2%	15%	6%

From a revenue perspective, the Made-to-Measure water and wastewater rate structure results in a 10 per cent increase in revenues from the multi-residential customer class, which more accurately reflects this sector's actual demand on infrastructure under the new model. Residential and non-residential revenue contributions from water and wastewater services remain approximately the same compared to the current structure, reinforcing continuity for the majority of ratepayers.

Conversely, the implementation of the preferred blended stormwater rate structure leads to a significant redistribution within stormwater revenues. Specifically, multi-residential stormwater contributions decrease by 28 per cent, with this reduction largely offset by increased contributions from the non-residential sector. This adjustment better reflects the distribution of impervious surfaces across property types and corrects imbalances under the current system.

Table 12: Revenue Shifts over Status Quo by Account Type and Service

	Water and Wastewater	Stormwater	Combined
Residential	-2%	2%	-2%
Multi-Residential	10%	-28%	0%
Non-Residential	-2%	27%	5%

When considered together, the proposed changes result in an overall 5 per cent increase in non-residential contributions across all services, while residential contributions decrease slightly. This rebalancing reflects a more accurate allocation of costs based on infrastructure usage and property impact, supporting both fairness and the long-term financial sustainability of the system.

In summary, the combined impact of the recommended water rate structure changes achieves the City's objectives of improving equity, enhancing transparency, and maintaining service affordability, while minimizing disruption to the majority of customers.

Affordability

One of the guiding principles of the rate structure review, as directed by Council, is to consider affordability for households and businesses. Many respondents to the City's water rate survey, that was conducted as part of the water rate structure review consultation, highlighted the importance of affordability, particularly in light of the ongoing cost of living crisis. Ensuring that water, wastewater, and stormwater rates

remain fair and manageable for residents while also supporting economic growth and maintaining Ottawa's business-friendly environment is a key priority.

To assess the potential affordability impacts the proposed water rate structure may have, a detailed analysis of the City's existing and proposed water and wastewater rates was conducted using the U.S. Environmental Protection Agency's (EPA) Financial Capability Assessment guidance. This assessment, which examined the **Cost Per Household as a percentage of Median Household Income**, found that the average annual residential water bill was $989.49 in 2024, or **0.97 per cent of the Median Household Income**. Based on the EPA's financial capability assessment. Ottawa's water bills have a low residential indicator financial impact. Looking at residential water accounts in 2024:

- 70 per cent of accounts fell within the low impact range
- 29 per cent of accounts fell within the mid impact range
- 1 per cent were above the high impact annual threshold of $2,040

Table 13: U.S. EPA Financial Capability Assessment

Residential Indicator Financial Impact	Residential Indicator (Cost per household as Per Cent of MHI)	Bill Amount Ranges (Based on MHI)
Low	< 1%	< $1,020
Mid-Range	1 to 2%	$1,020 to $2,040
High	> 2%	> $2,040

*MHI (median household income) from Statistics Canada, 2021 Census and Statistics Canada, Table 98-10-0055-01.

Additionally, staff conducted a comparison of the City's existing and proposed water and wastewater rates using affordability metrics from the 2024 BMA Municipality Study. The study found that Ottawa's water and wastewater costs made up 0.64 per cent of average household income, which is comparable to or lower than other large Ontario municipalities and significantly below the provincial average of 1.12 per cent. This analysis indicates that Ottawa's water rates remain relatively affordable in comparison to provincial benchmarks.

Table 14: Water & Wastewater Costs as a Per Cent of Household Income

Municipality	2024 Avg. Household Income	2024 Residential Water/WW Costs	2024 Water/WW as a % of Household Income
Mississauga	$135,730	$741	0.55%
Brampton	$134,938	$741	0.55%
Vaughan	$170,033	$1,042	0.61%
Ottawa	**$139,850**	**$889**	**0.64%**
Markham	$144,342	$993	0.69%
Toronto	$130,860	$904	0.69%
Hamilton	$114,469	$965	0.84%
London	$104,214	$1,023	0.98%
Kitchener	$112,517	$1,250	1.11%
Windsor	$90,420	$1,519	1.68%
Provincial Average	**$124,639**	**$1,383**	**1.12%**

While affordability remains a priority, existing financial assistance programs appear to be sufficient in supporting low-income households in Ottawa. Ontario Works, which provides financial aid for shelter costs, can also assist with water bills. In 2023, fewer than 8 per cent of households receiving Ontario Works assistance requested support for their water bills, suggesting that many low-income households either do not pay their own water bills directly, as is often the case in rental or multi-residential properties, or do not see it as a primary financial burden. Additionally, the City's water utility deferral program for low-income seniors and individuals with disabilities provides extended payment periods and reduced interest rates, yet only 27 households applied for assistance in 2023. The low participation rates in these programs suggest efforts should focus on increasing awareness of existing programs and addressing potential barriers to access to ensure that residents in need can take full advantage of available support.

