

2. RESERVES REVIEW REVUE DES RÉSERVES
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COMMITTEE RECOMMENDATIONS

That Council approve:

1. The Reserve Management Policy that adopts:
 - a) A portfolio based structure and management approach, and;
 - b) That minimum and maximum target balances be established using a risk-based approach, and;
2. An increase in the minimum target balance in the Tax Stabilization Reserve to \$34.8M by 2020 from annual surplus or budgeted contribution.
3. That the City Clerk and Solicitor in consultation with Corporate Services be delegated the authority to amend any by-laws necessary to reflect the changes described in this report.

RECOMMANDATIONS DU COMITÉ

Que le Conseil approuve:

1. La Politique sur la gestion des réserves, qui adopte :
 - a) une structure et une méthode de gestion basées sur des portefeuilles;
 - b) l'établissement de soldes cibles minimums et maximums en fonction d'une méthode basée sur les risques;
2. L'augmentation du solde cible minimum du Fonds de réserve de stabilisation des taxes à 34,8 M\$ d'ici à 2020, au moyen de l'excédent annuel ou de la contribution budgétée.
3. Que l'on délègue au greffier municipal et avocat général en consultation avec services organisationnels le pouvoir de modifier toutes les règlements supplémentaires au besoin pour qu'ils tiennent compte des modifications décrites dans le présent rapport.

DOCUMENTATION/DOCUMENTATION

1. Deputy Treasurer's report, dated 27 February 2018 (ACS2018-CSD-FIN-0004)

Rapport de la Trésorière municipale adjointe, daté le 27 février 2018 (ACS2018-CSD-FIN-0004)

2. Extract of draft Minutes, Finance and Economic Development Committee, 6 March 2018

Extrait de l'ébauche du procès-verbal, Comité des finances et du développement économique, le 6 mars 2018

**Report to
Rapport au:**

**Finance and Economic Development Committee
Comité des finances et du développement économique
6 March 2018 / 6 mars 2018**

**and Council
et au Conseil
28 March 2018 / 28 mars 2018**

**Submitted on February 27, 2018
Soumis le 27 février 2018**

**Submitted by
Soumis par:**

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Ward: CITY WIDE / À L'ÉCHELLE DE LA VILLE File Number: ACS2018-CSD-FIN-0004

SUBJECT: Reserves Review

OBJET: Revue des réserves

REPORT RECOMMENDATIONS

**That the Finance and Economic Development Committee recommend Council
approve:**

1. The Reserve Management Policy that adopts:
 - c) A portfolio based structure and management approach, and;
 - d) That minimum and maximum target balances be established using a risk-based approach, and;
2. An increase in the minimum target balance in the Tax Stabilization Reserve to \$34.8M by 2020 from annual surplus or budgeted contribution.
3. That the City Clerk and Solicitor in consultation with Corporate Services be delegated the authority to amend any by-laws necessary to reflect the changes described in this report.

RECOMMANDATIONS DU RAPPORT

Que le Comité des finances et du développement économique recommande au Conseil d'approuver:

1. La Politique sur la gestion des réserves, qui adopte :
 - c) une structure et une méthode de gestion basées sur des portefeuilles;
 - d) l'établissement de soldes cibles minimums et maximums en fonction d'une méthode basée sur les risques;
2. L'augmentation du solde cible minimum du Fonds de réserve de stabilisation des taxes à 34,8 M\$ d'ici à 2020, au moyen de l'excédent annuel ou de la contribution budgétée.
3. Que l'on délègue au greffier municipal et avocat général en consultation avec services organisationnels le pouvoir de modifier toutes les règlements supplémentaires au besoin pour qu'ils tiennent compte des modifications décrites dans le présent rapport.

EXECUTIVE SUMMARY

The management of reserves is an important factor in the City's overall financial condition as they impact both financial sustainability and financial flexibility. The credit agencies have acknowledged the City's strong reserve levels and its relatively low level of debt as major attributes towards maintaining high credit ratings (Moody's Aaa and S&P AA).

A complete review of the structure, purpose and level of funding within the various reserves has been on the Finance Department's work plan since 2017. Staff engaged

MNP Consulting to review the purpose, source, use and balance required for each of the reserve funds currently maintained by the City. They used a risk-based methodology and approach to recommend the appropriate structure and reserve balance minimum and maximum levels required to maintain the City's financial stability and sufficient liquidity.

Currently the City has thirty-three (33) reserves of which five (5) are restricted and twenty eight (28) are discretionary. The scope of the Reserves Review only included the discretionary reserves. The recommended structure separates the discretionary reserves into three portfolios (operating, capital, combined operating and capital) and combines several reserves providing increased flexibility to address funding needs. For example, the Tax Stabilization Reserve will serve as the primary fund for purposes of tax supported operating budget stabilization and will eliminate the need to maintain separate reserves for Child Care, Winter Maintenance, Self-Insurance and Elections. The result is a reduction in the number of discretionary reserves from 28 to 19.

MNP recommends using a Portfolio Based approach for establishing a reserve, by combining reserves used for similar purposes, but with different risk profiles. Similar to an investment portfolio, combining funds with different risk profiles reduces the overall risk of the fund and the larger size of the combined fund, provides much greater flexibility to manage fluctuations or deal with unexpected events.

Based on application of the Government Finance Officers Association (GFOA) risk assessment framework, a detailed quantitative risk assessment for selected City of Ottawa reserves was completed. The purpose of the quantitative risk assessment was to utilize statistical models that provide an estimate of the significance of the relationship between the risk factors and the impact on city costs or revenues.

