Agenda
Civic Works Committee

14th Meeting of the Civic Works Committee

October 22, 2024

9:30 AM

Council Chambers - Please check the City website for additional meeting detail information. Meetings can be viewed via live-streaming on YouTube and the City Website.

The City of London is situated on the traditional lands of the Anishinaabek (AUh-nish-in-ah-bek), Haudenosaunee (Ho-den-no-show-nee), Lūnaapéewak (Len-ah-pay-wuk) and Attawandaron (Add-a-won-da-run).

We honour and respect the history, languages and culture of the diverse Indigenous people who call this territory home. The City of London is currently home to many First Nations, Métis and Inuit today.

As representatives of the people of the City of London, we are grateful to have the opportunity to work and live in this territory.

Members

Councillors A. Hopkins (Chair), J. Pribil, S. Trosow, S. Franke, D. Ferreira

The City of London is committed to making every effort to provide alternate formats and communication supports for meetings upon request. To make a request specific to this meeting, please contact CWC@london.ca or 519-661-2489 ext. 2425.

Pages

1. Disclosures of Pecuniary Interest

2. Consent

3. Scheduled Items

4. Items for Direction

5. Deferred Matters/Additional Business

6. Confidential

6.1 Litigation/Potential Litigation/Solicitor-Client Privilege/Position, Plan,

Procedure, Criteria or Instruction for Negotiation Purposes

A matter pertaining to litigation or potential litigation, affecting the municipality; advice that is subject to solicitor-client privilege, including communications necessary for that purpose and directions and instructions to officers and employees or agents of the municipality; and a position, plan, procedure, criteria or instruction to be applied to any negotiations carried on or to be carried on by or on behalf of the municipality or local board.

7. Adjournment

Report to Civic Works Committee

To: **Chair and Members**
Civic Works Committee

From: **Anna Lisa Barbon, CPA, CGA**
Deputy City Manager, Finance Supports

Subject: **SS-2024-289 Single Source Procurement of Fleet Equipment from a Group Procurement Organization**

Date: **October 22, 2024**

Recommendation

That, on the recommendation of the Deputy City Manager, Finance Supports, the following actions **BE TAKEN** with respect to the single source procurement of multiple Fleet Vehicles and Equipment through two Group Procurement Organizations:

a) Approval **BE GIVEN** to execute Single Source purchases in accordance with Section 14.4(g) of the City of London's Procurement of Goods and Services Policy;

b) Single Source negotiated pricing with Supply Ontario **BE ACCEPTED** to purchase twelve cargo vans and one pickup truck for a total estimated price of $743,384 (excluding HST) from Highbury Ford Sales Ltd in London;

c) Single Source negotiated pricing with Canoe **BE ACCEPTED** to purchase seven tandem dump trucks with snowplows for a total estimated price of $2,475,625 (excluding HST) from Carrier Truck Centers in London;

d) Single Source negotiated pricing with Canoe **BE ACCEPTED** to purchase three compressed natural gas front end loading garbage trucks for a total estimated price of $1,818,696 (excluding HST) from Vision Truck Group in Cambridge;

e) Single Source negotiated pricing with Canoe **BE ACCEPTED** to purchase two golf triplex trim mowers and three pull behind debris blowers for a total estimated price of $195,610 (excluding HST) from Turf Care Products Ltd. in St. Marys;

f) Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with these purchases;

g) Approval hereby given **BE CONDITIONAL** upon the Corporation entering into a formal contract or having a purchase order, or contract record relating to the subject matter of this approval in accordance with Section 14.4(g) of the Procurement of Goods and Services Policy; and,

h) That the funding for this purchase **BE APPROVED** as set out in the Source of Financing Report attached, hereto, as Appendix A.

Executive Summary

This report requests approval for Fleet Services to use Group Procurement Organizations (GPOs) in accordance with the Procurement of Goods and Services Policy to procure a specific group of equipment from the approved 2024 Fleet capital replacement budget. Three Request for Proposal's (RFPs) from Canoe Procurement Group of Canada and one Tender from Supply Ontario (Ministry of Government Services) offer equipment from qualified bidders that meet our operational

requirements. Using GPOs for competitive procurement will reduce administrative costs, shorten procurement timelines, and ensure preferred pricing.

The vehicles and equipment identified in this report are replacing assets that have reached the end of their useful lifecycle and require replacement to maintain current levels of service. The scheduled life cycle replacements include:

- Twelve light-duty utility cargo vans, and one pickup truck,
- Seven tandem dump trucks with snowplows,
- Three Compressed Natural Gas (CNG) powered front-end loading garbage trucks,
- Two triplex trim mowers and three pull-behind debris blowers.

Linkage to the Corporate Strategic Plan

This recommendation supports the 2023-2027 Strategic Plan by contributing to the following strategies:

- Well-Run City - Continue to deliver municipal services that meet the needs of a growing and changing community.

- Climate Action and Sustainable Growth - Implement the Climate Emergency Action Plan with a focus on actions up to 2027 that will contribute towards achieving 2030 emissions reduction targets.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

Fuel Switching – Diesel to CNG (CWC – September 25, 2018, Business Case - Switching to Compressed Natural Gas for Waste Collection Vehicles)

Fleet EV Chargers (CWC – October 13, 2021, Non-Repayable Contribution Agreement with Canada for Installation of Fleet Electric Vehicle Charging Stations)

1.2 Background

In January 2024, the City publicly notified suppliers through Bids and Tenders (Notice-2024-002) of its intent to participate in procurements conducted by several cooperative buying groups. Fleets Services with the support of Procurement and Supply have determined three RFPs from Canoe Procurement Group of Canada and one Tender from Supply Ontario that provide equipment meeting our operational requirements for upcoming life cycle replacements. This approach leverages a transparent bidding process, resulting in the acquisition of qualified equipment. Fleet Services is requesting authorization to use GPOs to procure equipment outlined in this report in accordance with 14.4 (g) of the Procurement of Good and Services Policy.

This report outlines the scheduled lifecycle replacement of various vehicles and equipment in the 2024 Fleet Services capital replacement budget. The GPOs Canoe Procurement Group of Canada and Supply Ontario are offering equipment from qualified bidders that are within approved Fleet capital budgets and meet operational requirements determined by the respective Service Area. In several instances maintaining a standard design as other units of similar class, will benefit the organization including reduced training requirements, enhanced operational safety, less spare part inventory and less maintenance downtime.

From a climate screening perspective, the electric and natural gas equipment brought forward in this report will reduce annual municipal fleet emissions by 1.5%. The 13 light-duty vehicles will transition to zero tailpipe emissions and 3 CNG garbage trucks will

reduce their emissions by 25%, collectively avoiding 700 tonnes of GHG emissions over the equipment's lifecycle. Given product availability, performance requirements, electrical infrastructure, and approved funding, some equipment cannot transition away fossil fuel at this time, however Fleet Services will continue to evaluate replacements with the goal of reducing carbon emissions.

2.0 Discussion and Considerations

Light Duty Electric Vehicles - In 2024, twelve light duty utility cargo vans and one pickup truck at the Bathurst operations yard are scheduled for replacement. With the recent installation of twenty Level 2 EV charging ports at Bathurst yard, Fleet Services recommends replacing all 13 gasoline-powered vehicles with battery electric vehicles (BEV) of similar performance and size. The utility cargo vans support various mobile trades across the City, including mechanics, plumbers, electricians, water meter services, and pollution control. From a Climate Lens perspective, transitioning these 13 units to electric will result in an average fuel savings of approximately $2,100 and a reduction of 4.5 tonnes of greenhouse gas emissions per vehicle per year. Although additional funding was not supported through the 2024-2027 Multi-Year Budget for the purchase of additional electric vehicles, favourable pricing as noted in Section 2.1 below, allows the ability to procure electric vehicles within existing approved budgets instead of the anticipated gas-powered vehicles.

Tandem Dump Truck with Plow - In 2024, seven tandem dump trucks with snowplows are scheduled for replacement. The City's tandem axle dump trucks are versatile assets used year-round across Road Operations, Sewer Operations and Water Operations. During the summer construction season, these trucks transport granular materials and haul away excavated materials from projects. In the winter season all forty units are outfitted for various operational activities including snow loading, snow plowing and sand/salt spreading. A market scan revealed there are currently no viable hybrid or electric power options for our distributed fleet of tandem trucks. However, Fleet Services will continuously assess the feasibility of alternative fuels such as natural gas or renewable diesel.

Front End Garbage Truck – Three front-end loading garbage trucks were scheduled for replacement in 2024. However, the truck due for replacement in 2025 was prematurely replaced after recently becoming inoperable. The fleet includes seven top loading packers that collect garbage from multi-residential and high-rise buildings, numerous townhomes complexes, various City facilities (e.g., community centres, Storybook Gardens, etc.), and other collections from the Enviro Depots. All three replacements will be equipped with natural gas engines, cutting greenhouse gas emissions by an estimated 11 tonnes per truck and saving $6,000 in fuel per truck annually. Fuel savings from the transition will help repay the loan from the Efficiency, Effectiveness, and Economy (EEE) reserve, which funded the natural gas modifications at the Exeter Road maintenance garage.

Golf Triplex Mowers and Debris Blowers – In support of Golf operations, two rotary mowers are scheduled to be replaced. These mowers are essential for maintaining challenging areas around greens and bunkers. Additionally, three tow behind blower units which are crucial for clearing cart paths, paved roadways, and blowing away grass clippings and other organic debris, are also due for replacement. After conducting a market scan, it was determined there are currently no electric or hybrid options available that meet the specific requirements for these mowers and tow behind blowers.

2.1 Procurement Process

The City issued public notification Notice-2024-002 of its intent to use various GPOs on January 4, 2024 (Bids and Tenders - London) including Canoe Procurement Group of Canada and Supply Ontario (Ministry of Government Services). The City is a registered member of the Canoe Procurement Group of Canada and is also registered as a non-Ontario Public Service (OPS) client with Supply Ontario. With guidance from Procurement and Supply, Fleet Services will acquire equipment through GPO contracts

from Ford Motor Company of Canada, International Truck, Mack Truck, Toro Company, and their respective authorized dealers.

Ford Motor Company of Canada (Highbury Ford Sales Ltd of London)
The purchase includes twelve 2024 Ford E-Transit 350 Cargo Vans and one 2024 Ford F150 Lightning Pro (commercial fleet version) through Supply Ontario Vendor of Record Contract Tender 19514 - Vehicle Acquisition and Upfitting Services. With Ford's delivery allowance discount ($2,000/cargo-van and $1,000/pickup) and the Federal point-of-sale incentives ($10,000/cargo-van from the iMHZEV Program and $5,000/pickup from the iZEV Program) the electric vehicle options are supported within existing approved capital budgets. The total quoted price for thirteen light vehicles after calculating the pretax and post tax incentives from Highbury Ford Sales is $743,384 (excluding HST).

International Truck (Carrier Truck Centers of London)
The purchase of seven 2025 International HV607 Tandem truck chassis equipped with Viking-Cives mounted snowplows and dump body through Canoe Procurement Group of Canada RFP #032824-NVS HV Series. The total quoted price for seven HV Series trucks with Viking plow and wing from Carrier Truck Centres is $2,475,625 (excluding HST).

Mack Truck (Vision Truck Group of Cambridge)
The purchase of three CNG powered 2025 Mack LR 64R chassis with a Labrie-Wittke Starlight 40 cubic yard front end loader bodies through Canoe Procurement Group of Canada RFP #032824-MAK Mack LR. The total quoted price for three Mack LR trucks with Labrie-Wittke body from Vision Truck Group is $1,818,696 (excluding HST).

Toro Company (Turf Care Products Canada Ltd of St. Marys)
The purchase of two golf triplex trim mowers and three pull behind debris blowers through Canoe Procurement Group of Canada RFP #031131-TTC Ground Maintenance Program. The total quoted price for these units from Turf Care Products Canada Ltd is $195,610 (excluding HST).

Fleet Services and Procurement and Supply recommend utilizing the group buying opportunities offered by the respective GPOs, given the benefits outlined in this report. This recommendation is in accordance with Section 14.4 (g) of the Procurement of Goods and Services Policy:

- 14.4 g. It is advantageous to the City to acquire the goods or services from a supplier pursuant to the procurement process conducted by another public body or a Group Procurement Organization (GPO);

As per section 14.5 a) ii) of the Procurement of Goods and Services Policy, Committee and City Council must approve a single source award greater than $50,000, unless otherwise permitted by the policy.

Fleet Services, in collaboration with Procurement and Supply Services, will continue to explore group purchasing opportunities to reduce costs, streamline the purchasing process, standardize vehicles and equipment, and ensure that operational requirements are met.

3.0 Financial Impact

All equipment listed in this report is scheduled for replacement as part of established and budgeted lifecycle planning, to support of current level of service.