Implementation

If the rate structure updates are approved by Council, implementation of the new rate structures is expected to take approximately 21 months. This timeline includes several key phases to ensure a smooth transition. Staff will work with Geospatial Analytics, Technology and Solutions team in Planning, Development and Building Services to acquire updated impervious surface data to refine the rate model prior to final rate setting. Operational procedures and processes will need to be updated to support the new rate structure, including necessary modifications to the existing water and tax billing systems. The implementation will also require collaboration with both internal stakeholders and external software vendors to integrate the necessary system changes.

Adjustments will be made to ensure that the new rate structure functions seamlessly within the current water and tax software systems.

Alongside these technical modifications, an extensive education and communication campaign will be launched to inform and prepare residents for the upcoming changes. This will include outreach efforts such as mailers and digital resources to explain the changes to the rate structure, its implications, and how property owners can navigate the new system. Additionally, an online portal will be developed to provide residents with easy access to their impervious surface data and corresponding charges. These steps are essential in ensuring a well-executed rollout and a successful transition to the new billing framework.

Final Implementation Rates

Once the water, wastewater and stormwater rate structure is approved by Council, additional work will be required to finalize the rates for implementation. The next steps will involve updating the rate models with the most current data, including updated consumption patterns, impervious surface information, and budgetary requirements. While the final rates may differ slightly from the figures presented in this report, the models and principles approved in this report will remain.

As part of this process, fixed ratios may change slightly using the latest consumption data to maintain equitable cost distribution across all meter sizes. This ensures that the average user at each meter size continues to pay the same cost per cubic metre. Similarly, stormwater rates will be recalculated based on the most recent impervious surface data, which will be informed by a spring 2026 flyover, provided the data collection is successful. The first set of rates for water, wastewater and stormwater under this new rate structure will be included in the 2027 budget for Council approval. Likewise, the rural ditch levy requirement will be included in the 2027 Budget and rates will be set based on ratios approved through the 2027 Tax Policy report.

Annual Rate Setting Process

The implementation of the new rate structure requires a systematic approach to annual rate setting that balances revenue requirements with changing community characteristics. While the Long-Range Financial Plan (LRFP) establishes the annual percentage increase, the actual percentage rate increase annually will be refined further through a comprehensive process that considers multiple factors affecting the distribution of costs.

Staff will establish rates each year based on the LRFP percentage increase and must also account for several dynamic factors. These include factors such as:

- Property growth across the city
- Changes in water consumption patterns
- The most recent impervious surface data, which may reflect shifts in impervious surface profiles as property owners potentially reduce hard surfaces in response to the new rate structure.
- Modifications to Official Plan boundaries
- Full urbanization of designated rural villages

Each of these factors may minimally impact the rates required to meet revenue targets and therefore annual rate increases may not always be uniform across all property types and account classifications.

To ensure transparency, staff will provide detailed explanations through the annual budget process on the actual rate increase, identifying which factors affected the LRFP percent increase and to what extent. This information will include analysis of consumption trends, property growth statistics, and changes in impervious surface distributions to clarify the relationship between the forecasted LRFP rate increase and final proposed rate increase.

The distribution of costs between residential and non-residential properties will be reflected naturally through the annual rate-setting process, with the recommended rate structure maintaining proportional contributions based on actual system impacts. As the community evolves through development and redevelopment, the rate model will automatically adjust to ensure fair cost distribution across all property types.

Property Classification Methodology

The City employs distinct methodologies for classifying properties for water/wastewater billing and stormwater billing purposes.

- **Water and Wastewater billing*:*** Properties are classified into three primary categories: residential, multi-residential, and non-residential. This classification relies primarily on MPAC property codes that reflect the property type and use. Staff will determine the appropriate classification based on these codes, which will inform the applicable tier structure and fixed charge ratio. In instances where MPAC data is not yet available, such as for new developments, staff may use other City data sources to assign an interim classification such as building permit

information. Once MPAC data becomes available, the classification will be reviewed and adjusted if necessary.

- **Stormwater billing*:*** Residential properties are classified into four specific subcategories: single-family homes, semi-detached homes, townhomes, or apartments/condominiums. This more granular classification also uses MPAC property codes that reflect specific residential property types. The codes corresponding to each classification will be explicitly documented each year in the annual Stormwater Rate By-law, providing transparency and consistency in application. Properties with mixed uses will be classified based on the predominant use as determined by MPAC.