In addition to the quantitative regression analysis, the risk assessment also encompassed a review of the 2006 – 2015 operating budget year-end performance related to various tax and rate supported operations. The results of this analysis contributed directly to the development of recommended reserve target balances outlined in the report.

Based on this extensive risk and regression analysis and budget trend analysis, this report is also recommending that minimum and maximum reserve balances be

established for those reserves that are used to deal with operating risks and for the City Wide Capital Reserve.

The most significant gap exists within the Tax Stabilization Reserve. The balance in the new combined Tax Stabilization Reserve is \$23.6 million (excluding the \$12.4 million reserve balance for Child Care which is fully committed). The recommended minimum balance for this reserve, based on the risk analysis is \$34.8 million. This is certainly a feasible target but can only be achieved over a number of years, taking into consideration the processes the City currently has in place to manage reserves and reserve balances. The tax stabilization reserve will be supplemented by future operating surpluses or budget contributions, as required, to achieve the minimum target by 2020.

La gestion des fonds de réserve est un facteur important dans la situation financière globale de la Ville, car ils ont une incidence sur sa viabilité financière et sur sa marge de manœuvre financière. Les agences d'évaluation du crédit ont reconnu les niveaux élevés des fonds de réserve de la Ville et son niveau d'endettement relativement faible comme étant des caractéristiques importantes favorisant le maintien de cotes de crédit élevées (Aaa selon l'agence de notation Moody's et AA selon l'agence de notation Standard & Poor's).

Un examen complet de la structure, du but et du niveau de financement des divers fonds de réserve figure sur le plan de travail du Service des Finances depuis 2017. Le personnel a retenu les services de MNP Consulting pour passer en revue le but, la source, l'utilisation et le solde nécessaires pour chacun des fonds de réserve actuellement gérés par la Ville. MNP a utilisé une méthodologie et une approche fondées sur le risque pour recommander la structure appropriée ainsi que les soldes minimaux et maximaux des fonds de réserve nécessaires pour maintenir la stabilité financière de la Ville et une liquidité suffisante.

Actuellement, la Ville a trente-trois (33) fonds de réserve dont cinq (5) sont assujettis à des restrictions et vingt-huit (28) sont discrétionnaires. L'examen des fonds de réserve ne portait que sur les fonds de réserve discrétionnaires. La structure recommandée sépare les fonds de réserve discrétionnaires en trois portefeuilles (fonctionnement, immobilisations, fonctionnement et immobilisations combinés) et combine plusieurs fonds de réserve offrant ainsi une souplesse accrue afin de répondre aux besoins en financement. Par exemple, le Fonds de réserve de stabilisation des taxes servira de

fonds principal aux fins de stabilisation du budget de fonctionnement financé par les taxes et éliminera la nécessité de maintenir des fonds de réserve distincts pour les services de garde, l'entretien hivernal, l'auto-assurance et les élections. Cela entraîne une réduction du nombre de fonds de réserve discrétionnaires, qui passe de 28 à 19.

MNP recommande d'utiliser une approche fondée sur le portefeuille pour l'établissement d'un fonds de réserve, en combinant les fonds de réserve utilisés à des fins similaires, mais ayant des profils de risque différents. Comme c'est le cas pour un portefeuille d'investissement, la combinaison de fonds ayant différents profils de risque réduit le risque global du fonds et la taille du fonds combiné et offre une plus grande flexibilité pour gérer les fluctuations ou faire face à des situations imprévues.

En appliquant le cadre d'évaluation du risque de la Government Finance Officers Association (GFOA), une évaluation quantitative détaillée du risque pour certains fonds de réserve de la Ville d'Ottawa a été effectuée. Le but de l'évaluation quantitative du risque était d'utiliser des modèles statistiques qui fournissent une estimation de l'importance de la relation entre les facteurs de risque et l'incidence sur les coûts ou les recettes de la Ville.

En plus de l'analyse de régression quantitative, l'évaluation du risque comportait également un examen des résultats du budget de fonctionnement de la fin de l'exercice de 2006 à 2015 relativement à diverses opérations financées par les taxes et les redevances. Les résultats de cette analyse ont directement contribué à l'élaboration des soldes cibles des fonds de réserve indiqués dans le rapport.

En se fondant sur cette analyse exhaustive du risque et de régression et sur l'analyse des tendances budgétaires, le présent rapport recommande également que les soldes minimaux et maximaux des fonds de réserve soient établis pour les fonds de réserve qui sont utilisés pour traiter les risques opérationnels et pour le fonds de réserve pour immobilisations de la Ville.

On constate l'écart le plus important dans le Fonds de réserve de stabilisation des taxes. Le solde dans le nouveau Fonds de réserve de stabilisation des taxes combiné est de 23,6 millions de dollars (à l'exclusion du solde du fonds de réserve de 12,4 millions de dollars pour les services de garde qui est entièrement engagé). Le solde minimal recommandé pour ce fonds de réserve, en se fondant sur l'analyse du risque, est de 34,8 millions de dollars. C'est certainement un objectif réalisable, mais il

ne peut être atteint que sur plusieurs années, en tenant compte des processus qui sont actuellement en place à la Ville pour gérer les fonds de réserve et les soldes des fonds de réserve. Le Fonds de réserve de stabilisation des taxes sera complété par des excédents de fonctionnement ou des contributions budgétaires futurs, au besoin, pour atteindre la cible minimale d'ici 2020.