Funding for the equipment identified in this report is available in the Fleet Services approved capital replacement budget ME202401 - Vehicle and Equipment Replacement TCA and additional transfer from Waste Management budget for the Top Loaders as outlined in the attached Appendix A - Source of Financing.

The fuel savings generated from the transition from gasoline to electric vehicles will be reflected in adjusted internal rental rate charges. Additionally, fuel savings from the three top loaders switching to CNG will contribute towards the EEE loan repayment that funded the required garage modifications for servicing natural gas trucks.

Conclusion

In accordance with section 14.4 (g) of the Procurement of Goods and Services Policy, Fleet Services is requesting approval to purchase the equipment outlined in this report through Group Purchasing Organizations. This procurement approach offers several advantages to the City including reduced administrative costs, shorten procurement timelines, standardization of equipment, and secures preferred pricing to participating agencies.

Prepared by:	**Drew Freeman, M.A., P.Eng.** **Senior Manager, Fleet Services** **Finance Supports**
Submitted by:	**Lynda Stewart** **Director, Fleet and Facilities** **Finance Supports**
Recommended by:	**Anna Lisa Barbon, CPA, CGA** **Deputy City Manager** **Finance Supports**

cc: Steve Mollon, Senior Manager, Procurement & Supply
Dave Fawcett, Manager Fleet Planning
Sneha Madur, Engineer, Corporate Energy Management

Appendix A – Source of Financing

Appendix "A"

#24196
October 22, 2024
(Award Contract)

Chair and Members
Civic Works Committee

RE: SS-2024-289 Single Source Procurement of Fleet Equipment from a Group Procurement Organization
(Various Work Orders)
Capital Project ME202401 - Vehicle and Equipment Replacement - TCA
Capital Project SW6050 - New and Emerging Solid Waste Technologies
Highbury Ford Sales Ltd. In London - $743,384.00 (excluding HST)
Carrier Truck Centers in London - $2,475,625.00 (excluding HST)
Vision Truck Group in Cambridge - $1,818,696.00 (excluding HST)
Turf Care Products Ltd. in St. Marys - $195,610.00 (excluding HST)

Finance Supports Report on the Sources of Financing:
Finance Supports confirms that the cost of this project can be accommodated within the financing available for it in the Capital Budget and that, subject to the approval of the recommendation of the Deputy City Manager, Finance Supports, the detailed source of financing is:

Estimated Expenditures	**Approved Budget**	**Committed to Date**	**This Submission**	**Balance for Future Work**
ME202401 - Vehicle and Equipment Replacement - TCA				
Vehicles and Equipment	12,865,745	3,801,608	4,600,181	4,463,956
ME202401 Total	$12,865,745	$3,801,608	$4,600,181	$4,463,956
SW6050- New and Emerging Solid Waste Technologies				
Engineering	1,000,000	314,731	0	685,269
Construction	23,515,398	4,012,145	0	19,503,253
Vehicles and Equipment	12,655,602	11,930,363	725,239	0
SW6050 Total	$37,171,000	$16,257,239	$725,239	$20,188,522
Total Expenditure	$50,036,745	$20,058,847	$5,325,420	$24,652,478
Sources of Financing				
ME202401 - Vehicle and Equipment Replacement - TCA				
Capital Levy	50,000	50,000	0	0
Funding from Operations	44,469	44,469	0	0
Drawdown from Fleet Renewal Reserve Fund	8,271,276	3,707,139	4,564,137	0
Drawdown from Operating EEE Reserve	4,500,000	0	36,044	4,463,956
ME202401 Total	$12,865,745	$3,801,608	$4,600,181	$4,463,956
SW6050- New and Emerging Solid Waste Technologies				
Debenture by-law No. W.-5679-335 (Note 1)	11,300,000	0	0	11,300,000
Drawdown from Fleet Renewal Reserve Fund	1,571,000	1,571,000	0	0
Drawdown from Solid Waste Renewal Reserve Fund	12,351,532	2,737,771	725,239	8,888,522
Drawdown from Canada-Community Building Fund Reserve Fund	11,948,468	11,948,468	0	0
SW6065 Total	$37,171,000	$16,257,239	$725,239	$20,188,522
Total Financing	$50,036,745	$20,058,847	$5,325,420	$24,652,478

Financial Note:	**ME202401**	**SW6050**	**Total**
Contract Price	$4,520,619	$712,696	$5,233,315
Add: HST @13%	587,680	92,650	680,330
Total Contract Price Including Taxes	5,108,299	805,346	5,913,645
Less: HST Rebate	-508,118	-80,107	-588,225
Net Contract Price	$4,600,181	$725,239	$5,325,420

Note 1: Administration hereby certifies that the estimated amounts payable in respect of this project does not exceed the annual financial debt and obligation limit for the Municipality from the Ministry of Municipal Affairs in accordance with the provisions of Ontario Regulation 403/02 made under the Municipal Act.

Jason Davies
Manager of Financial Planning and Policy

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Report to Civic Works Committee

To: **Chair and Members**
Civic Works Committee

From: **Kelly Scherr, P.Eng., MBA, FEC**
Deputy City Manager, Environment and Infrastructure

Anna Lisa Barbon, CPA, CGA
Deputy City Manager, Finance Supports

Subject: **Water Service Area Financial Plan Update**
Date: **October 22, 2024**

Recommendation

That on the recommendation of the Deputy City Manager, Environment and Infrastructure, and the Deputy City Manager, Finance Supports the updated Water Service Area Financial Plan for the City of London **BE APPROVED** as per the requirements of O. Reg 453/07 of the Safe Drinking Water Act, it being noted that this financial plan is consistent with Council approved financial policies and the adopted 2024-2027 Water Multi-Year Budget.

Executive Summary

As part of the Municipal Drinking Water Licensing Program, municipalities are required to prepare and approve Financial Plans for their drinking water system in accordance with Ontario Regulation 453/07 under the Safe Drinking Water Act. A condition of London's Drinking Water Licence is to update the Financial Plan and include it with the application for licence renewal which is required in 2025. This report is intended to seek Council approval of the Financial Plan as stipulated by the regulation. The updated Financial Plan is attached as Appendix 'A'

The Drinking Water Licence renewal will be completed administratively and does not specifically require Council approval.

Linkage to the Corporate Strategic Plan

This recommendation supports the following 2023-2027 Strategic Plan areas of focus:

- Climate Action and Sustainable Growth:
  - The infrastructure gap is managed for all assets; and
  - London's infrastructure is built, maintained, and secured to support future growth and protect the environment.
- Well-Run City
  - London's finances are maintained in a transparent, sustainable, and well-planned manner, incorporating intergenerational equity, affordability and environmental, social, and governance considerations.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

- CWC – May 5, 2015 - Updated Water Service Area Financial Plan: https://pub-london.escribemeetings.com/filestream.ashx?DocumentId=18984; https://pub-london.escribemeetings.com/filestream.ashx?DocumentId=18985

- CWC – April 15, 2020 - Water Service Area Financial Plan: https://pub-london.escribemeetings.com/filestream.ashx?DocumentId=72487
- Council – February 29, 2024 – 2024-2027 Multi-Year Budget adopted: Council - February 29, 2024 (escribemeetings.com)

1.2 Context

In 2007 the Ministry of the Environment, Conservation, and Parks issued Ontario Regulation 453/07 Financial Plans under the Safe Drinking Water Act, 2002. The regulation and accompanying guideline prescribes the requirements for Financial Plans to be prepared as part of the Municipal Drinking Water License Program set out in Part V of the Safe Drinking Water Act. This regulation was designed by the province in response to Justice Dennis O'Connor's Walkerton Inquiry recommendations. The intent is to ensure that municipalities plan for the long-term financial sustainability of their drinking water systems to ensure the safety and reliability of their drinking water systems in the future. This report and the Financial Plan have been prepared to comply with the requirements of O. Reg. 453/07.

Previous Financial Plans were submitted to the Ministry of Municipal Affairs and Housing in 2010, 2011, 2015, and 2020. Updating and re-submission of the Financial Plan is required when changes to the plan are substantive, as occurred in 2011, or at the time of licence renewal, which is the reason for this re-submission.

2.0 Discussion and Considerations

2.1 Financial Plan Contents

The Financial Plan summarizes operational and capital programs, rate increases, and financing that will ensure adequate monetary resources for financial stability and sustainability in the "near" term (5 to 7 years).

This Financial Plan has been prepared based on the financial information presented in the adopted 2024-2027 Water Multi-Year Budget. It also outlines the various financial principles and practices that are utilized to ensure the financial health of London's water utility. Specifically, the Financial Plan details the financing principles utilized to fund the Water capital and operating plans, reserve fund policies to ensure adequate reserve funds are maintained, and strategies for the management and appropriate use of debt financing. It is worth noting that the financial principles and practices utilized by the Water utility are consistent with the Corporation's overall financial principles and best practices as outlined in the City's Strategic Financial Framework.

The financial statements included in the Financial Plan project 6 years into the future and are prepared based on Public Sector Accounting Standards. It should be noted that the City of London bases infrastructure needs on a 20 year analysis and maintains a financial model that projects 20 years into the future. The Regulation requires updated plans to be submitted as part of the application process for water utility licence renewal (every 5 years).

The capital programs described in the plan have a strong focus on renewal of aging infrastructure. It identifies the funding requirements to ensure a safe and sufficient water supply, while meeting all regulatory compliance requirements. It is a commitment to continue renewing infrastructure as it approaches the end of its useful life and prior to failure, thereby minimizing maintenance and repair costs, social disruption and water loss, as well as ensuring inter-generational equity. Adherence to the plan will result in the lowest water charges to the City's rate payers in the long term.

Following approval of the plan by City Council, it will be available for review by the public on the City's website and also available in hard-copy for our customers on request. The Ministry of Municipal Affairs and Housing requires confirmation that the availability of the plan has been advertised in the media and that the plan has been uploaded to our website.

Conclusion

In accordance with Ontario Regulation 453/07 under the Safe Drinking Water Act, municipalities are required to prepare and approve Financial Plans for their drinking water system. As stipulated in O. Reg 453/07, the Financial Plan must be approved by the Owner of the London Water System, the Corporation of the City of London, before it can be submitted to the Ministry of Municipal Affairs and Housing. The fully developed and implemented Financial Plan will maintain a high quality, abundant and reliable water supply at affordable rates, allowing future generations to prosper as we have.

Prepared by:	**Aaron Rozentals, P.Eng., GDPA** **Division Manager, Water Engineering**
Submitted by:	**Ashley Rammeloo, MMSc, P.Eng.** **Director, Water, Wastewater, and Stormwater**
Recommended by:	**Kelly Scherr, P.Eng., MBA, FEC** **Deputy City Manager, Environment and Infrastructure**
	Anna-Lisa Barbon, CPA, CGA **Deputy City Manager, Finance Supports**

cc: J. Bowes

Appendix ‘A’ – Water Service Area Financial Plan

The Corporation of the City of London
Environmental and Engineering Services

Water Service Area

Financial Plans

O. Reg. 453/07 under Safe Drinking Water Act, 2002

October 3, 2024

Contents

1. Introduction

In 2007, the Ministry of the Environment (MOE) issued Ontario Regulation 453/07 *Financial Plans* under the *Safe Drinking Water Act, 2002 (SDWA)*. The regulation and accompanying guideline prescribes the requirements for Financial Plans to be prepared as part of the Municipal Drinking Water Licensing Program set out in Part V of the SDWA. This regulation was designed by the MOE in response to Justice Dennis O'Connor's Walkerton Inquiry recommendations. The intent is to ensure that municipalities plan for the long-term financial sustainability of their drinking water systems and ensure the safety of their drinking water systems into the future. This report has been created to comply with the requirements of O. Reg. 453/07 and covers the public portion of the City of London's water supply system which includes all pipes, valves, treatment systems, pumping stations and reservoirs. The financial statements included in this report project 6 years into the future. It should be noted however that the City of London bases infrastructure needs on a 20 year analysis and maintains a financial model that projects costs 20 years into the future. These 20-year plans are used to inform the City's multi-year budget process, which set operating budgets four years at a time and include a 10-year capital plan. Long-term infrastructure needs have also been assessed using 75 and 100 year outlooks to determine if financial sustainability achieved in the near term will support future long-term needs. Assuming revenue and expenditure forecasts meet projections, it is the expectation of the Water Service Area that future needs can be met.

The Plan outlined in this document, and its associated appendices and reference reports, will maintain a safe, secure and reliable water supply for current and future generations of Londoners through sound financial planning. This Financial Plan adheres to the principles of The Corporation of the City of London's Strategic Financial Framework, approved by Council October 10, 2023. This plan represents a balanced approach to funding the needs of the City's existing Water infrastructure, service improvements required to maintain customer levels of

service, as well as the requirements placed upon the City to invest in new infrastructure to support a growing City. Reliable infrastructure and performance of the water system are key elements to not only economic development but also quality-of-life and safety in the community. Efforts continue to further enhance and protect water quality and reliability. Utilities are continually faced with the renewal needs of aging infrastructure and inflationary pressures. Re-thinking past practices and investing in new approaches, while ensuring the reliability of the service, have become fundamental to the daily delivery of clean water.