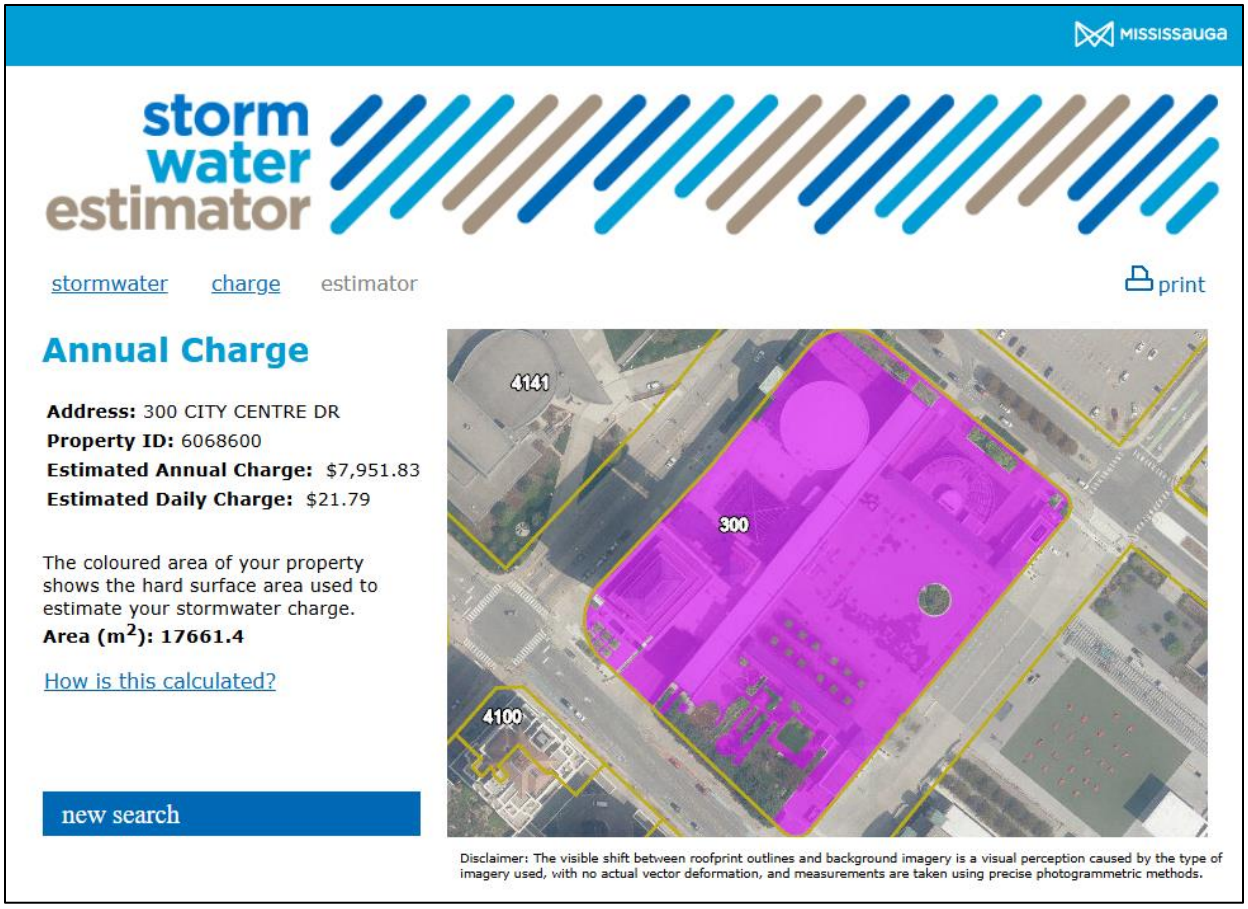
Non-residential properties are not subcategorized for stormwater billing purposes, as they are charged based on exact impervious surface measurements rather than property classification. However, their designation as non-residential properties still relies on MPAC property codes to ensure consistent application across all City billing systems.

The property classification methodology will be reviewed periodically to ensure alignment with MPAC classification updates and to address any systemic issues identified through the dispute resolution process.

Online Stormwater Portal

Resident feedback from the water rate review survey and consultations emphasized the need for an accessible method to review and challenge impervious surface measurements. To address this, staff researched best practices from other municipalities that have successfully implemented similar rate structures. Notably, the City of Mississauga’s Stormwater Estimator tool provides an interactive system that allows property owners to look up their property, view impervious surface overlays, and estimate charges.