BACKGROUND

The management of reserves is an important factor in the City's overall financial condition as they influence both financial sustainability and financial flexibility. The credit agencies have acknowledged the City's strong reserve levels and its relatively low level of debt as major attributes towards maintaining high credit ratings (Moody's Aaa and S&P AA).

Council has recognized the importance of maintaining adequate reserves since the first LRFP adopted in 2002. In the first LRFP, Council adopted a \$50 million target for the combined closing balances of the tax-supported reserves. The Fiscal Framework approved in 2007 included a section on Fund Balances and Municipal Position with a guiding principle that "The City will sustain an appropriate level of municipal equity to manage risks and to generally sustain the finances of the corporation" and sets a target of 1% of operating costs to be maintained in the Tax Stabilization Reserve.

Long Range Financial Plan IV established that – a minimum of one year's debt servicing be maintained in Water and Sewer Reserves. These targets were set a long time ago, and the financial framework, scope and needs of the City have changed significantly over the years. A more robust approach needed to be developed to provide a more rigorous framework for managing the City's reserves.

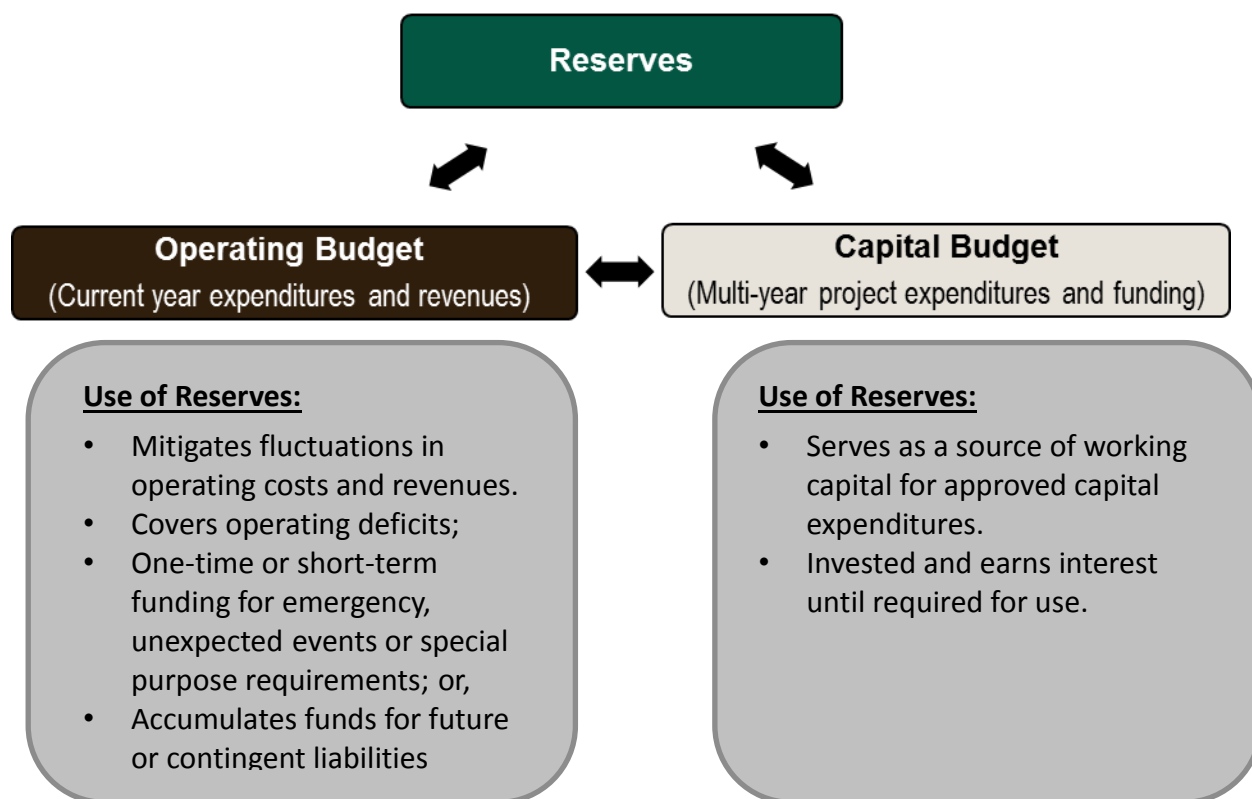
A complete review of the structure, purpose and level of funding within the various reserves has been on the Finance Department's work plan since 2017. Staff engaged MNP Consulting to review the purpose, source, use and balance required for each of the reserve funds currently maintained by the City. They used a risk-based methodology and approach to recommend the appropriate structure and reserve balance minimum and maximum levels required to maintain the City's financial stability and sufficient liquidity.

This report provides the results of the review, recommends changes to the reserve structure and the establishment of minimum/maximum levels for the City's operating

reserves and the City Wide Capital Reserve. Staff is also seeking approval for a Reserve Management Policy that reflects this new Reserve Framework.

DISCUSSION

The City's reserves are established under Council authority and are different in both source and use of funds. From a financial accounting and reporting perspective, reserves are independent of the City's ongoing capital and operating expenditures. However, as outlined below, reserves do provide a source of funds to manage fluctuations and unexpected or emergency needs for both operating and capital.



An operating reserve is generally used to stabilize or mitigate the impact of fluctuations in operating costs and revenues or to accumulate funds for future or contingent liabilities (e.g. Employee Related Future Compensation and Benefits). Capital reserves are used to fund capital works and are invested by the City until required for use thereby earning interest.