The Financial Plan is a summary of various capital and operational programs already approved by Council for the current multi-year budget period (2024-2027), which also included forecasted capital expenditures out to 2033.

Previous plans were approved by Council in 2010, 2011, 2015, and 2020. This plan was updated for 2024 to coincide with the City's most recent multi-year budget and as part of the Water Operating Authority's 5-year license renewal requirements.

1.1. Service Context

The supply of drinking water is a very important service to the City of London. Residents and businesses expect to be able to turn on their tap at any time and be able to trust that the water coming out is safe to drink and of adequate pressure and volume to meet their needs. The City of London owes a duty of care to residents and businesses to ensure that water is available, clean and safe and it is this responsibility that guides staff in their day to day operations, long term planning, and recommendations to Council. Below is a description of the objectives and financial principles of the Water Service Area as well as a description of the organizational structure of the three groups involved in supplying clean water within the Water Service Area.

1.1.1. Water Service Area Objectives and Financial Principles

Below are the broad objectives and financial principles for the Water Service Area that were adopted by City of London Council in November 2008. The report detailing these principles in attached as Appendix B. These principles continue to apply as they did in 2008 (wording updated to reflect current situation). As noted above, these principles are also consistent with the City of London's Strategic Framework.

i. Growth pays for growth (with the exception of various development charges incentives and Regional Water System expansions, which are currently funded by water ratepayers),

ii. Pay-as-you-go financing for operating and routine life cycle expenditures,

iii. Strive for inter-generational equity to avoid burdening future generations in order to benefit current ratepayers,

iv. Use debt to smooth out funding requirements for large, infrequent life cycle or system improvement projects,

v. Build reserve funds to provide funding for emergency repairs and/or moderate funding requirements for intermittent medium-sized projects,

vi. Use reserve funds to balance annual revenue fluctuations resulting from weather,

vii. Set rates to achieve and maintain financial sustainability,

viii. Address funding requirements for new legislation-driven improvements at the time that they are known and use reserve funds or debt as appropriate,

ix. Commit to life cycle infrastructure renewal needs, irrespective of water usage trends, since pipe deterioration is generally insensitive to the amount of water consumed,

x. Commit to life cycle infrastructure renewal needs, since it is less expensive to renew infrastructure that is approaching failure than to attempt to maintain and repair it.

For the Water Service Area, financial sustainability means adhering to our objectives and financial principles while having stable rate increases at or near the rate of inflation where possible. Since the first Financial Plan was prepared in 2010, the following rate increases were enacted which allowed the water utility to move towards financial sustainability by 2016.

Year	Water Rate Increase
2010	8%
2011	0%
2012	8%
2013	8%
2014	8%
2015	7%
2016	3%
2017	3%
2018	3%
2019	3%
2020	2.5%
2021	2.5%
2022	2.5%
2023	2.5%

2024	2.5%

Going forward, it is anticipated that the capital and operational needs of the Water Service Area can continue to be achieved with smaller annual water rate increases like those seen since 2016 as informed by the Corporate Asset Management Plan.

1.1.2 Corporate Asset Management Plan

The Corporate Asset Management Plan is the culmination of efforts from staff across the City who are involved with managing municipal infrastructure assets, including finance and technical service areas and operations staff. Currently, the City of London owns and maintains approximately $7.65 billion worth of water assets. Table 1 summarizes the value of the water system and the 10 year cumulative infrastructure gap for maintaining current and achieving proposed Levels of Service (LOS).

Table 1 Water System Summary of the State of Infrastructure

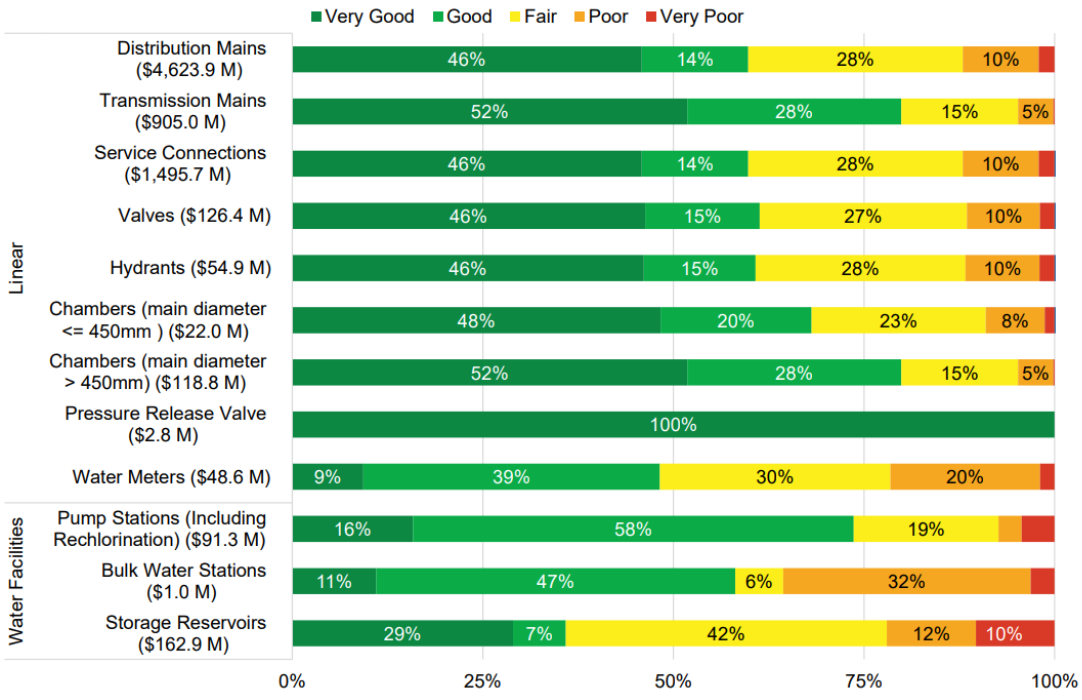
Service	Replacement Value $ (millions)	Current Condition	10 Year Maintain Current Infrastructure Gap	10 Year Achieve Proposed Infrastructure Gap	Data Reliability	Data Accuracy
Water	$7,653	Good	None	None	High	Med-High

The Corporate Asset Management Plan recommended relying on the existing 20 year plans and their updates as a means to manage the infrastructure needs for Water. The 20 year plan for Water was updated as part of the 2020-2023 Multi-Year Budget process and again for the 2024-2027 Multi-Year Budget process. Based on this update, given the present asset information, the projected investment suggested in the 20 year plan is appropriate. Water is projected to

not have an infrastructure gap assuming that reserve funds are available to address needs. There are no proposed LOS identified that would create additional funding gaps. Staff will continue to monitor the infrastructure gap and will take action if necessary.

Figure 1 shows the replacement value and condition that is attributable to the municipally owned Water Services assets, as detailed in the 2023 Corporate Asset Management Plan. Approximately 89% of the City's Water Services assets are in Fair to Very Good condition, with the remainder assessed as in poor or very poor condition, indicating a need for investment in the short to medium term. The full Corporate Asset Management Plan can be found of the City of London website (www.London.ca/CAM).

Figure 1 Water System Asset Condition Details



1.2. Background Information

1.2.1. Historical Overview

The residents of the City of London first voted to establish a public water supply system in the 1870's. At that time the preferred source of water was the natural springs that exist in present day Springbank Park on the banks of the Thames River. The water was collected in ponds and then pumped by a water powered pump (at the river) up nearby Reservoir Hill where it was stored in a reservoir. The elevation of the reservoir was high enough to supply the entire city at the time. This hill is still the location of most of the City's distribution reservoirs. In 1910, the City had outgrown the Springbank Park source and started developing wells to augment the supply. In the following 50 years it became clear that it was not sustainable to continue to rely on drilling new wells to keep up with the demand of London's growing population. In 1967 the province connected London to a treated source of water from Lake Huron and the City quickly moved to using 100% Lake Huron water in that same year. In 1995, the City also connected to a source of water from Lake Erie that supplies water to the south end of the City. The current split in supply to the City is approximately 85% from the Lake Huron Primary Water Supply System and 15% from the Elgin Area Primary Water Supply System.

1.2.2. Water Operations

Water Operations provides continuing maintenance of the water supply system in the City of London to ensure that water can be conveyed to the residents of London. They are responsible for the treatment, operation and control of all valves, pumping stations, disinfection equipment, reservoirs and any other element of the system that needs control. They also are responsible for both preventative and unplanned maintenance on these elements as well as watermains, hydrants and any other aspect of the system requiring maintenance.

1.2.3. Water Engineering

Water Engineering is responsible for long range planning, design and construction of a large portion of the capital projects that fall under the Water Service Area. This division's work includes growth-related projects, life cycle renewal of watermains, expansion or refurbishment of pumping stations, and system improvements to enhance water quality or increase pressure. Water Engineering is also responsible for maintaining the city-wide distribution system hydraulic model, product approval and water efficiency/demand management/conservation programs.

1.2.4. Regional Water Supply

Regional Water Supply is an independent body that is responsible for operating and maintaining the water treatment plants located at Grand Bend on Lake Huron and east of Port Stanley on Lake Erie and the transmission of treated water to the City of London as well as to the other municipal customers they serve within the Regional system.

The respective Joint Boards of Management for the Lake Huron and Elgin Area Primary Water Supply Systems own and govern the area water systems using the City of London as the Administering Municipality. Accordingly, the City of London provides associated administrative and management services on behalf of the Joint Boards.

Approximately 5,000 square kilometres of the greater London area of Southwestern Ontario is supplied by these two systems:

The Lake Huron Primary Water Supply System (LHPWSS) services the communities of London, Lambton Shores, North Middlesex, South Huron, Bluewater, Middlesex Centre, Lucan-Biddulph and Strathroy-Caradoc from a water treatment plant located north of the village of Grand Bend in South Huron. The water treatment plant has a rated supply capacity of 340 million litres per day and serves a population of approximately 375,000 people.

The Elgin Area Primary Water Supply System (EAPWSS) services the communities of St. Thomas, London, Aylmer, Bayham, Central Elgin, Malahide, Southwold and Dutton Dunwich from a water treatment plant located east of the village of Port Stanley in Central Elgin. The water treatment plant has a rated supply capacity of 91 million litres per day and serves a population of approximately 130,000 people.

The lake supplies are the source of all water the City of London uses during normal conditions and the City pays a volumetric water rate to each board for this treated water. The City of London has seats on both regional boards, giving the City a governance role in both systems. As an owner of these systems, the Board's debt is partially carried by the City of London, affecting the borrowing capacity of the City. This debt is reflected in the Financial Plans for Regional Water. Regional Water Supply's Financial Plans are stand-alone documents and are not included in this report.

1.2.5. Water By-law

The City of London has a by-law that governs the water system, the responsibilities of the public, that of the City, and specifies the rates to be charged for Water Services. The aim of the by-law is to achieve full cost recovery through a user-pay approach. The water by-law can be found on the City's website and is called Water By-law W-8 (Water By-law - W-8 | City of London).

2. Water System Needs and Revenue Requirements

In 2023, the City of London's water distribution system was comprised of 9 pumping stations, 5 reservoirs, over 1,634 km of water mains, 14,043 valves, 7,330 hydrants, 124,644 water services, and 122,492 meters. The average age of water distribution system components is under 38 years old with some individual components over 100 years old.

The expenditure needs of the system evolve over time as infrastructure components have different life spans. Over 96% of the asset replacement value is related to buried pipe infrastructure which has a relatively long service life and high replacement cost. The City has actively replaced aging pipes for over 40 years. In the last two decades, it has become apparent that water pipes reach the end of their useful life at different ages. From field data, it has been demonstrated that the failure frequency of all cast iron watermains is continuing to increase, and generally 1950's and 1960's vintage pipes are breaking more rapidly than older pipes. Recently it has been identified that some copper water service pipes are failing in less than 10 years.

The Water Service Area reviews these infrastructure needs annually and establishes priorities for renewal of existing infrastructure or construction of new infrastructure.

This section of the plan provides a summary of some of the needs and requirements that constitute the priorities of Water Service Area programs and the 2024-27 Water Budget. These are Council approved programs which are ongoing in many cases or have a firm completion date. These programs form key components which drive the Financial Plan to maintain infrastructure at serviceable levels and meet the growth needs of the City.

2.1. Capital

The Corporation of the City of London divides its capital plan into three categories of work; life cycle renewal (maintenance of existing), service improvement (upgrade of existing), and growth (addition of new infrastructure).