Figure 10: Mississauga's Stormwater Estimator Tool



Source: https://estimator.stormwatercharge.ca/

Revenue staff are working with Technology Solutions to design a similar solution that will be integrated into a new section of Ottawa.ca. This solution will include an address or roll number lookup function that displays an estimated charge, alongside a map overlay to help users visualize impervious surface boundaries on their property. The portal will also include a link to an appeal form for residents wishing to dispute their assessment, supported by educational content to enhance public understanding of the rate structure changes.

Technology Solutions estimates that development of the online stormwater portal and appeal form intake will take approximately nine months to develop and implement from the time impervious-layer image data is available, and cost approximately $45,000. The targeted completion date is end of Q4 2026, to align with the beginning of the broad communication and education campaign in Q1 2027.

Stormwater Billing Dispute Resolution Process

A clear and efficient dispute resolution process is essential for maintaining public confidence in the new stormwater billing system. The process will vary depending on whether properties are billed a fixed rate based on classification or charged based on exact impervious surface measurements.

- **Residential properties billed at a fixed rate:** Disputes will be limited to property classification challenges (single-family home, semi-detached, townhome, or apartment/condo). Since the City relies on Municipal Property Assessment Corporation (MPAC) data for these classifications, property owners must first dispute any classification errors with MPAC directly. Once MPAC updates the property classification, these changes will flow through to the City's billing system and be reflected in subsequent billing cycles. The City will not accept direct appeals for classification changes unless accompanied by documentation from MPAC confirming the revised property type.

- **Properties billed based on exact impervious surface measurements:** Residents may dispute the area calculation captured by the City's aerial imagery analysis. Valid grounds for dispute include demonstrable errors in measurement, misclassification of pervious surfaces as impervious, or inclusion of neighbouring properties' impervious areas. Property owners must submit supporting documentation with their appeal, which may include property surveys, site plans, or other evidence demonstrating the error. The City will review these claims provide a written determination.

- **Limitations:** Disputes will not be permitted for changes to impervious surfaces made after the date when aerial imagery was captured. The billing will remain based on the most recent imagery until the next scheduled data collection cycle, typically every year. This approach ensures administrative efficiency while still allowing for periodic updates that reflect property modifications.

Information Technology System Modifications

The implementation of the new rate structure will require modifications to existing tax and water billing software, specifically H2Ottawa and VTAX. These systems currently support the existing water, wastewater, and stormwater rate structures but need to be updated to accommodate the recommended changes. Enhancements will include hosting impervious surface data for each tax roll, adapting water billing structures to incorporate the new tiers, and modifying bill print formats to reflect the updated charges. Software modifications are being planned with Information Technology Services. The

estimated timelines outlined in this report are feasible; but may require refinement following detailed technical planning. It is estimated that these software modifications will take approximately 12 months to complete, including the necessary development, testing, and deployment phases. The anticipated cost for these updates is estimated at $250,000.

Public Information and Education Campaign

A robust communication and education strategy will be a critical component of the implementation process to ensure that residents fully understand the changes and their implications. A webpage dedicated to water, wastewater, and stormwater billing changes will be developed to provide comprehensive details on the new tiered rate structure, impervious surface charges, and the methodology used to collect and measure impervious area data. Additionally, the site will outline the process for challenging data discrepancies, ensuring transparency and accessibility for all property owners.

In addition to digital resources, a widespread public engagement effort will be undertaken to communicate the rate structure changes. Informational mailers will be sent to all water and tax account holders, providing clear explanations of the new charges and how they will impact billing. Property-specific stormwater impact statements will also be mailed to non-residential properties that are transitioning to exact impervious billing and are expected to experience a substantial increase in charges, ensuring they understand the financial implications of the changes. Staff will also conduct outreach and education through a three-month social media campaign leading up to the start date of the new rate structure to advise residents of the changes and where to get more information. The estimated cost for the proposed communication and education campaign is projected to be between $50,000 to $100,000 mainly comprising of mailing costs.

Human Resource Requirements

The ongoing operational needs and client servicing of the proposed rate structure are largely met by current staffing levels, with some exceptions. Implementation will require temporary staffing increases to ensure a smooth transition for residents from the current to the new rate structure.

Two temporary FTEs will be needed to assist with testing of all the system changes for six to eight months leading up to implementation.

During the first year of the new rate structure, Revenue Services will require five temporary FTEs to address the temporary increased calls and inquiries related to the change, explanation of charges on the bills, impervious billing questions, and the anticipated higher rate of appeals in the first year.

The long-term sustainability of the new rate structure necessitates one permanent FTE to support ongoing quality assurance, impervious surface audits and challenges, and billing corrections. As property owners contest their assessments, this role will be responsible for reviewing cases, verifying measurement data, and ensuring accurate billing adjustments. Additionally, maintaining high data integrity will require continuous monitoring, periodic updates to property classifications, and routine audits to confirm that impervious surface calculations remain accurate and up to date.