RESERVE STRUCTURE

Currently the City has thirty-three (33) reserves of which five (5) are restricted and twenty eight (28) are discretionary. From a structural perspective, reserves are categorized as discretionary or restricted. Restricted reserves are established by Council when legislation requires funds received for a special purpose to be segregated and accounted for separately, including ongoing financial reporting. Restricted or legislated reserve funds can only be used for their prescribed purpose. Examples include Building Code Reserves and Gas Tax Reserves.

The current reserve list is as follows:

Restricted

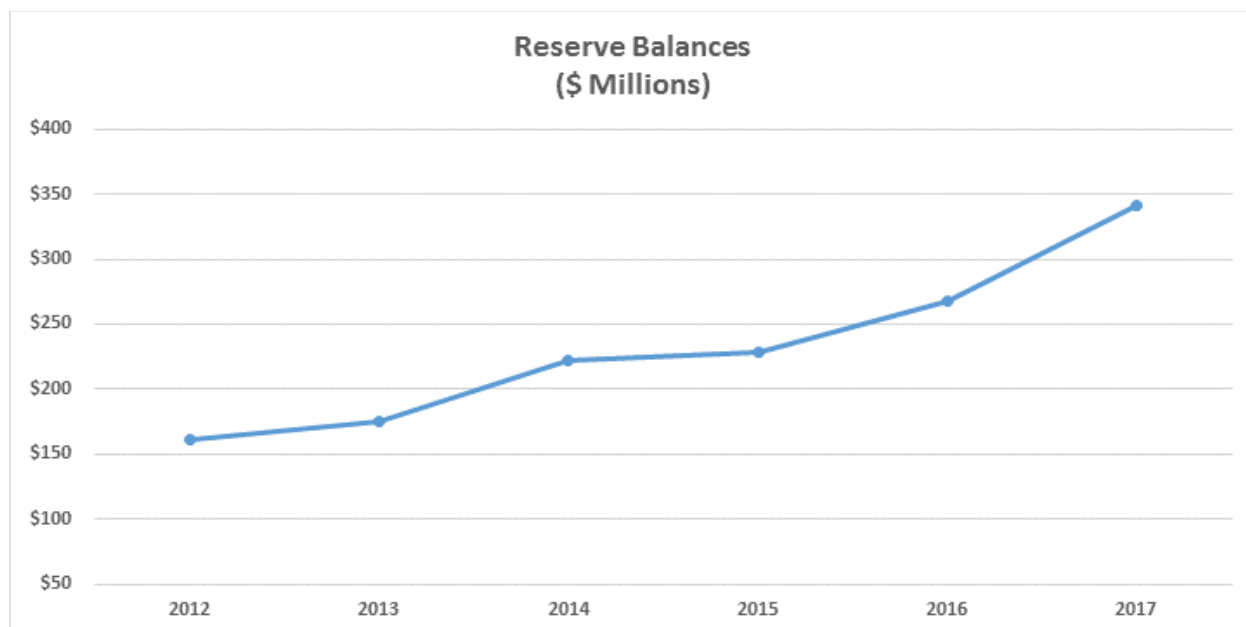
1. Building Code - Stabilization
2. Building Code - Insurance
3. Building Code - Capital
4. Gas Tax - Provincial
5. Gas Tax - Federal

Discretionary

1. Tax Stabilization
2. Election
3. Self Insurance
4. Winter
5. Child Care
6. Social Housing
7. Affordable Housing
8. Employee Benefits
9. City Wide Capital
10. Environment

11. Corporate Fleet
12. Police Fleet
13. Police Capital
14. Police Facilities
15. Transit Capital
16. Para Transpo
17. Cash-in-Lieu of Parkland - City Wide
18. Cash-in-Lieu of Parkland - Ward
19. Cash-in-Lieu of Parking
20. Parking
21. Ottawa Public Library Capital
22. Ottawa Public Health Capital
23. Landfill Closure
24. Springhill Closure
25. Water
26. Sewer
27. Solid Waste
28. Solid Waste Compensation

The following graph provides an overview of the City's reserve balances and how they have increased over the past five years and substantiates MNP's assessment that the City has strong reserve management processes in place.



Corporate Finance Services hired the consulting firm of MNP LLP to complete a risk analysis and review best practices. As a result of this analysis staff are recommending the following changes:

1. Developing and implementing a streamlined “Portfolio Based” structure for reserves based on the source and intended use of those funds:
2. Establishing a policy for reserves including guidelines, procedures and target balances (minimum and maximum) where applicable.

The scope of this review was limited to the “discretionary” reserves and the recommended structure reduces the twenty eight (28) discretionary accounts to nineteen (19).

MNP recommends using a Portfolio Based approach for establishing a reserve, by combining reserves used for similar purposes, but with different risk profiles. Similar to an investment portfolio, combining funds with different risk profiles reduces the overall risk of the fund and the larger size of the combined fund, provides much greater flexibility to manage fluctuations or deal with unexpected events.

Using a Portfolio Based approach, a separate reserve would be established only if there is a unique source of revenue and use (capital or operating) for those funds. The only exception proposed is for the fleet reserve as it is managed as one entity. This

approach ensures that different sources of revenue are not co-mingled and are used only for the purpose intended.

Examples of sources of revenue include:

- City-wide Tax
- Transit tax
- Water, wastewater and stormwater rate revenue
- Cash in lieu of Parkland
- Garbage fee
- Parking revenue

The proposed changes are detailed below in Table 1.