The City of London undertakes five capital activities to mitigate maintenance problems, health concerns, performance deficiencies and firefighting deficiencies, including:

1. Watermain replacement to address watermain breaks and corrosion degradation;

2. Watermain replacement to address undersized mains – inadequate system-wide capacity or local fire flows;
3. Watermain rehabilitation (i.e. clean and reline) to address excessive hydraulic roughness and/or structural weakness as an alternative to replacement;
4. Replacement of lead water services; and
5. Rehabilitation/replacement of watermains to address other performance deficiencies (i.e. excessive velocities and/or pressure loss)

2.1.1. Life Cycle Renewal (maintenance of existing)

Several capital programs are at the centre of renewal and the efforts to maintain the infrastructure at an appropriate level of service. These programs use different tools depending on the condition of an asset: either extending the life of the current asset or replacing it like-for-like.

1. The Watermain Cleaning & Relining Program structurally relines watermains where the structural condition of a watermain is not acceptable and there are no other planned works by other service areas on the street. Relining is avoided in areas with lead services. This program has been primarily used on 1950's and 1960's watermain since there are no lead services and the sewers on these streets are typically still in good condition. Cleaning and relining restores water quality and improves fire flow, while extending the life of a watermain that would otherwise have to be replaced at a much higher cost. This also reduces social impacts and disruption by utilizing trenchless technologies.
2. The Watermain Replacement Program ensures that the distribution system remains reliable and cost effective. This program is coordinated with Wastewater and Transportation to undertake complete City blocks of infrastructure renewal.

3. Watermain Condition Inspection and Monitoring - Since 2006 there has been a recognition that the watermain renewal programs (rehabilitation and replacement described above) have functioned well, but have not considered large diameter watermains because of their history of few problems. Several pilot projects were undertaken from 2007 to 2012, including the installation of over 15 km of fibre optic cable in the City's largest watermain to monitor the pipeline in real time for stress failures. This program currently has an annual budget and inspects several watermains annually.
4. The Cathodic Protection Program is the installation and replacement of anodes on watermains around the City. This program has been particularly beneficial in extending the life of ductile iron and steel watermains. The amount spent on this program was increased with the 2020 budget and going forward to ensure we are keeping up with all our eligible mains.

Some anticipated outcomes of maintaining these programs are a reduction in water quality complaints, extended service life of watermains (before replacement is required), reduction in the number of watermain breaks, reduction in water losses and non-revenue water used for flushing, and a reduction in risk of private property damage and traffic disruption.

To prioritize the replacement and relining of watermains, Water Engineering uses a custom program called Water Condition Assessment Program (WCAP). This program takes the information from all the watermains in the City and rates them based on several attributes determined by staff. The attributes include factors such as age, number of breaks, pipe material, presence of lead services, hydraulics and importance factors. Once the Water renewal priorities are established, consultations are held with Transportation and Wastewater staff so that the timing of the renewal work can be coordinated to save on construction costs and minimize social disruption.

The Water Service Area keeps abreast of the newest technological innovations in both watermain reconstruction and rehabilitation and is always looking for ways to apply these to reduce the costs of life cycle renewal activities of the distribution system in the long-term and reduce impacts on the environment and our customers, such as:

Trenchless Technologies

The Water Service Area has been utilizing trenchless technologies since 1995 and continues to expand their use. Compared to open cut excavation and surface restoration techniques, trenchless methods minimize the amount of excavation required to install watermain, minimize damage to surface structures, cause less disruption of traffic and other social inconveniences on and around job sites. This technology allows installations to be made in areas where open cut excavation is significantly more costly and disruptive. Trenchless procedures are also more environmentally friendly because they produce less construction pollutants and noise. The Water Service Area has been successfully implementing trenchless rehabilitation for 20 years and continues to evaluate and pilot test new methods and materials as they become available, including horizontal directional drilling, structural lining, spray-in-place lining, hydro vacuum excavation equipment, etc.

2.1.2. Service Improvement (upgrade of existing assets)

While it is important to maintain the system in working condition, it also at times becomes necessary or desirable to improve the system. Some of these improvements are driven by legislation enacted by other levels of government, while others can be driven by customer needs at the local level.

Lead Mitigation Program

In 2019, Health Canada updated its Guideline for Canadian Drinking Water Quality with respect to lead and lowered their maximum acceptable concentration for lead in drinking water from 10 micrograms per litre to 5 micrograms per litre.

Ontario's Ministry of Environment, Conservation and Parks is currently reviewing the Health Canada Guideline, and dialoguing with municipalities regarding potential regulatory changes as a result. City staff are actively participating in discussions with the Ministry. The water in London's distribution system has very low levels of lead, but many homes built before 1953 are connected to the distribution system by lead water services. The water service is the pipe that conveys water from the watermain under the street, to the water meter in the customer's house. Water services run across both public and private property. The public portion runs from the watermain to the property line, and the private portion runs from the property line to the water meter. Since 2006, City staff have provided free sampling to more than 12,000 London homes, replaced more than 5,200 lead services (public-side), provided educational and awareness information on the City's website, offered a loan program for private-side lead service replacements, and implemented a system-wide corrosion control plan. Approximately 3% of London's water services are still lead on the public side, and this number has decreased each year through additional lead service replacements. The Water Budget continues to support this multi-pronged, long-term lead mitigation program, which can be readily adjusted and modified to meet future regulatory changes.

Water Efficiency, Conservation and Outreach

The City of London has actively promoted water conservation since the late 1980's when water consumption approached the supply capacity of the water system. The City of London continues to see Water Efficiency, Conservation and Outreach as an important aspect of responsible water use. Significant water conservation efforts have been made over the past few decades including efficient water fixtures, conservation awareness and building code updates that until recently have allowed for water usage to reduce while the City population/system users increased. We are now not unexpectedly seeing the consumption results of population increases exceed the past consumption

trends. The City continues to prioritize water conservation through residential and city facility retrofits, incentivizing fixing residential leaks and other programs. Additionally, it is recognized Conservation and Water Education is still of significant importance to ensure longtime and new Londoners remain Water aware. Water conservation and efficiency improvements are important aspects of the long-term strategy for creating additional supply capacity to support growth and keeping future rate increases affordable by avoiding costly system expansion. The City is in the process of establishing a number of water efficiency projects that can be developed and implemented of the next number of years.

Legislation which Impacts Service Improvements

The "Licensing of Municipal Drinking Water Systems" (O. Reg. 188/07) requires 5 components:

1. A Drinking Water Works Permit (DWWP)
2. An Accepted Operational Plan
3. Accreditation of the Operating Authority
4. A Financial Plan *(This Document)*
5. A Permit to Take Water (PTTW).

The requirement for a Drinking Water Quality Management System (DWQMS) and related implementation requirements have been implemented. The City of London's Operational Plan was initially submitted and approved by Municipal Council in 2009. The Drinking Water Works Permit and the Municipal Drinking Water Licence (accreditation limited scope) were received December 17, 2010. The external audit of the Operational Plan was completed in 2013, at which time the Operating Authority received full accreditation.

The City received its most recent reaccreditation on August 26, 2022, and the Operational Plan was most recently endorsed by Municipal Council on November 29, 2023.

2.1.3. Growth (addition of new infrastructure)

Development Charges (DCs) play an important part in how growth infrastructure is financed in London. Each new house, commercial centre, educational facility, and/or manufacturing plant requires infrastructure and servicing in order to function efficiently and effectively. DCs are fees that are paid by new development to fund growth infrastructure and services constructed throughout the City.

In Ontario, the Provincial government regulates the setting of DC rates through the *Development Charges Act* (DCA). The purpose of DCs is to collect funds from new development to finance capital works supporting current and future growth.

At least every ten years, as required by the DCA, the City of London conducts a DC Background Study to forecast the City's future residential and non-residential growth to determine infrastructure needs and costs. This information is used to calculate the amount of money that new development needs to pay in order to support growth infrastructure and services. The DC Background Study for Water was most recently completed in 2021 and may be found on the City of London's website (www.london.ca/dc).

The costs of water projects related to growth are funded from various sources but divided into two main groups, growth and non-growth. The growth component of a project is funded through Development Charges (DC). The non-growth component of a project benefits existing residents and business and is typically funded through existing ratepayers and will directly impact this Financial Plan.

2.2. Operations and Maintenance

The budget for operations and maintenance is used to keep the system operating efficiently within regulatory compliance. It is also required to perform the necessary testing, maintenance and repairs to keep the water distribution system functioning reliably. A major component of this budget is the bulk purchase of water from the Regional Water Supply Systems. Water Operations uses staff

resources as well as other necessary expenditures; these can include power to operate pumps and equipment as well as chlorine to ensure that a chlorine residual is kept at an acceptable and safe level. Maintenance is generally divided into two major categories, preventative maintenance and unplanned maintenance. These two categories are described in more detail below.

2.2.1. Preventative Maintenance

Preventative maintenance represents a proactive approach to maintaining the water distribution system. Preventative maintenance activities often address issues before they cause a major problem or breakdown and can result in significant cost savings. To ensure effectiveness, many preventative maintenance programs make use of GIS technology to track progress and reported problems. Below are some of the key programs that fall under this heading.

- Watermain flushing to maintain water quality in the distribution system (disinfection residual and aesthetic parameters).
- Hydrant maintenance is conducted and is comprised of two components: 1) annual maintenance, and 2) frost checks during freezing months.
- Valves are exercised to ensure functionality and identify deficiencies.
- Air release and vacuum valves, appurtenances, and chambers are inspected and maintained.
- The Supervisory Control and Data Acquisition (SCADA) system equipment and station pumps undergo life cycle maintenance based on manufacturers' specifications or as required by the regulations.
- Reservoir inspections are performed by contracted divers, at a minimum frequency of every 5 years. Reservoir cleaning is scheduled based on these inspections.

- Enhancement of the leak detection monitoring program is currently underway. Benefits will include increased detection of leaks and reduction of non-revenue water, increased reliability of infrastructure and avoidance of failures.

2.2.2. Unplanned Maintenance

Unplanned maintenance typically consists of repairing leaks or other deficiencies (e.g. damaged hydrants) that are reported by the public, other utilities, or London staff. For facilities, required maintenance work may be identified by Operators during regular visits to the facilities. Often unplanned maintenance can be costly and disruptive for the customers, which is why significant effort and focus is put on preventative maintenance. Below are some examples of the types of maintenance that fall under this heading.

- Watermain break repairs, which have been trending down each year, reflects our well established watermain rehabilitation and replacement program. The five-year average for watermain breaks is 65 per year.
- Water service replacements and repairs consume a considerable amount of operating resources each year. The average number of water service repairs and replacements is 283 annually. These are made up of leaking service repairs, lead service replacements, and undersized service upgrades.
- Valve replacements and repairs are common and critical to the proper operation of the water distribution system. There will typically be over 100 valves that require repairs or replacements each year. These can be a result of broken valve stems, rounded nuts, leaking valve housing and corroded bolts.

3. Financial Model and Budget Process

3.1. Financial Model

The Water Service Area maintains a financial model to aid in long-term forecasting and budgeting, upon which this Financial Plan is based. The model has been used in budget development and deliberations since 2009 and has proven to be a very useful tool in assessing the financial health of the water system.

3.2. Budget Process

The Municipal Act, 2001 authorizes a municipality to prepare and adopt a budget covering a period of two to five years. The City of London has chosen to utilize a four-year period. Rather than approving a budget annually, a budget is approved for four years, subject to annual re-adoption, to establish funding. The last year of the multi-year budget is subject to reconfirmation by the new term of Council. In 2023, the Province of Ontario extended "Strong Mayor" powers to various Ontario municipalities, including London. These new powers, as outlined in Ontario Regulation 530/22, outline that the head of council (Mayor) shall, on or before February 1 of each year, prepare a proposed budget for the municipality. Once that budget is released, the regulation provides prescribed timeframes for Council amendments to the Mayor's proposed budget, Mayoral veto power for any Council amendments, and the ability for Council to override Mayoral vetoes. While this process is different than the traditional budget approach at the City of London, ultimately Council maintains the final decision-making authority over the budget with the override powers outlined in the legislation.

Water rate increases are often approved ahead of the balance of the budget so they can be implemented on January 1st. Council approved the 2024 Water rates on November 28, 2023. The 2.5% increase for Water rates was effective

January 1, 2024. The 2024-2027 Multi-Year Budget for Water was then discussed at open houses and public meetings in January 2024, Public Participation meetings on January 29, 2024 and February 27, 2024, and deliberated throughout February 2024. Deemed approval of the budget under the "Strong Mayor" legislation was March 1, 2024.

Water Service Area costs can be broken into two broad types of expenditures, Capital and Operating.

3.2.1. Operating Budget

Operating costs are generally those costs that relate to the operational issues of supply, distribution, and purchase of water for the current year including the staff, supplies and other costs required for management and maintenance of meters, pumping stations, pipes, and reservoirs. These expenditures do not increase the value of the system or the life of the system but are required to ensure the reliable delivery of safe clean water to the community and realize the anticipated life of the infrastructure components. It is generally accepted that due to the immediate benefit and short-term impact of operating expenditures, they will be funded through the collection of user rates within the year the costs are incurred.