Performance Metrics

To ensure the long-term success of the revised water rate structure and guide ongoing evaluation, the City will establish a robust performance measurement framework. This framework will include clearly defined Key Performance Indicators (KPIs) to assess financial outcomes, administrative efficiency, environmental impacts, and customer experience. Monitoring these metrics over time will allow staff to make data-driven decisions, identify emerging challenges, and refine the system where necessary.

- **Cost Recovery Ratio** - A critical financial performance measure will be the cost recovery ratio, specifically whether the target revenue split of 35 per cent fixed and 65 per cent variable is achieved and sustained. This ratio reflects the City's commitment to balancing financial stability with conservation incentives and will be reviewed annually against actual billing data.
- **Revenue Stability** - To evaluate the financial resilience of the new structure, staff will track monthly and seasonal fluctuations in revenue and compare these patterns to those observed under the previous model. Reduced volatility will indicate greater predictability and improved budget planning capacity.
- **Appeal Volume** - The volume and nature of appeals related to impervious surface measurements will serve as an indicator of data accuracy and the perceived fairness of the new stormwater billing system. A high number of appeals may signal the need for additional quality assurance processes or public education.
- **Administrative Efficiency** - Staff will monitor the time and resources required to administer the new rate structure, including data processing, billing, and appeals

management. Comparisons will be made with the administrative burden of the previous system to determine whether efficiency has improved or diminished.

- **Water Conservation** - Changes in overall water consumption patterns—particularly across different property types—will be assessed to determine whether the new rate structure continues to promote conservation. Trends in reduced usage, especially among high-consumption users, will be tracked over time.
- **Impervious Surface Reduction** - Where possible, the City will monitor voluntary efforts by property owners to reduce impervious surfaces, either through changes in landscaping or building design. This metric will help evaluate whether the new structure incentivizes more sustainable property management practices.
- **Customer Satisfaction** - Periodic sentiment surveys will be conducted to assess user satisfaction with billing clarity, fairness, and the overall understanding of the rate structure. These surveys will help identify communication gaps and inform future public engagement efforts.
- **Portal Usage** - The online stormwater portal will be a key tool for transparency and user engagement. Metrics such as access frequency, page views, and data correction submissions will be tracked to understand how effectively the tool is being utilized and whether further enhancements are required.
- **Customer Service Volume** - The volume of customer service inquiries—particularly those related to billing—will be monitored to gauge public understanding of the new rate structure. A high volume of inquiries following implementation may indicate a need for expanded communication efforts or additional support resources.

FINANCIAL IMPLICATIONS

A new bulk fill user fee will be established in 2026 instead of leveraging an existing volumetric fee and the existing $3.6 million in operating authority allocated to Public Works will move to capital. Implementation of the recommended changes will require initial investments in 2026. These include IT system modifications to existing billing software estimated at approximately $250,000, costs associated with data acquisition and processing, particularly for impervious surface measurements, and a comprehensive public information and education campaign estimated to cost between $50,000 and $100,000. The online portal is estimated to cost $45,000 to build. Additionally, 2 temporary FTEs will be needed to support system testing for 6 to 8 months. These costs will be funded from existing budget resources.

A new rural tax levy will be introduced in 2027 for the additional $2 million in roadside ditch maintenance works and allocated to the capital program, for a base budget of $5.68 million. This program will be indexed annually.

In 2027 budget, the new user fees will be identified in accordance with this report including the removal of the fire supply charges. The proposed rate structure revisions aim to enhance the financial stability and predictability of water, wastewater, and stormwater services by increasing the fixed portion of revenues and implementing an equitable impervious surface-based stormwater model. This is crucial for sustainably funding the operations, maintenance, and necessary capital investments in the City's infrastructure as outlined in the Long-Range Financial Plan (LRFP), supporting full cost recovery long-term. The 5 temporary FTEs are needed to address increased customer inquiries and will be funded from existing budget resources. The 1 permanent FTE needed to support ongoing quality assurance, impervious surface audits and challenges and billing corrections will be brought forward in the 2027 rate budget if required.

In addition, the existing stormwater funded culvert program will be funded from the general tax levy starting in 2027. This change will be updated in the respective LRFPs and brought forward through future budget reports. The existing $1.123 million stormwater funded operating budget allocated to Public Works will be realigned to the capital programs and will remain stormwater funded, indexed annually.

LEGAL IMPLICATIONS

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

COMMENTS BY THE WARD COUNCILLOR(S)

This is a citywide report. Staff have engaged with impacted Ward Councillors in consideration of this report's recommendations.