Table 1 - Recommended Structure

Portfolio	New Reserve Name	Source	Old Reserve Name
Operating	Tax Stabilization Reserve	City Wide Tax	Combines tax stabilization, winter, child care, self insurance and election reserves.
	Transit Operating Reserve	Transit Tax & Revenue	New. Previously included in transit capital reserve.
	Employee Benefit Reserve	City Wide Tax	Previously vested employee benefits for sick leave at termination only. Expanding to include all future benefits previously only reported in the Financial Statements.
	Landfill Closure Reserve	Garbage Fee	Combines landfill closure and Springhill closure reserves previously only reported in the Financial Statements.
Capital	City Wide Capital Reserve	City Wide Tax, Surplus from Sinking Fund, Endowment Earnings, Proceeds from Sale of Land	Combines city-wide capital and environment reserves.
	Transit Capital Reserve	Transit Tax	Combines transit and para-transpo reserves.
	Fleet Reserve	City Wide Tax and Rate	Combines city-wide fleet, water fleet and sewer fleet reserves.
	Housing Reserve	25% of Land Sales & Housing Operating Surplus	Combines social housing and affordable housing reserves.
	Police Capital Reserve	Police Tax	Combines police capital and facilities strategic plan reserves.

Portfolio	New Reserve Name	Source	Old Reserve Name
	Police Fleet Reserve	Police Tax	No change.
	Cash-in-Lieu Parkland City Wide Reserve	Cash-in-Lieu	No change.
	Cash-in-Lieu Parkland Ward Reserve	Cash-in-Lieu	No change.
	Ottawa Public Health	Operating Surplus (Max. \$200K)	No change
Combined Operating & Capital	Water Reserve	Water Rate & Fees	No change.
	Wastewater Reserve	Wastewater Rate & Fees	Previously sewer reserve which combined wastewater and stormwater.
	Stormwater Reserve	Stormwater Rate & Fees	New. Previously part of sewer reserve.
	Solid Waste Reserve	Garbage Fee	Combines solid waste and solid waste compensation reserves.
	Parking Reserve	Parking Revenue	Combines parking and cash-in- lieu parking reserves.
	Ottawa Public Library Reserve	City Wide Tax	No change.

The recommended structure separates the discretionary reserves into three portfolios (operating, capital, combined operating and capital) and combines several reserves providing increased flexibility to address funding needs. For example, the Tax Stabilization Reserve will serve as the primary fund for purposes of tax supported operating budget stabilization and will eliminate the need to maintain separate reserves for Child Care, Winter Maintenance, Self-Insurance and Elections.

The Child Care reserve was established to provide grants to non-profit child care and family resource programs and to fund unforeseen costs and emergency situations related to child care. These are all operating costs. Until the end of 2015, subsidized child care spaces were attached to specific child care service providers with guaranteed fee subsidy funding. On January 1, 2016, Ottawa moved to a new more flexible fee subsidy model that offers choice to parents and allows funding to be portable. The balance in the Child Care reserve as of December 31, 2017 is \$12.4 million and has been fully encumbered as per the approved 2016/2017 Child Care Service Plan to stabilize funding for service providers as they transition to the new funding model.

The Election reserve was established to stabilize fluctuations in the tax rate that would be caused by large one-time municipal election costs that occur every three years. Reserve funding is provided annually through the operating budget to ensure funds are available to run the election. This will continue with the annual allocation made to the Tax Stabilization reserve ensuring that the \$6 million election cost is available without requiring an increase tax requirement. The minimum and maximum target balance for the Tax Stabilization reserve includes the \$6 million election cost.

Two operating reserves have been added to the operating reserve portfolio that were previously only reported in the Financial Statements. These include the Employee Benefits Reserve and the Landfill closure Reserve. A new reserve is recommended to be created to absorb fluctuations in the Transit operating budget.

Similar to the operating reserves certain capital reserves are also recommended to be combined where they have similar uses.

The Social Housing and Affordable Housing reserves are both used to fund the acquisition, development and renewal of housing units. The social housing reserve is funded from operating surpluses in the Housing Services operating budget. The affordable housing reserve is funded from a 25% contribution from land sales as per the Affordable Housing Policy. Both of these sources will now fund the combined Housing Reserve.

The Environmental Resource Areas Acquisition Reserve Fund has been combined with the City Wide Capital Reserve. The environmental reserve was established to fund the acquisition of natural environment areas designated in the City's Official Plan and is funded from the surpluses in the sinking fund. The City Wide Capital reserve has been funding resource area acquisitions due to the lack of funding available from the debenture sinking fund. Resource area acquisitions will be incorporated into the next Long Range Financial Plan for Tax Supported Capital.

Various service areas currently have combined operating and capital reserves which are recommended to continue as they effectively deal with the operating and capital requirements of the service. A new reserve is recommended for stormwater services as this business line is now funded separately from sanitary sewer services.

RESERVE BALANCES

MNP reviewed the City's procedures for managing reserves, and felt that overall, the City's management of reserves is both proactive and effective. All transfers to and from the reserves must be approved by Council. Timely and comprehensive reporting to Council on year-end budget disposition and capital closures and adjustments, both of which can affect reserve balances, are two key examples of where the City exercises sound financial management practices related to reserve administration. Regularly reviewing capital works and closing those that are complete has resulted in over \$40 million in funds being returned to various capital reserves over the three year time period reviewed (2014-2016) .