3.2.2. Capital Budget

Capital costs are those expenditures which increase the value of the system, expand the system, improve the system, replace existing assets and/or extend the lifespan of existing assets.

3.2.3. Revenues and Rates

London's water rate structure was overhauled in 2013 to incentivize water conservation while protecting the long-term financial sustainability of the water system. The rate structure includes a significant fixed portion which stabilizes revenue and recognizes the value of having water available for use and fire protection. To promote conservation, the highest rate in the structure is set for a

water use tier that would represent above average use in order to provide an incentive for conservation.

While our rate structure has helped stabilize revenue, fluctuations in water consumption can still have a significant impact on the City's revenues and represent a risk. Water consumption is significantly dependent on climate conditions, economic development, and consumer demand. These factors are difficult to predict with accuracy and are prone to change abruptly with little warning.

As of 2023, the industrial sector makes up 0.29% of total water accounts, but 7.6% of annual water consumption. Water demand for these accounts varies with industrial output, which is dependent on macro-economic conditions. Collectively the industrial, commercial, and institutional sector account for 4.3% of the customer base but consume 37% of total annual billed water. The largest consumers also have the means and motivation to increase their water efficiency, which can result in decreased water consumption.

Inaccurate water demand projections would impact revenue, budgets, and long-term infrastructure planning as system improvements may be prioritized incorrectly, and revenue shortfalls or surpluses will occur. To mitigate negative risks to the financial health of the water system, water projections are conducted through the use of multiple industry standards (curve fitting, statistical analysis, market research) and industry leading (artificial intelligence, data science) models. The models take into account various approaches to demand projection and provide a range of possible demand volumes. Conservative demand projections were utilized for planning purposes to account for the unknowns. There are also ongoing efforts to identify and address gaps in water demand tracking to improve future projection efforts.

4. Capital Financing

The expenditures required to renew, improve and expand the water supply and distribution system represent approximately 40-45% of the total revenues collected from water rates. There are several financing strategies used by the Corporation. The discussion in the rest of this chapter describes how these strategies are applied specifically within the Water Service Area.

4.1. Financing Options

The Water Capital Plan has been divided into three categories, consistent with the City's Capital Budget, as described in Section 2.1:

- Lifecycle Renewal
- Service Improvements
- Growth

There are a number of available sources of financing for capital works as summarized in the table below.

Financing Options for Capital Categories					
Category	**Pay-As-You-Go**	**Reserve Fund**	**Debt**	**Development Charges**	**Other Government Funding**
Lifecycle	Yes - Preferred	Yes	No(1)	No	Yes, if eligible
System Improvements	Yes	Yes	Yes	No	Yes, if eligible
Growth	No	Yes(2)	Yes	Yes	Yes, if eligible

Notes:

1. Could be considered if the asset to be renewed is a major expenditure with a long useful life (e.g. reservoir) which aligns with the principle of intergenerational equity.
2. Utilizes water reserve fund for non-eligible growth related works and/or non-growth component of project.

Financing decisions for capital works are based on a number of considerations including:

1. ***Is it an Asset Management (Lifecycle Renewal) project?***
   - The preferred funding source for Lifecycle Renewal works is pay-as-you-go and funding saved via reserve funds. Pay-as-you-go funding is from the current year's revenues. This approach ensures that the taxpayers who benefited from the useful life of the asset pay for the work required to restore the useful life of the asset for future generations.

2. ***Does this project create capacity necessary for growth in the City?***
   - When additional water supply capacity is created, allowing for future growth in the City, Development Charges should fund a corresponding portion of the works.

3. ***What is the life span of the project?***
   - When a project has a significant life span and funding is not otherwise available it may be appropriate to issue debt, thereby ensuring costs are incurred by future benefitting generations.

4. ***Are there available funds from other levels of government?***
   - From time to time other levels of government will invite applications for funding. These funding sources often have stringent criteria for eligibility and timing of works. Alternatively, ongoing funding is provided through some programs such as the Canada Community Building Fund (CCBF) although given the relatively good health of the water utility and low debt levels, London Council has chosen to allocate very little CCBF funds to water infrastructure.

5. ***Does the project benefit specific residents?***

- Some works are undertaken which benefit residents of a particular street or neighbourhood. Examples of this type of work would be new sidewalks, water supply or sanitary sewer collection. In some cases the residents will contribute to the funding of those works through Local Improvement Charges or Area Rate Charges enacted through municipal by-laws.

4.2. Inter-Generational Equity

A guiding principle for financing decisions is the concept of inter-generational equity for municipal capital works intended to equitably distribute the costs across present and future taxpayers. This means that the generation which will receive the most benefit of the works should bear the majority of the cost of the works. Furthermore, the current benefitting generations have received the assets in relatively good condition and should pass them on to the next generations in similar condition. Some of the means to achieve this include:

- Paying for replacement and renewal works through pay-as-you-go financing and funding saved via reserve funds,
- Issuing debt only for large scale projects with significant future years of benefit.

4.3. Reserve Funds

Reserve Funds assist in smoothing out rates for water users by creating a funding source for future larger, intermittent projects and fluctuating revenue streams. Capital budgets can vary significantly year over year and large non-recurring projects can create funding needs that are best funded over time. The Water Service has maintained Reserve Funds for over 40 years allowing the utility to remain prudent in the use of debt. It is the intent to target a minimum reserve fund balance of an average of one year's lifecycle renewal capital budget over the 10-year (2024-2033) multi-year budget capital plan – this translates to approximately $53.5 million for the Waterworks Renewal Reserve Fund, which is

the primary discretionary reserve fund of the Water Service Area. This represents approximately 0.7% of the $7.7 billion asset replacement value of the system; noting that this reflects updates from the 2023 Corporate Asset Management Plan and the 2024-2027 Multi-Year Budget. As of 2018 the City has also started building a Water Budget Contingency Reserve that is intended to mitigate unforeseen events or one-time unanticipated revenue losses and expenses in order to stabilize water rates.

The Water Service Area maintains a number of reserves and reserve funds, which are held for specific purposes. These include:

Reserve / Reserve Fund	Description
Water Works Renewal	Primary Water reserve fund used to finance lifecycle renewal, service improvement and rate-supported share of growth works.
City Services – Water Distribution	Development Charges collected to fund growth works
Capital Asset Growth - Industrial DC Incentive Program Water Reserve Fund	Used to fund the City Services Reserve Fund with amounts equal to development charges incentivized so that these development projects, when started at a later date, can be funded through the City Services Reserve Fund
Lead Service Replacement Program Reserve Fund	To fund the Lead Service Replacement Program, assisting homeowners with the replacement of the private portion of lead services
Water Customer Assistance Reserve Fund	Customer assistance charges collected in excess of customer assistance expenditures incurred, used to fund future customer assistance initiatives or reduce future customer assistance monthly charges
Efficiency, Effectiveness & Economy Water Reserve	The equivalent of 90 days' savings on most Water position vacancies are contributed to this reserve, which is used to fund initiatives recommended by the Senior Leadership Team
Water Budget Contingency	To fund unanticipated revenue and expenditure fluctuations

4.4. Growth Pays for Growth

A significant guiding principle of the Development Charges (DC) By-law is that growth should pay for growth. As such, the 2019 Development Charges Background Study and subsequent 2021 Development Charges Background Study Update identified all water growth related supply works within the City over the next twenty years, and identified all non-growth benefits and any post period amounts. Notwithstanding this concept, Council has also directed a number of exemptions for industrial, institutional, residential and commercial growth in order to stimulate economic development within the City. Additionally, recent legislative changes have resulted in additional statutory exemptions and discounts for non-profit housing, purpose built rental units, affordable and attainable housing, among others. These portions of water supply system growth are not paid for by DC's but are supported by the water rate.

4.5. Debt Management

The long-term financial goal is to continue to fund water system capital works using pay-as-you-go and reserve funds as the primary sources of funding. Further debt financing will ultimately be used exclusively to fund large, extraordinary works, or to mitigate the impact of larger than average total capital budget. The future use of debt will be done in accordance with the City's Strategic Financial Framework and Debt Management Policy.

The Water Service has minimal debt and the Water system has largely been maintained using pay-as-you-go capital financing. As of 2024, the total net debt outstanding was approximately $500,000. Debt servicing costs in 2024 will be approximately $400,000.

The water budget also carries debt associated with the City's share of debt issued by the Joint Boards. This is approximately $12.3 million at the end of 2019 and is factored into the City's overall borrowing capacity. Debt payments

tied to the City's share of the Joint Board debt are made indirectly as the part of the purchase of water charged to the City by the Joint Boards and are estimated to be approximately $2.5 million in 2020.

4.6 Senior Government Funding

Canada Community Building Fund

The Water Service Area will receive approximately $5.7 million in CCBF funding between 2024 and 2027, which will be used to fund several Water capital projects and assist in managing the infrastructure gap.

5. Financial Statements

Future Accounting Pronouncements:

These standards and amendments were not yet effective for the year ended December 31, 2023, and have therefore not been applied in preparing these financial statements. Management is assessing the impact of the following accounting standards and updates on the future financial statements.

a) Revenue – PS 3400, establishes a single framework to categorize revenues to enhance the consistency of revenue recognition and its measurement. This standard is effective for fiscal years beginning on or after April 1, 2023 (the Corporation's December 31, 2024 year-end).

b) Public Sector Guideline 8 Purchased Intangibles – allows public sector entities to recognize intangibles purchased through an exchange transaction. This guideline is effective for fiscal years beginning on or after April 1, 2023 (the Corporation's December 31, 2024 year-end).

c) Public Private Partnerships - PS 3160, Public Private Partnerships (P3s), provides specific guidance on the accounting and reporting for public private partnerships between public and private sector entities where the public sector entity procures infrastructure using a private sector partner. This standard is effective for fiscal years beginning on or after April 1, 2023 (the Corporation's December 31, 2024 year-end).

Change in Accounting Policies – Adoption of New Accounting Standards:

The Corporation adopted the following standards concurrently beginning January 1, 2023:

a) PS 1201, Financial Statement Presentation – PS 1201, Financial Statement Presentation replaces PS 1200, Financial Statement presentation. This standard introduces the Statement of Remeasurement Gains and Losses separate from the Statement of Operations. Requirements in PS2601, Foreign Currency Translation, PS 3450,

Financial Instruments, and PS 3041, Portfolio Investments, which are required to be adopted at the same time, can give rise to the presentation of gains and losses as remeasurement gains and losses.

b) PS 3041, Portfolio Investments replaces PS 3040, Portfolio Investments. The standard provides guidance on accounting for, and presentation and disclosure of, portfolio investments to conform to PS 3450, Financial Instruments.

The above standards were adopted prospectively and there was no impact to the Corporation as a result of the adoption of the above two standards.

c) PS 3450, Financial Instruments and PS 2601, Foreign Currency Translation

On January 1, 2023, the Corporation adopted PS 3450, Financial Instruments and PS 2601, Foreign Currency Translation. The standards were adopted prospectively from the date of adoption. The new standards provide comprehensive requirements for the recognition, measurement, presentation and disclosure of financial instruments and foreign currency transactions.

Under PS 3450, all financial instruments, including derivatives, are included on the City's consolidated statement of financial position, and are measured at either fair value or amortized cost based on the characteristics of the instrument and the Corporation's accounting policy choices. Unrealized gains and losses arising from changes in fair value are presented in the consolidated statement of remeasurement gains and losses.

In accordance with the provisions of this new standard, the Corporation reflected an adjustment on January 1, 2023, of a decrease to portfolio investments of $4,199,059, and to accumulated remeasurement

gains/(losses) due to the unrealized loss of the Corporation's investments that were previously recorded at amortized cost.

d) PS 3280, Asset Retirement Obligations – On January 1, 2023, the Corporation adopted PS 3280, Asset Retirement Obligations (ARO). The new accounting standard addresses the reporting of legal obligations associated with the retirement of certain tangible assets by public sector entities. This standard was adopted on the modified retrospective basis at the date of adoption, and the discount rate and assumptions used on initial recognition are those as of the date of adoption of the standard.

The attached forecasted financial statements have been prepared under these requirements. The "forward-looking" financial statements are for 6 years, from 2025 to 2030 as required by the Water Operating Authority licence renewal process *(Safe Drinking Water Act, O.Reg 453/07, section 3.2)*.

Financial Information

The financial information in the Water Service Financial Plan has not been audited. The 2023 values for Water Services are final and a review process was completed as part of the Corporation of the City of London's consolidated audit to ensure accuracy and reliability of the information. The values are derived from amounts included within the audited Consolidated Financial Statements of the Corporation of the City of London, December 31, 2023, and the 2024 values are year-end projections. The future year assumptions originate from the Financial Model for Water, which includes elements from the 2024-2027 Council-approved Water Capital Budget and Forecast, Water Operating Budget and Forecast, and 2019 Development Charges Background Study and associated 2021 Development Charges Background Study Update.