CONSULTATION

To ensure a comprehensive and inclusive review, the City engaged in extensive public consultations. A city-wide online survey was conducted from February 14 to July 31, 2024, receiving nearly 40,000 responses, providing key insights into public concerns and priorities related to water rates. Between May and June 2024, four in-person community engagement sessions were held in rural wards, with approximately 700 participants. Additionally, sector-specific meetings took place from July through October

2024, involving representatives from small businesses, large commercial enterprises, educational institutions, healthcare, non-profits, multi-residential stakeholders, the Township of Russell, and federal organizations.

These engagement efforts helped to identify key concerns and priorities, which directly informed the development of the revised rate structure. A summary of the feedback received is provided in the **What We Learned Summary Report** attached as Document 1.

ACCESSIBILITY IMPACTS

Ensuring equitable access to information and meaningful participation has been a core priority throughout the water rate structure review process. The project team has taken deliberate steps to remove barriers and accommodate the diverse needs of residents, consistent with the principles of the Accessibility for Ontarians with Disabilities Act (AODA, 2005) and the *Integrated Accessibility Standards Regulation* (IASR O.Reg 191/11).

During the consultation phase, all public-facing materials were made available in accessible formats to ensure they could be used by residents with disabilities. This included accessible digital versions of the consultation documents and survey, as well as paper copies of the survey that were distributed through select locations and by request to ensure inclusion of individuals without access to digital technology. These efforts were designed to broaden participation and ensure feedback was representative of the entire community.

In addition to formal accessibility measures, staff made concerted efforts to gather feedback from residents who were unable to participate through traditional methods. On multiple occasions, members of the project team engaged directly with individuals who were physically unable to attend public meetings or who experienced difficulty completing either the digital or paper survey. These residents were provided with alternative formats or verbal options to share their perspectives, which were recorded and incorporated into the consultation findings that informed this report.

Looking ahead to implementation, staff remain committed to accessibility in all communications and public interactions. All educational and outreach materials—whether digital, printed, or interactive—will be produced in accessible formats. The online portal that will allow residents to review impervious surface data, file appeals, and learn more about the new rate structure will also be designed to meet accessibility standards, ensuring compatibility with assistive technologies and ease of navigation for

all users.

To support this commitment, the project team will work in partnership with the City's Accessibility Office to ensure full compliance with the AODA IASR throughout implementation. This includes the ongoing review of materials and systems, consideration of user testing with persons with disabilities, and timely updates to reflect evolving accessibility best practices.

ASSET MANAGEMENT IMPLICATIONS

While the recommendations outlined in this report do not involve the acquisition of new assets or directly alter the lifecycle costs of existing infrastructure, they have important implications for the City's ability to sustainably own, operate, and maintain critical water, wastewater, and stormwater systems. These services rely on extensive, long-lived assets—such as pipes, treatment facilities, reservoirs, and stormwater management structures—that must be carefully managed to ensure safe, reliable, and cost-effective service delivery.

The City of Ottawa's Comprehensive Asset Management (CAM) Policy emphasizes the importance of aligning financial strategies with the long-term stewardship of municipal infrastructure. A key principle of the policy is ensuring that funding mechanisms are stable, predictable, and sufficient to meet the service levels expected by residents, businesses, and institutions. The rate structure recommendations presented in this report directly support that objective.

By improving the financial sustainability of the water rate model—through increased fixed cost recovery, a more equitable distribution of stormwater charges based on impervious surface area, and a tiered approach to consumption billing—the City will be better positioned to generate consistent revenues aligned with the true cost of service delivery. These enhancements reduce the City's vulnerability to revenue fluctuations tied to seasonal water usage, and provide a stronger foundation for planning, maintaining, and renewing infrastructure in accordance with long-range financial and asset management plans.

Furthermore, the revised rate structure strengthens the link between service beneficiaries and funding responsibility. By tying stormwater charges to a property's impact on the system and aligning water and wastewater costs with usage and infrastructure needs, the model ensures that those who benefit most from municipal assets are contributing proportionately to their upkeep. This approach reflects asset

management best practices by reinforcing accountability, improving transparency, and promoting equity.

ECONOMIC IMPLICATIONS

The proposed rate structure is designed not only to enhance equity and sustainability but also to support economic development, a core guiding principle of the review. Throughout the consultation process, the City engaged directly with stakeholders from Ottawa's commercial, institutional, and multi-residential sectors—including small businesses, large enterprises, healthcare and education institutions, federal organizations, and Business Improvement Areas—to better understand their needs and priorities. Feedback from these groups played a critical role in shaping a rate model that balances fiscal responsibility with economic competitiveness.