As part of the review of best practices, MNP examined the policy framework and structure of selected Canadian municipalities including Toronto, Edmonton, Winnipeg, Mississauga and the Region of Peel. Each of these municipalities have reported to their Councils in recent years on policy changes and/or financial planning recommendations including proposed fund balances for their reserves. Within this group, the Region of Peel is cited as having a best practice policy framework that integrates reserve management into the overall strategic financial management of the municipality.

Effective management of reserves is a key component of municipal long-term financial planning. While the focus often tends to be on the adequacy of the "current" fund balance, a longer-term perspective is required to realize the full benefits of mitigating and eliminating future unforeseen operating and financial risks to the City. The following section will focus on the risk assessment conducted by MNP and staff's recommended target balances.

RESERVE FUND TARGET BALANCES

Reserves are a critical component of the City's long-term financial plan. They safeguard and protect the City and provide a significant contribution to the following three critical elements of a sound financial plan:

- 1. Sustainability** – The ability to continually provide essential city services and maintain capital infrastructure without resorting to unplanned increases in taxes or user rates and/or cuts in services and capital spending. Sustainability also encompasses the ability to plan for ongoing infrastructure renewal and one-time, major capital expenditures. Sound multiyear budgeting for both ongoing municipal service delivery (operating) and

infrastructure renewal (capital) needs is most often associated with financial sustainability.

2. **Flexibility** – The ability to respond proactively to unpredictable events and uncontrollable factors that have an impact on city expenditures or revenue generation.
3. **Vulnerability** – The degree to which the City is exposed to significant and unprecedented financial losses that are related to unforeseen risks, which include major legal claims, natural disasters and other catastrophic events. Vulnerability is also related to the city’s exposure to uncontrollable, major losses of funding from external sources including property assessment tax rebates and unforeseen reductions in Federal or Provincial funding. Vulnerability often encompasses one-time, extraordinary measures such as an emergency declaration to secure senior government disaster relief funding, and or special one-time funding decisions of Council, including debt and use of reserve funds for unintended purposes (e.g. major legal claim settlement).

In addition, **liquidity** is also an important consideration related to the management of reserves. Financial liquidity is recognized as a strength for the City of Ottawa and contributes directly to the City’s Triple-A credit rating from Moody’s Investors Service - the highest possible rating enjoyed by municipalities in Ontario.

The above elements represent a **risk continuum** and provide an overall framework for assessing the City reserves.

While the above elements provide an overall context or framework for assessing reserves from a risk perspective, to complete this review in a meaningful and substantive fashion, a more detailed risk based assessment “model” is required. MNP researched current municipal and public-sector practices and observed that a risk based approach to evaluating municipal reserve balance has a very limited application. In Canada, only the City of Edmonton, City of Winnipeg and City of Toronto have undertaken and reported to Council on a selective risk analysis related to their reserves.

In 2013, a case study which implemented the risk-based methodology was prepared and published by Government Finance Officers Association (GFOA) for the City of Colorado Springs. In 2015, the City of Edmonton used the methodology to examine the adequacy of the City’s Financial Stabilization Reserve. This report provides a general

overview of the methodology and describes how it was adapted by MNP for the analysis of the City's reserves.

The GFOA methodology adopts a "Triple A" approach to accounting for the financial impact of uncertainties such as extreme weather events and other uncontrollable events such as unforeseen legal claims and economic downturns. The "Triple A" approach includes three components:

- **Accept** – Cities must **accept** that they are always subject to uncertainty, including extreme weather events.
- **Assess** – Cities must make best efforts to **assess** and plan for the potential impact of uncertainty.
- **Augment** – The range of uncertainty that cities will face is always greater than assessed, so they need to **augment** the financial resources required to address the impact.

In MNP's review of the application of the GFOA framework, the ability to link independent key risk factors to specific reserves presents a challenge as the data related to "true risk factors" is limited. A "true risk factor" is defined as having attributes or variables that are **uncontrollable** by the City of Ottawa and have a direct impact on specific city expenditure or revenues. An example of a "true risk factor" for the City's Winter Reserve would be annual snowfall accumulation because it is uncontrollable and has a significant impact on the cost of winter operations. For this reason, not all reserves lend themselves to the quantitative risk assessment model. For instance, none of the Solid Waste risk factors evaluated were deemed "true risk factors" because they are either controllable or are among many other factors impacting overall operating revenues or expenditures.

Because of the limited application of the GFOA framework to the City's reserves, MNP examined other key elements for purposes of assessing risk and developing recommended minimum and maximum target balances. Given that considerable risk relates to ongoing year-end budget deficits in tax and rate supported operations, a multi-year budget performance analysis was completed for selected City functions for the years 2006 – 2015. As well, related to the City-wide tax supported capital reserve, an examination of net funding deficits based on capital project account closures was also completed for the three years 2014- 2016. In so doing, the recommended minimum and maximum target balances are, for the most part, derived from the GFOA based quantitative risk assessment and the multi-year budget performance trends.

Quantitative Risk Assessment

Based on application of the GFOA risk assessment framework, a detailed quantitative risk assessment for selected City of Ottawa reserves was completed. The purpose of the quantitative risk assessment was to utilize statistical models that provide an estimate of the significance of the relationship between the risk factors and the impact on city costs or revenues. The statistical models utilizing regression analysis and standard deviation were applied to a select number of City of Ottawa risk factors including:

- **Self-Insurance**
 - Number of Claims
 - Average Cost of Claims
- **Winter**
 - Total Winter Snowfall
 - Total Snowfall Days
- **Transit**
 - Average Fuel Price
 - Total Transit Ridership
- **Water**
 - Total Annual Water Consumption
- **Sewer**
 - Total Annual Water Consumption

Overall, the findings of the quantitative risk assessment when applied to the GFOA framework can be characterized as a mixed success. In some cases, such as Winter and Self Insurance, the approach utilized was very effective in quantifying the financial risk to the City. In other cases, such as Transit, Water and Sewer, while some correlation exists between the identified risk factors and the related impact of operating costs and revenues, the ability to predict the outcome of a risk event was limited. A good example is the fluctuation in overall Transit ridership. While ridership has an obvious strong correlation with Transit revenues, many other risk factors have an impact on Transit operations and it is not possible to quantify all the risks and the bottom-line impact of the year end transit operating budget performance results.