Glossary

Tangible Capital Assets

Tangible capital assets are non-financial assets having physical substance that:

a) *are held for use in the production or supply of goods and services, for rental to others, for administrative purposes or for the development, construction, maintenance or repair of other tangible capital assets;*
b) *have useful economic lives extending beyond an accounting period;*
c) *are used on a continuing basis; and*
d) *are not for resale in the ordinary course of operations. (PS 3150.05)*

Some examples of tangible capital assets for the Water Services area include watermains, hydrants, and water meters.

Amortization

Amortization is the attribution of the historical cost of TCA across the useful life of the specific asset (Annual Amortization = Historical Cost / Life of Asset). The amortized cost is an expense on the Statement of Operations and the historical cost of the TCA is reduced by the same amount on the Statement of Financial Position. This process roughly allocates the costs of the TCA into the years of benefit.

The amortization of the costs of tangible capital assets should be accounted for as expenses in the statement of operations. (PS 3150.23)

The amortization period of a water asset varies from 3 years to 60 years, depending on the categorization of the asset.

Annual Surplus (Deficit)

The Water annual surplus (deficit) is essentially derived from the difference between the Amortization and the actual spending on capital as well as the increase in reserve and reserve funds within the year.

Accumulated Surplus (Deficit)

This balance is reported as part of the Statement of Financial Position. It represents the accumulation of prior and current surpluses and deficits and reflects the net economic resources of the Water Service. The Water Service

accumulated surplus is comprised primarily of the lifetime total cost of Tangible Capital Assets minus the Amortization that has occurred to date in addition to the reserve and reserve fund balances.

5.1. Statement of Operations

	Actuals	Projected	Forecast					
	2023	2024	2025	2026	2027	2028	2029	2030
REVENUES								
User Charges - Water Consumption	60,145,717	64,974,764	65,617,681	67,951,866	71,833,816	74,209,094	76,659,542	79,187,574
Capital Renewal	30,907,176	32,602,246	33,580,272	35,143,993	37,552,128	39,209,373	40,941,110	42,750,672
Fire Protection	3,857,391	3,867,357	3,685,804	3,858,792	4,124,601	4,307,980	4,499,779	4,700,186
Customer Assistance	340,682	357,248	371,767	379,202	386,786	394,522	402,412	410,460
Miscellaneous User Charges	1,267,969	1,211,000	1,559,390	1,600,578	1,677,334	1,717,633	1,758,977	1,801,378
Other Municipal Revenues	390,293	347,000	130,000	130,000	130,000	130,000	130,000	130,000
Federal Transfers [1]	743,314	1,425,000	1,425,000	1,425,000	1,425,000	1,425,000	1,425,000	1,425,000
Investment income	2,756,173	2,498,216	1,348,555	1,573,773	1,671,258	1,717,484	1,698,283	1,766,552
Development Charges (transfer from City Services Reserve Fund) [2]	(408,086)	26,913,968	19,735,911	24,143,061	9,100,924	2,627,831	15,379,321	5,313,491
Developer Contributions of Tangible Capital Assets [3]	6,659,977	6,835,868	7,009,432	7,665,359	7,952,424	7,498,585	7,392,333	7,503,627
Total Revenues	**106,660,606**	**141,032,668**	**134,463,810**	**143,871,624**	**135,854,271**	**133,237,502**	**150,286,758**	**144,988,940**
EXPENSES								
Purchase of Water	27,914,892	29,682,926	32,298,057	34,056,348	35,906,418	37,814,070	39,825,992	41,644,500
Personnel Costs	11,239,572	10,128,740	10,736,424	11,009,432	11,267,817	11,450,000	11,555,426	11,888,589
Administrative, Other & Recovered Expenses	1,707,737	4,540,605	4,685,816	4,795,546	4,907,785	5,079,557	5,257,342	5,441,349
Billing & Customer Service	2,839,299	2,430,631	2,515,333	2,565,640	2,616,953	2,708,546	2,803,345	2,901,463
Purchased Services	3,934,918	3,718,452	4,019,820	4,088,926	4,153,601	4,298,977	4,449,441	4,605,172
Materials & Supplies	2,823,551	2,878,106	3,231,286	3,313,556	3,399,806	3,518,799	3,641,957	3,769,426
Equipment & Rentals	2,307,293	2,319,837	2,210,834	2,273,724	2,320,782	2,402,009	2,486,080	2,573,092
Financial Expenses - Other	72,584	86,000	86,000	86,000	86,000	89,010	92,125	95,350
Customer Assistance	237,726	364,477	371,767	379,202	386,786	394,522	402,412	410,460
Loss on Disposal of Tangible Capital Assets[4]	0	535,994	522,007	390,576	452,631	479,970	476,236	464,284
Non TCA Expenditures [5]	2,216,473	13,155,769	7,465,080	9,372,672	9,240,609	6,345,091	9,465,038	6,373,029
Amortization [6]	17,899,409	18,750,210	19,202,172	19,692,570	20,249,622	20,828,565	21,395,373	21,967,630
Employee future benefit liability [7]	(28,349)	131,420	152,823	137,110	131,489	134,151	137,399	138,594

	Actuals	Projected	Forecast					
	2023	2024	2025	2026	2027	2028	2029	2030
Total Expenses	**73,165,105**	**88,723,167**	**87,497,418**	**92,161,302**	**95,120,300**	**95,543,269**	**101,988,167**	**102,272,937**
NET SURPLUS (DEFICIT)	**33,495,502**	**52,309,501**	**46,966,392**	**51,710,322**	**40,733,971**	**37,694,233**	**48,298,592**	**42,716,003**

Subject to rounding.

Footnotes and assumptions:

(1) - Represents capital revenue from federal grants. Does not include debenture financing, transfers from operating or reserve funds. Estimate based on the approved capital budget for the respective years 2024-2027.

(2) - Transactions recorded directly to reserve funds must be accounted for through the operating or capital fund. This includes recognition of development charge levies earned in the year. Accounting adjustment made in 2023 resulted in negative revenue.

(3) - Contributed tangible capital assets are tangible capital assets that become the ownership of the City when a subdivision is assumed by the City. These assets are recognized at fair market value during the year of assumption.

(4) - When an asset is replaced prior to the end of its useful life, an adjustment must be made to expense the remaining book value. Amount fluctuates from year to year. Estimate based on 5 year rolling average.

(5) - for PSAB purposes, expenses not considered to be part of the cost of a tangible capital asset are expensed as operating expenses. Therefore although funded through capital, these expenses will be included in the operating expenses in the year incurred and be reflected in the Statement of Operations on the financial statements. Estimated based on 5 year rolling average % of capital expenditure budget.

(6) - Represents the annual writedown of the tangible capital assets over the useful life of the asset. Estimate based on 5 year rolling average.

(7) - Represents the annual change in the estimated future costs of employee benefits. Estimate based on 5 year rolling average. Accounting adjustment made in 2023 resulted in negative expenditure.

5.2. Statement of Financial Position

	Actuals	Projected	Forecast					
	2023	2024	2025	2026	2027	2028	2029	2030
Financial Assets								
Cash and Investments	171,724,645	128,410,722	124,633,615	108,723,130	92,685,413	102,853,132	91,254,928	120,764,986
Accounts Receivable and Other Receivabl	7,738,970	8,144,129	8,260,442	8,586,708	9,111,787	9,449,678	9,800,227	10,163,911
Total Financial Assets	**179,463,615**	**136,554,851**	**132,894,057**	**117,309,838**	**101,797,199**	**112,302,809**	**101,055,156**	**130,928,897**
Financial Liabilities								
Accounts Payable and Accrued Liabilities	1,728,719	2,672,289	2,143,169	2,354,845	2,459,488	2,194,500	2,592,567	2,310,036
Deferred Revenue	42,456,084	26,717,061	18,029,198	2,627,027	2,246,972	8,703,480	2,682,723	6,972,762
Employee Future Benefit Payable	4,501,169	4,632,589	4,785,412	4,922,522	5,054,011	5,188,163	5,325,561	5,464,156
Long-term Liabilities (1)	140,256	140,256	140,256	140,256	140,256	140,256	2,140,256	17,724,256
Total Financial Liabilities	**48,826,228**	**34,162,194**	**25,098,034**	**10,044,649**	**9,900,727**	**16,226,398**	**12,741,108**	**32,471,209**
Net Financial Assets	**130,637,387**	**102,392,656**	**107,796,022**	**107,265,189**	**91,896,472**	**96,076,411**	**88,314,048**	**98,457,688**
Non-Financial Assets								
Prepaid Expenses	104,288	29,033	32,208	35,655	40,369	48,311	37,115	38,732
Inventories	393,358	429,138	443,339	418,027	391,517	415,076	419,419	417,476
Tangible Capital Assets	896,074,230	991,083,347	1,047,530,906	1,115,224,682	1,187,287,362	1,237,541,005	1,310,750,980	1,361,054,415
Accumulated Amortization	(320,439,628)	(334,855,038)	(349,756,948)	(365,187,703)	(381,125,899)	(397,896,747)	(415,038,916)	(432,769,661)
Total Non-Financial Assets	**576,132,248**	**656,686,480**	**698,249,506**	**750,490,662**	**806,593,350**	**840,107,644**	**896,168,599**	**928,740,961**
Accumulated surplus	**706,769,635**	**759,079,136**	**806,045,529**	**857,755,851**	**898,489,822**	**936,184,055**	**984,482,647**	**1,027,198,650**
Accumulated surplus comprised of:								
Accumulated surplus, before remeasurement losses	707,322,867	759,632,368	806,598,760	858,309,082	899,043,053	936,737,287	985,035,878	1,027,751,881
Accumulated remeasurement losses	(553,232)	(553,232)	(553,232)	(553,232)	(553,232)	(553,232)	(553,232)	(553,232)
Accumulated Surplus	**706,769,635**	**759,079,136**	**806,045,529**	**857,755,851**	**898,489,822**	**936,184,055**	**984,482,647**	**1,027,198,650**

Subject to rounding.

Footnotes and assumptions:

(1) On January 1, 2023, the Corporation adopted PS 3280, Asset Retirement Obligations (ARO). The new accounting standard addresses the reporting of legal obligations associated with the retirement of certain tangible assets by public sector entities. Asset Retirement Obligations liability included in Long-term Liabilities in years 2023, 2024 and the 6-year forecast.

5.3. Statement of Cash Flow

	Actuals	Projected	Forecast					
	2023	2024	2025	2026	2027	2028	2029	2030
Cash provided by (used in)								
Operating Activities								
Annual Surplus	33,495,502	52,309,501	46,966,392	51,710,322	40,733,971	37,694,233	48,298,592	42,716,003
Items not involving cash								
Loss on disposal of tangible capital assets[5]	0	535,994	522,007	390,576	452,631	479,970	476,236	464,284
Amortization [3]	17,899,409	18,750,210	19,202,172	19,692,570	20,249,622	20,828,565	21,395,373	21,967,630
Change in employee future benefit	(28,349)	131,420	152,823	137,110	131,489	134,151	137,399	138,594
Developer Contributions of Tangible Capital Assets [4]	(6,659,977)	(6,835,868)	(7,009,432)	(7,665,359)	(7,952,424)	(7,498,585)	(7,392,333)	(7,503,627)
Change in non-cash assets and liabilities								
Accounts Receivable and Other Receivables	500,254	(405,160)	(116,313)	(326,266)	(525,078)	(337,891)	(350,550)	(363,684)
Prepaid Expenses	(103,627)	75,255	(3,175)	(3,447)	(4,714)	(7,942)	11,195	(1,616)
Inventories	(119,634)	(35,779)	(14,202)	25,312	26,510	(23,559)	(4,344)	1,944
Accounts Payable and Accrued Liabilities	(21,657)	943,569	(529,120)	211,676	104,644	(264,988)	398,067	(282,532)
Deferred Revenue	8,930,733	(15,739,023)	(8,687,863)	(15,402,171)	(380,055)	6,456,508	(6,020,757)	4,290,038
Net change in cash from operating activities	**53,892,654**	**49,730,121**	**50,483,289**	**48,770,323**	**52,836,596**	**57,460,464**	**56,948,878**	**61,427,035**
Capital Activities								
Purchase of Tangible Capital Assets	(31,755,029)	(93,044,044)	(54,260,396)	(64,680,808)	(68,874,313)	(47,292,745)	(70,547,082)	(47,500,977)
Net change in cash from capital activities	(31,755,029)	(93,044,044)	(54,260,396)	(64,680,808)	(68,874,313)	(47,292,745)	(70,547,082)	(47,500,977)
Financing Activities								
Long-term debt issued	0	0	0	0	0	0	2,000,000	15,837,000
Long-term debt repayments	33,174	0	0	0	0	0	0	(253,000)
Net change in cash from financing activities	**33,174**	**0**	**0**	**0**	**0**	**0**	**2,000,000**	**15,584,000**
Investing Activities								
Net decrease (increase) in investments	(553,232)	0	0	0	0	0	0	0
Net change in cash from investing activities	**(553,232)**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Net change in cash and investments	**21,617,567**	**(43,313,923)**	**(3,777,107)**	**(15,910,485)**	**(16,037,717)**	**10,167,719**	**(11,598,203)**	**29,510,058**
Cash and investments, beginning of year	150,107,078	171,724,645	128,410,722	124,633,615	108,723,130	92,685,413	102,853,132	91,254,928
Cash and investments, end of year	**171,724,645**	**128,410,722**	**124,633,615**	**108,723,130**	**92,685,413**	**102,853,132**	**91,254,928**	**120,764,986**

Subject to rounding.