A key feature of the revised structure is the increased proportion of fixed charges, rising from 20 per cent to 35 per cent of total water and wastewater revenues. This adjustment improves billing predictability and revenue stability, reducing volatility for both the City and account holders—particularly beneficial for large consumers and businesses that require long-term financial planning.

The introduction of a declining tier structure for non-residential water and wastewater rates further supports economic development by having competitive consumption rates for high-volume users. This not only encourages growth and investment in Ottawa's commercial and industrial sectors but also helps offset potential increases in stormwater charges for non-residential properties under the new impervious surface-based model. The result is an overall minimal financial impact for most non-residential users and cost neutrality for the majority of account holders when considering combined water, wastewater, and stormwater fees.

ENVIRONMENTAL IMPLICATIONS

The revised water rate structure is designed not only to improve financial equity and sustainability, but also to support the City of Ottawa's broader environmental objectives. The proposed billing model introduces several key features that align with responsible environmental stewardship and climate resilience.

A central component of the updated stormwater rate structure is the transition to impervious surface-based billing. By linking charges directly to the amount of impermeable surface on a property, the City is aligning stormwater fees with the actual impact each property has on the municipal stormwater system. This approach improves

fairness and encourages property owners to adopt low-impact development practices, such as green roofs and expanded landscaping that reduces runoff. By financially incentivizing such actions, the rate structure promotes long-term stormwater management solutions that can mitigate the environmental burden on public infrastructure.

Importantly, a well-funded stormwater system enhances the City's ability to withstand and respond to the increased frequency and intensity of extreme weather events driven by climate change. Effective stormwater infrastructure reduces flood risk, protects local waterways from pollution and erosion, and contributes to the resilience of both urban and rural communities.

From the perspective of drinking water and wastewater services, the revised structure maintains a strong commitment to conservation. By continuing to derive 65 per cent of revenues from variable charges, the model ensures that users are incentivized to monitor and reduce their consumption. This conservation pricing model reinforces the principle that those who use more water should pay more, encouraging behavioural change and reducing pressure on water supply and treatment infrastructure.

Further, the inclining tiered rate structure for residential and multi-residential properties reinforces responsible water use. Customers who consume more water move into higher pricing tiers, providing a clear financial incentive for moderation. This tiered design not only supports conservation but also aligns with principles of fairness, as it protects low-usage customers from bearing the costs associated with higher demand users.

INDIGENOUS, GENDER AND EQUITY IMPLICATIONS

The City sets water, wastewater and stormwater rates per the *Municipal Act, 2001*, and related prescribed regulations. The City recognizes that water rates may impact equity-denied groups, including equity-seeking women and gender-diverse individuals in the City. However, the rate setting process is currently the same across the City for each ward and neighbourhood. Water, wastewater and stormwater rates differ with property type, tax class, and meter size.

RISK MANAGEMENT IMPLICATIONS

The transition to a revised water rate structure carries several key risks that must be proactively managed to ensure successful implementation and public acceptance. The following section outlines key risks and the City's approach to managing them.

1. Low Public Support

Adjustments to utility rates—especially those perceived as complex or financially burdensome—may not be supported by some residents. Concerns may arise around the fairness of new stormwater fees or the shift to higher fixed charges, particularly among residents unfamiliar with the rationale behind these changes. To mitigate this risk, the City will implement a targeted public communication strategy that explains the rationale and benefits of the new rate structure. This will include a clear narrative emphasizing how the changes improve equity, support environmental stewardship, and ensure long-term financial sustainability. A proactive rate impact statement will be sent to non-residential account holders immediately after Council approval to give businesses time to prepare for any financial impact of the rate change. These efforts will be complemented by transparent materials and messaging designed to build trust and acceptance throughout the transition process.

2. Implementation Challenges

The introduction of a new billing model based on impervious surface area and revised tiered water rates presents significant implementation complexity. The success of the project depends on the effective integration of new data systems, billing software updates, interdepartmental coordination, and public education efforts. To manage this risk, the City has allocated a long runway for implementation, allowing sufficient time to refine the rate model, acquire and verify necessary data, and test system compatibility. Temporary staffing will be introduced to support operational demands during rollout, and a dedicated project management team will oversee execution to ensure timely delivery of all components, including system upgrades, training, and stakeholder engagement.

3. Inaccurate or Disputed Data

The reliance on aerial imagery, GIS technology, and AI-assisted mapping to determine impervious surfaces introduces the risk of data errors, which may lead to misbilling or resident frustration. To address this, the City will implement a transparent and accessible appeal process, enabling property owners to review and contest their impervious surface measurements if needed. A user-friendly online portal will be developed to provide residents with direct access to their property data and a mechanism for submitting corrections. Additionally, staff will conduct regular quality assurance reviews and audits to validate data accuracy and maintain public confidence in the integrity of the billing system.