Budget Performance Risk

In addition to the quantitative regression analysis, the risk assessment also encompassed a review of the 2006 – 2015 operating budget year-end performance related to various tax and rate supported operations. The results of this analysis contributed directly to the development of recommended reserve target balances outlined in the report.

The following City tax and rate supported operations/budget accounts were analyzed related to year-end budget performance including the actual year-end net surplus or deficit:

- Self-Insurance Claims – Tax Supported
- Winter Operations – Tax Supported
- Transit Operations – Tax Supported
- Tax Rebates & Remissions (Net of Supplementary Taxes) – Tax Supported
- City-Wide Tax Supported Operations (Excluding Winter and Transit Operations)
- Solid Waste Operations – Tax Supported
- Solid Waste Operations – Rate Supported
- Water Operations – Rate Supported
- Sewer Operations – Rate Supported
- Police – Tax Supported
- Library – Tax Supported

The purpose of examining year-end budget performance trends for the above areas was to specifically assess the potential future risk of realizing an unfavourable year-end deficit. These areas based on a review of the overall City budget, are considered “major drivers” of the overall City budget and as such, the history of year-end budget performance can be utilized as a predictor of future reserve funding requirements. The review of the respective budget performance and specifically the trend lines assisted staff in developing minimum and maximum operating stabilization funding amounts related to the applicable reserve target balances.

Tax Supported City Wide Capital Risk

MNP examined the risks associated with City’s capital reserve, specifically the City Wide tax supported capital reserve. Capital spending on infrastructure renewal is a major issue for all municipalities and the City fully recognizes this risk. Based on development of comprehensive asset management plans and related long range

financial plans, the City is recognized as a municipal leader in addressing the growing infrastructure funding challenge.

The City Wide capital reserve fund serves to fund the many tax supported projects approved by City Council each year. Capital funds are transferred into the reserve following budget approval, and then transferred out to the specific capital project account. At any given time, hundreds of tax supported capital project accounts are active and in consultation with the Finance staff, the focus of the risk assessment for this area has been placed on the potential for net capital funding deficits that exist on closure of the capital project accounts. Table 2 below provides a three-year summary of capital project closures including the total number of projects in a net deficit funding position.

Table 2 - Summary of Capital Project Closures - Tax Supported (\$Millions)

Year	Total Projects Closed	Total Projects in Net Funding Deficit Position	Total Net Deficit Funding Amount
2014	268	27	\$1.0 M
2015	268	27	\$0.9 M
2016	244	29	\$1.64 M
TOTAL	780	83	\$3.54 M

Based on the above findings related to the City Wide Capital Reserve an uncommitted balance of \$3.5M should be maintained to mitigate the risk of net capital funding deficits on closure. Staff are also recommending that \$19.5M be maintained to mitigate the annual budget risk related to Endowment fund earnings (\$13M), Ottawa Lands Development Corporation earnings (\$5M) and Surplus Land Sales (\$1.5M) which form part of the operating budget contributions to the City Wide Reserve and are therefore used to fund the City's annual capital program.

Prior to detailing the recommended target balances it is important to understand some of the best practice advice reviewed. Some of the key best practices highlighted by MNP include the following:

- Standard & Poor's considers reserves of between 1 percent and 4 percent of revenues to be "adequate" while reserves above 15 percent are "very strong".

- The Government Finance Officers Association (GFOA) recommends maintaining discretionary reserve fund balances equal to two months of operating expenses or 16.6%.
- MNP recommends a minimum of 8.5% and maximum of 9.6% based on the specific risk assessment for the City as a whole.

As of December 31, 2017, the City's uncommitted reserve balance for all discretionary reserves in total is \$329.2 million this equates to 10% of the City's total expenditure budget of \$3.3 billion. Therefore, the City's overall reserve balance is "strong" and staff recommend maintaining that balance between MNP's recommended minimum of 8.5% of operating expenditures and a maximum of 12% based on best practice.

Outlined in Table 3, are the recommended minimum and maximum for a select number of risk areas based primarily on 10-year budget performance and GFOA risk factors:

Table 3 - Minimum and Maximum Targets for Risk Areas

Risk Area	Min Target	Max Target	Rationale
Tax Supported Budget	\$10M	\$15M	Min: 10-year budget performance trend line average deficit. Max: 1.5X GFOA risk factor.
Winter Operations	\$9.0M	\$12M	Min: 12.5% (1.5 months) of actual 5-year average annual expenditure. Max: 16.6% (2 months) of actual 5-year average annual expenditure.
Self-Insurance	\$5M	\$10M	Min: 10-year budget performance trend line average deficit. Max: 10-year budget performance trend line peak deficit
Tax Rebates and Remissions (Net of Supp. Taxes)	\$3.7M	\$7M	Min: 10-year budget performance trend line average deficit. Max: 10-year budget performance trend line peak deficit
Police Operations	\$1.0M	\$1.5M	Min: 10-year budget performance trend line average deficit. Max: 1.5X GFOA risk factor.
Transit Operating	\$4.7M	\$12M	Min: 10-year budget performance trend line average deficit. Max: 10-year budget performance trend line peak deficit

Risk Area	Min Target	Max Target	Rationale
Employee Benefits	\$67.6M	\$90.1M	Min: equates to 9% of the total projected employee future benefit liability. Max: equates to 12% of the total projected employee future benefit liability.
City Wide Capital	\$23M	\$26.5M	Min: \$3.5M based on 2014-16 deficits for capital projects closed augmented by revenue risk of \$13M for annual endowment fund contribution and \$6.5M from sale of land. Max: 2X GFOA risk factor applied to the \$3.5M only.