5.4. Changes in Net Financial Position

	Actuals	Projected	Forecast					
	2023	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Annual Surplus	33,495,502	52,309,501	46,966,392	51,710,322	40,733,971	37,694,233	48,298,592	42,716,003
Acquisition of Tangible capital assets	(31,755,029)	(93,044,044)	(54,260,396)	(64,680,808)	(68,874,313)	(47,292,745)	(70,547,082)	(47,500,977)
Developer contributions of tangible capital assets	(6,659,977)	(6,835,868)	(7,009,432)	(7,665,359)	(7,952,424)	(7,498,585)	(7,392,333)	(7,503,627)
Amortization of tangible capital assets	17,899,409	18,750,210	19,202,172	19,692,570	20,249,622	20,828,565	21,395,373	21,967,630
Loss on disposal of tangible capital assets	0	535,994	522,007	390,576	452,631	479,970	476,236	464,284
	(20,515,597)	**(80,593,708)**	**(41,545,649)**	**(52,263,021)**	**(56,124,483)**	**(33,482,794)**	**(56,067,806)**	**(32,572,690)**
Unrealized remeasurement losses	(553,232)	0	0	0	0	0	0	0
Change in Prepaid Expenses	(103,627)	75,255	(3,175)	(3,447)	(4,714)	(7,942)	11,195	(1,616)
Change in inventories of supplies	(119,634)	(35,779)	(14,202)	25,312	26,510	(23,559)	(4,344)	1,944
	(776,492)	**39,476**	**(17,377)**	**21,865**	**21,796**	**(31,500)**	**6,852**	**327**
Change in net financial assets	12,203,412	(28,244,730)	5,403,366	(530,834)	(15,368,717)	4,179,939	(7,762,363)	10,143,640
Net Financial Assets, beginning of year	118,433,975	130,637,387	102,392,656	107,796,022	107,265,189	91,896,472	96,076,411	88,314,048
Net Financial Assets, end of year	**130,637,387**	**102,392,656**	**107,796,022**	**107,265,189**	**91,896,472**	**96,076,411**	**88,314,048**	**98,457,688**

Subject to rounding.

5.5 Statement of Remeasurement Gains and Losses

	Actuals	Projected	Forecast					
	2023	2024	2025	2026	2027	2028	2029	2030
Accumulated remeasurement gains (losses), beginning of the year	0	(553,232)	(553,232)	(553,232)	(553,232)	(553,232)	(553,232)	(553,232)
Adjustment on adoption of the financial instruments standard	(4,199,056)	0	0	0	0	0	0	0
	(4,199,056)	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Unrealized gains (losses) attributable to:								
Portfolio investments								
Designated for fair value	3,402,411	0	0	0	0	0	0	0
Total unrealized gains (losses)	**3,402,411**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Amounts reclassified to statement of operations:								
Portfolio investments								
Designated for fair value	243,413	0	0	0	0	0	0	0
Total realized (gains) losses, reclassified to the statement of operations	**243,413**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Proportionate amount of other comprehensive income from investment in government business enterprises	0	0	0	0	0	0	0	0
Net change in remeasurement gains (losses) for the year	**3,645,824**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Accumulated remeasurement gains (losses), end of the year	**(553,232)**	**(553,232)**	**(553,232)**	**(553,232)**	**(553,232)**	**(553,232)**	**(553,232)**	**(553,232)**

Subject to rounding.

Appendix A

Council Resolution Approving Water Financial Plan

(To be added following Council Approval)

Appendix B

November 2008 Financial Principles Report

Agenda Item # Page #

15 | 89

	CHAIR AND MEMBERS ENVIRONMENT AND TRANSPORTATION COMMITTEE MEETING ON NOVEMBER 24, 2008
FROM:	**PAT McNALLY, P.Eng. ACTING GENERAL MANAGER OF ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**WATER 20 YEAR FINANCIAL MODEL**

RECOMMENDATION

That, on the recommendation of the Acting General Manager of Environmental and Engineering Services and City Engineer, the following actions **BE TAKEN:**

(a) the following principles **BE ADOPTED** to guide staff in the completion of the 20 year Water Financial Plan and the preparation of the legislated Financial Plan by July 2010:

i. growth pays for growth (with the exception of industrial development charges and Regional Water System expansions which are currently funded by water rate payers),
ii. pay-as-you-go for operating and routine life cycle expenditures,
iii. strive for inter-generational equity to avoid burdening future generations in order to benefit current rate payers,
iv. use debt to smooth out cash requirements for large infrequent life cycle or system improvement projects,
v. build reserve funds to provide cash for emergency repairs and/or moderate cash requirements for intermittent medium sized projects,
vi. use reserve funds to balance annual revenue fluctuations resulting from weather,
vii. set rates to achieve financial sustainability in the "near" term (target 7 year time frame),
viii. address cash requirements for new legislation driven improvements at the time that they are known and use reserve funds or debt as appropriate,
ix. commit to life cycle infrastructure renewal needs irrespective of water usage trends since pipe deterioration is generally insensitive to the amount of water consumed,
x. commit to life cycle infrastructure renewal needs since it is less expensive to renew infrastructure that is approaching failure than to attempt to maintain and repair it;

(b) the financial model **BE ADOPTED** utilizing moderate rate increases (Scenario # 3) as the preferred long term planning tool to ensure sustainability of the water supply system while continuing to close the infrastructure gap, it **BEING NOTED THAT** that the model will be used to monitor progress and updated and rerun on a regular basis as input data is refined;

(c) it **BEING NOTED THAT,** budgets will be approved annually by City Council.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

The reports noted below can be found at http://www.london.ca/Council/meetingpackages.htm :

- Infrastructure Deficit, January 28, 2008, Environment and Transportation Committee, Agenda Item #11,
- Water System Risk Management Exercise and Evaluation, April 23, 2007, Environment and Transportation Committee, Agenda Item #3,
- Water Distribution System Needs Update/Final Report – Project EW 3802, August 30, 2004, Environment and Transportation Committee, Agenda Item #4.

BACKGROUND

Purpose

The purpose of this report is to present to Committee and Council the 20 year financial plan for the City's water supply system that confirms our commitment to eliminating the water infrastructure gap and achieves sustainability of the system in the years to come. The financial plan identifies the funding requirements to ensure a safe and sufficient water supply, while meeting all regulatory compliance requirements. It is a commitment to continue renewing infrastructure as it approaches the end of its useful life, prior to failure, thereby minimizing maintenance and repair costs, social disruption and water loss and ensuring inter-generational equity.

The model was developed to incorporate real world factors which influence the operation of the water utility. It can be used for scenario evaluation (what if analysis), as well as exploring unforeseen changes that may arise. It can and will be used as a key tool in annual budgeting and planning for sustainability. The proposed principles put limits on acceptable inputs and ultimately the outcomes. The model is a key step in fulfilling the regulatory requirement fo a financial plan, required by the Ministry of the Environment by July 2010.

A fully developed and implemented financial plan will maintain ***London's Advantage*** over other municipalities providing a high quality, abundant water supply at affordable rates and ***securing tomorrow***, allowing future generations to prosper as we have.

Executive Summary

Over the last 8 years (the post-Walkerton era), City staff have worked to better understand what achieving a sustainable water system means and what effort would be required. Zero percent rate increases in the early part of this period seemed to be justified as consumption and reserves grew. A "needs" study four years ago identified that we were lagging behind the deterioration rate of our pipe and water meter infrastructure. As a result, funding was put in place in an effort to the close the gap. Recent legislation has added significant additional cost to the supply for safe drinking water to our customers. The most recent legislation requires that a financial plan be prepared and submitted to the Ministry of the Environment, as part of the new Drinking Water Licence requirements to ensure that water systems are adequately funded.

Principles have been suggested to help in the development of the financial plan. An interactive financial model has been developed over the last 4 years to assist Administration with the understanding of financial implications of capital needs, inflation, water consumption and the stability of reserve funds. The model presented in this report is intended to be used as a tool to assess different situations which might occur over time, with the recognition that it will be updated regularly.

Renewal of our underground piping will continue to be required to replace aging infrastructure, irrespective of water consumption. Declining revenues resulting from reduced consumption are putting additional pressure on budgets to try to close the gap that has arisen over the last several years. Rising costs to purchase water combined with construction cost increases exceeding the Consumer Price Index require increased revenue through London's water rates.

Accumulated debt repayment is a fixed cost and therefore insensitive to water consumption. Although the City has essentially no debt on the water distribution system, the Regional Water systems, through the Joint Boards, are carrying debt from the original transfer order and it is expected that new debt may be added in future years to address their longer term capital works needs. Debt held by the Joint Boards is apportioned to member municipalities in relation to their consumption.

Three scenarios were outlined to address the need for increased funding. Scenario 3, which introduces an 8% annual rate increase over the next four years (2009-2012) and then declines to the assumed inflation rate by 2015, is recommended to support the level of funding required to maintain ***London's Advantage – securing tomorrow*** by achieving a safe, sufficient and sustainable water supply and distribution system.

Context

City staff have developed a 20 year water financial model, which has been refined to best represent the long term funding requirements for London's water infrastructure. A 75 year outlook was also considered to determine if, in the longer term, the 20 year plan would lead us to long term sustainability. The model was originally created to help validate assumptions and assess the magnitude of the infrastructure gap identified in the 2004 Water Needs Study, undertaken by R.V. Anderson Consultants. The model has been refined and updated over the last few years to accurately represent future financial needs. The model is based on underlying assumptions of our assets remaining life, population and water consumption trends, and inflation factors. The model is premised on the long term renewal needs of the water assets (approximately $1.8 billion of pipes, pumping stations and reservoirs) and predicts funding requirements to renew that infrastructure prior to its failure, while maintaining an adequate capital reserve fund. The goal of the financial plan is to achieve sustainability of the water supply system. For purposes of this discussion, ***sustainability*** is defined as the point when annual rate increases can be maintained at or near the annual inflation rate based on a combination of the Consumer Price Index and the Construction Cost Index.

Legislative Context

The 20 year financial water model is a key step in preparing for completion of the legislated requirements noted below as component "4 Financial Plan" of the new Municipal Drinking Water Licence program. The intent of the legislation is to ensure that water utilities are adequately funded to eliminate health risks to the public and are financially sustainable over the long term.

In the Part Two Report of the Walkerton Inquiry, Justice O'Connor recommended that *"the MOE should require owners of municipal water systems to obtain an owner's licence for the operation of their waterworks"*. The MOE has implemented this recommendation through the new Municipal Drinking Water Licensing Program. A Municipal Drinking Water Licence will be issued once the City of London has the following in place:

1. A Drinking Water Works Permit (DWWP)
   a permit to establish or alter a drinking water system; which, together with a licence, will replace the current certificate of approval

2. An Accepted Operational Plan
   the plan will be based on the MOE Drinking Water Quality Management Standard (DWQMS) and will document the City of London's Quality Management System (QMS) and must be submitted by January 1, 2009 (tentative Council approval December 1, 2008)

3. Accreditation of the Operating Authority
   a successful third-party audit of London's QMS will be the basis for accreditation prior to January 1, 2010

4. A Financial Plan
   as required under the Financial Plans Regulation (O. Reg. 453/07 of the SDWA), the City of London will be required to submit a Financial Plan that satisfies the regulation prior to July 1, 2010

5. A Permit to Take Water (PTTW)
   the existing PTTW Program will not be altered as a result of the new Licensing Program, but the City of London is required to submit all current PTTW numbers as part of the Licence application. The Joint Boards of Management hold the PTTWs for the Regional Water Supply Systems, while London holds the PTTWs for the emergency well systems.

While the legislative requirements noted above are reasonably well spelled out and the implications of increased labour and financial resources are clear, there will undoubtedly be future legislation which will add to the City's resource and financing needs. When the details of the future legislation are known, Administration will bring this information forward to advise Committee and Council what impacts there may be (if any) on the financial plan and water rates.