4. Equity Perception Among Properties

Equity concerns could emerge if stakeholders perceive the new structure to disproportionately impact certain property types, sizes, or geographic areas, such as

rural versus urban households. In response, the City has designed the rate model to be rooted in a transparent methodology that reflects actual service usage and benefit received. The underlying principles and calculations will be made publicly available and clearly communicated through outreach materials to reinforce accountability and fairness. By classifying properties by type and impact, and by applying differentiated rates accordingly, the model avoids one-size-fits-all pricing and aims to equitably allocate costs among users based on measurable demand and infrastructure use.

5. Low Understanding of How Charges are Calculated

The complexity of utility billing often leads to confusion or skepticism, particularly when major changes are introduced. Even with a simplified and more intuitive structure, the risk remains that some residents may not fully understand how their charges are calculated. To address this risk, the City will undertake a comprehensive education campaign aimed at improving public understanding of the new water rate structure. This campaign will provide residents with clear, concise, and visually accessible materials—such as infographics and FAQs—across digital and print platforms. These resources will be made available in both official languages and accessible formats. Community partnerships and media engagement will further extend outreach and reinforce messaging.

RURAL IMPLICATIONS

The recommendations contained in this report carry specific implications for Ottawa's rural communities. While the revised rate structure aims to establish fairness, transparency, and financial sustainability across all areas of the city, its impacts on rural residents, properties, services, and land uses have been carefully considered through consultation, analysis, and the development of tailored policy options.

A key aspect of the revised stormwater rate model is the introduction of a Roadside Ditch Maintenance Levy in rural areas. This approach acknowledges the unique characteristics of rural stormwater infrastructure, which primarily consists of open ditches and culverts rather than underground pipe networks. The proposed special levy directly links the cost of maintaining these assets with the rural properties that benefit from them, thereby ensuring that stormwater management funding in rural areas is both transparent and locally responsive. Importantly, governance of this funding will fall under the oversight of the Agriculture and Rural Affairs Committee, ensuring that decisions regarding how the levy is allocated and prioritized are made by those with direct knowledge of rural conditions. This governance structure ensures that rural residents maintain control over how funds are invested in their communities and that the

program reflects rural-specific infrastructure needs.

Additionally, by reinforcing the financial sustainability of stormwater services, the revised rate structure supports water quality protection in rural waterways, which is essential for the health of aquatic ecosystems, the integrity of agricultural operations, and the safe enjoyment of recreational areas. Properly funded roadside ditch maintenance and culvert programs also reduce erosion, manage runoff volumes, and limit pollutants from entering rural streams and tributaries—supporting local wildlife habitats and broader environmental stewardship goals.

Finally, the City's commitment to equity and consultation means rural feedback has been fully incorporated into the development of the rate structure. As implementation proceeds, ongoing engagement with rural stakeholders—particularly through the Agriculture and Rural Affairs Committee—will ensure that the structure continues to reflect the rural context, and that residents and businesses have the tools and information they need to understand and manage their stormwater charges.

TECHNOLOGY IMPLICATIONS

Information Technology Services is working with the Geospatial Analytics, Technology and Solutions team in Planning, Development and Building Services to outline the technical work resulting from this report in the VTAX and H2Ottawa systems. Scoping of the work is underway: high-level cost and timeline estimates have been provided as part of this report.

TERM OF COUNCIL PRIORITIES

This report supports the current 2023-2026 Term of Council Priorities, in specifically a city that is green and resilient, as well as the City's commitment to financial sustainability and transparency.

The Water Rate Review addresses challenges related to fairness, transparency, and financial sustainability. The review aims to ensure that all users contribute equitably to the cost of water, wastewater, and stormwater services while maintaining affordability and promoting conservation.

SUPPORTING DOCUMENTATION

Document 1 – What We Learned Summary Report

Document 2 – Appendix A

DISPOSITION

Following approval of this report's recommendations and the approach of the implementation date, Revenue Services together with Legal Services will prepare the revised Water and Stormwater by-laws, and a revised area boundary by-law for stormwater which reflects the City's Official Plan and place it on Council's agenda for enactment. All administrative requirements for implementation of updates to the Water and Stormwater by-laws will be undertaken. Updates to the Stormwater By-law will be made annually following budget approval and placed on Council's agenda for enactment.

Following approval of this report, the rural ditch levy requirement will be included in the 2027 Budget and rates will be set based on ratios approved through the 2027 Tax Policy report. The first set of rates for water, wastewater and stormwater under this new rate structure will be included in the 2027 budget for Council approval.