The above noted maximum and minimum target balances for the first five specific risk areas have been incorporated into the target minimum and maximum for the Tax Stabilization Reserve. The operating budget stabilization risk that exists across several of the City's Tax Supported Operations is evident in the 10-Year Budget Performance Analysis and should be addressed by these minimum and maximum reserve targets.

Depicted below is the recommended Portfolio Structure, the projected year-end balances of the various reserves and the recommended minimum and maximum reserve balance targets. Targets are only being proposed for the operating reserves as they are established to address risks, whereas the capital reserves levels address capital needs and therefore reflect the long range capital plans for the various service areas. The only capital reserve with a target balance is the City Wide capital as previously mentioned there are risks in some of its revenue sources.

Table 4 - Recommended Target Balances

Recommended Portfolio Structure		Actual	RECOMMENDED TARGET (BY 2020)	
Category	Name	Dec. 31, 2017 Uncommitted (\$millions)	Minimum (\$millions)	Maximum (\$millions)
Operating				
	Tax Stabilization Reserve	\$ 23.6	\$ 34.8	\$ 51.5
	Transit Operating Reserve	\$ 4.7	\$ 4.7	\$ 12.0
	Employee Benefit Reserve	\$ 56.0	\$ 67.6	\$ 90.1
	Landfill Closure Reserve	\$ 4.8	<i>To Be Reviewed</i>	
		<u>\$ 89.1</u>		

Recommended Portfolio Structure		Actual	RECOMMENDED TARGET (BY 2020)	
Category	Name	Dec. 31, 2017 Uncommitted (\$millions)	Minimum (\$millions)	Maximum (\$millions)
Capital	-			
	City Wide Capital Reserve	\$ 23.3	\$ 23.0	\$ 26.5
	Transit Capital Reserve*	\$ 60.9	<i>Transit LRFP</i>	
	Fleet Reserve	\$ 23.5	<i>Fleet Mgmt Plan</i>	
	Housing Reserve	\$ 2.9	<i>N/A</i>	
	Police Capital Reserve	\$ 8.1	<i>Police Capital Plan</i>	
	Police Fleet Reserve	\$ 0.1	<i>Police Capital Plan</i>	
	Cash in Lieu (CIL) - Parkland City wide	\$ 4.0	<i>N/A</i>	
	CIL - Parkland by Ward	\$ 15.5	<i>N/A</i>	
	Ottawa Public Health	\$ 0.3	<i>Public Health Capital Plan</i>	
		<u>\$ 138.6</u>		
Combined Operating/Capital				
	Water Reserve	\$ 42.9	<i>Rate LRFP</i>	
	Wastewater Reserve	\$ 17.5	<i>Rate LRFP</i>	
	Stormwater Reserve	\$ 5.0	<i>Rate LRFP</i>	
	Solid Waste Reserve	\$ 4.3	<i>N/A</i>	
	Parking	\$ 27.3	<i>N/A</i>	
	Ottawa Public Library Reserve	\$ 4.5	<i>Library Financial Plan</i>	
		<u>\$ 101.5</u>		
TOTAL		<u><u>\$ 329.2</u></u>		

* Does not include all commitments. Reported on a cash basis.

The most significant gap exists within the Tax Stabilization Reserve. This is certainly a feasible target but can only be achieved over a number of years, taking into consideration the processes the City currently has in place to manage reserves and reserve balances. The tax stabilization reserve will be supplemented by future

operating surpluses or budget contributions, as required, to achieve the minimum target by 2020.

RURAL IMPLICATIONS

There are no specific rural implications to this report.

CONSULTATION

This section is not applicable for this report.

COMMENTS BY THE WARD COUNCILLOR(S)

As a City-wide report, this section is not applicable.

ADVISORY COMMITTEE(S) COMMENTS

This section is not applicable.

LEGAL IMPLICATIONS

There are no legal implications to approving the recommendations in this report.

RISK MANAGEMENT IMPLICATIONS

Risk Management considerations are addressed in the body of the report.

FINANCIAL IMPLICATIONS

Financial implications are identified in the report.

ACCESSIBILITY IMPACTS

There are no particular accessibility implications to this report.

TERM OF COUNCIL PRIORITIES

Recommendations in this report support various objectives under Council's priority of Financial Responsibility under the City Strategic Plan. The Reserve Review contributes directly to the achievement of Objective FS1 – Demonstrate sound financial management priorities and to Performance Measure 63-A as one of the components of the City's Fiscal Framework update.

SUPPORTING DOCUMENTATION

Document 1 - Reserve Management Policy

DISPOSITION

Upon approval of the report by City Council, staff in applicable Departments, in particular Corporate Services, will implement changes to all related processes, procedures, and By-laws which are required to carry out the report as approved.