An additional aspect of the legislative context in the post-Walkerton era is the extra cost that has been applied to the operation of the water system. While we welcome the risk reduction measures brought through legislation, these measures have increased the annual operating and capital costs by approximately $2 million (approximately 4% of budget) which puts water rates under further stress. Examples of initiatives to respond to the legislation over the last 8 years include:

- Source Water Protection
- Municipal Drinking Water Licence (detailed above)
- Corrosion control and lead mitigation
- Disinfection enhancements at the Regional Water treatment plants and City pumping stations
- Operator Certification revisions
- Enhanced water quality testing
- Compliance reporting
- PSAB implementation
- Occupational Health and Safety requirements
- Abandoned well decommissioning
- Engineer's reports and related modifications to facilities

Water Financial Principles

The 20 year financial plan is founded on the following principles, some of which may need to balanced against one another to achieve the most appropriate end result:

- growth pays for growth (with the exception of industrial development charges and Regional Water System expansions which are currently funded by water rate payers),
- pay-as-you-go for operating and routine life cycle expenditures,
- strive for inter-generational equity to avoid burdening future generations in order to benefit current rate payers,
- use debt to smooth out cash requirements for large infrequent life cycle or system improvement projects,
- build reserve funds to provide cash for emergency repairs and/or moderate cash requirements for intermittent medium sized projects,
- use reserve funds to balance annual revenue fluctuations resulting from weather,
- set rates to achieve financial sustainability in the "near" term (target 7 year time frame),
- address cash requirements for new legislation driven improvements at the time that they are known and use reserve funds or debt as appropriate,
- commit to life cycle infrastructure renewal needs irrespective of water usage trends since pipe deterioration is generally insensitive to the amount of water consumed,
- commit to life cycle infrastructure renewal needs since it is less expensive to renew infrastructure that is approaching failure than to attempt to maintain and repair it.

Infrastructure Gap

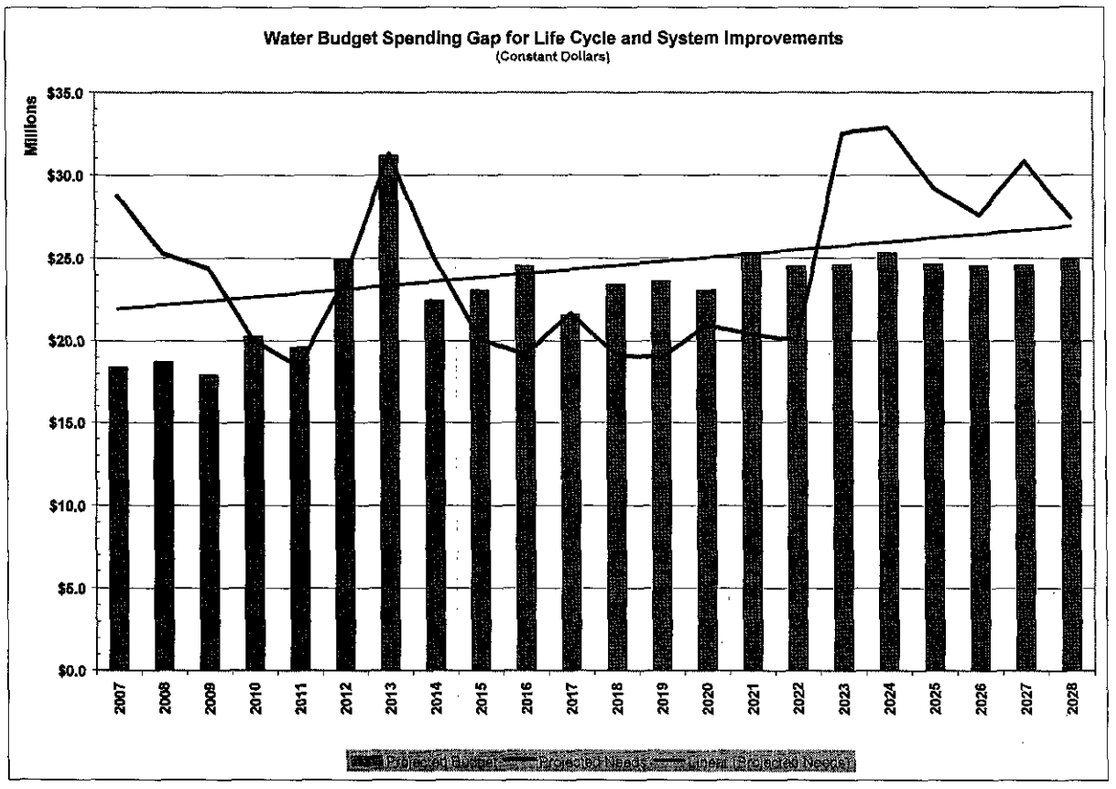
A large portion of the water infrastructure is very old and in need of renewal. A January 28, 2008 ETC report estimated the water infrastructure deficit for London at $220 million. This is an indication that more funding is required to renew aging infrastructure to ensure water reliability, quality, and financial sustainability in the future. Capital funding necessary to close the gap and address new growth falls under three headings in the City's water budget:

- life cycle infrastructure renewal
- system improvements
- rate supported growth

The infrastructure needs in any one year vary due to many factors; hence the annual funding requirements are not smooth. Each of the three budget components will be discussed in more detail below. The graph entitled "Water Budget Spending Gap for Life Cycle and System Improvements" illustrates the infrastructure gap, which from 2004 is steadily being closed as budgets are increased. The graph compares capital needs (the ragged line) and the projected budget (the vertical bars). Inspection of the graph demonstrates that there are large gaps between the need and the budget in 2007 to 2009 and 2023 to 2028. Sustainability is achieved in 2015, when water rate increases are at or near the assumed inflation rate, as illustrated on the reserve fund chart near the back of the report. The gap near the end of the period, emerges

as need outstrips available budget and the trend line for "need" is slightly above the budgeted amount. Appropriate use of innovative technologies, reserve fund, debt and rate increases all play a factor in closing the apparent gap.

The gap which emerges at the end of the period might be reason for concern, until we look beyond 20 years. Appendix "A" includes a similar graph, which has been extended to 75 years. From 2030 to 2045, projected budgets exceed projected needs for renewal which allows the gap in 2023 to 2029 to be made up. Based on our best current knowledge, significant gaps in funding will appear in and around 2050 and 2060, as major assets such as the City's reservoirs and pumping stations need to be replaced as they approach 100 years of service life. While the 75 year outlook is not as accurate the 20 year outlook, it demonstrates long term sustainability is feasible by utilizing the financial principles along with marginal budget increases (0.5% per year excluding inflation). This slight increase in annual budget would actually result in water rate increases less than inflation, since consumption and revenue is assumed to be growing at 1% per year after the initial 20 year period. Additional operating and maintenance costs associated with the expanded system have not been considered in this analysis beyond 20 years.



Life Cycle Infrastructure Renewal:

Appendix "B" includes charts which identify watermain material type and age. It is noted that over 43% of all watermains in the City of London are cast iron, which were installed in London between 1880 and 1969. Ironically, it is the younger cast iron watermains that are experiencing a shorter life expectancy than cast iron mains installed before World War II, in part, due to a thinner pipe wall thickness. System renewal became a routine program of the City's water group (the former PUC) in the 1970's. City staff must remain proactive in understanding failure mechanisms and innovative technologies to be used in the watermain renewal program to ensure that water supply to Londoners remains reliable.

The 20 year model and the 75 year outlook are based on extensive data, historical monitoring, and North American and local research to predict future infrastructure needs for infrastructure renewal. There are some key assumptions used in the model, e.g. pipe life, that require regular review and updating as new research and our own experiences will indicate.

In 2005, Council approved a plan that would add $500,000 per year to ramp up the renewal program by $10 million over 20 years. The additional renewal budget has been split between replacement and rehabilitation, utilizing clean and reline trenchless technologies to extend the life of the older cast iron watermains another 15 to 20 years at a fraction of the cost of replacement with significantly less social disruption.

In 2006, Council approved increases to the meter management program to allow the use of improved technology and new meters to minimize revenue leakage because of inaccurate meters. Part of the funding is also required to respond to change in the electricity market place with London Hydro's switch to Smart Electric Meters. More details are provided in the Meter Management Strategy report to be submitted to ETC this fall.

In 2006, Council approved $1.5 million to upgrade the 40 year old obsolete electrical components at the Arva Pumping Station.

In 2008, Council approved increases to the lead service replacement program of $1.5 million in 2008 and $750,000 for the next 17 years to accelerate the replacement of "public side" lead services.

As previously noted, lifecycle renewal is funded under a "pay-as-you-go" principle, whereby renewal projects in a given year are paid entirely by water rates collected in that year. This eliminates the need to borrow funds (debt) or drawdown the reserve fund. The effectiveness of these programs will need to be regularly re-evaluated and adjusted in scope, as necessary, within the financial model.

System Improvements:

System improvements, for the most part, are not a significant component of the capital replacement works. The chart below indicates a high expenditure during the year 2013 for replacement, water quality improvement and expansion of one of the three cells at the Springbank Reservoir complex (thereby qualifying it for inclusion in all three capital categories, but it is currently identified as a life cycle project in the budget document). This work, which has an anticipated 80 to 100 year life, will be funded through a debt issuance which allows this type of infrequent, long-life project to be completed without requiring cutbacks to other necessary renewal works. Other system improvements (such as enhanced security or increased water pressure) are funded by the water rate payers on a "pay-as-you-go" basis or through reserve fund drawdowns.

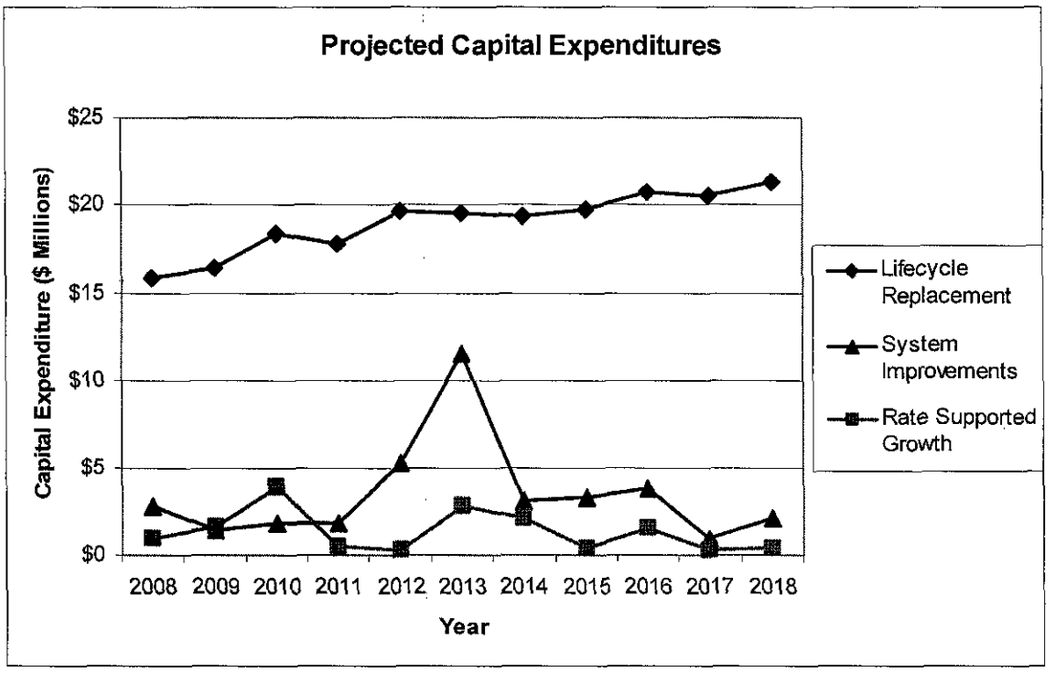
Growth:

Rate supported growth projects are not a significant factor in the financial model over the long term as in most circumstances, the majority of the system capital expansion costs will be paid through the Development Charges reserve fund. Water rate supported growth expenditures include industrial growth related projects and other growth projects which have a portion of the work improving service to existing customers, such as reliability or pressure improvements.

Growth within the Regional Water Supply System is currently paid through water rates, although there is a proposal to include Regional growth projects in the new Development Charges By-law for 2009. Debt adopted by the Regional Water Systems through the Joint Boards of Management is apportioned to the member municipalities in proportion to their percentage of flow from each system. So, while Regional system debt only indirectly impacts City water rates, it does have a direct impact on London's ability to borrow for other infrastructure projects.

All growth related projects in the model are based on the Water Master Plan, the Growth Management Implementation Strategy (GMIS) and the resulting Development Charges study that is currently underway. The water growth projects have been coordinated with infrastructure projects for transportation and wastewater. It is important to note that the future ongoing operating and maintenance costs of the expanded system are expected to be funded from water rates based on the consumption of these new customers and operational efficiencies. Any revenues which may accrue from the future Regional Water Development Charge have not been recognized in the model at this time, but if passed by Council in 2009, will help to reduce future rate increases.

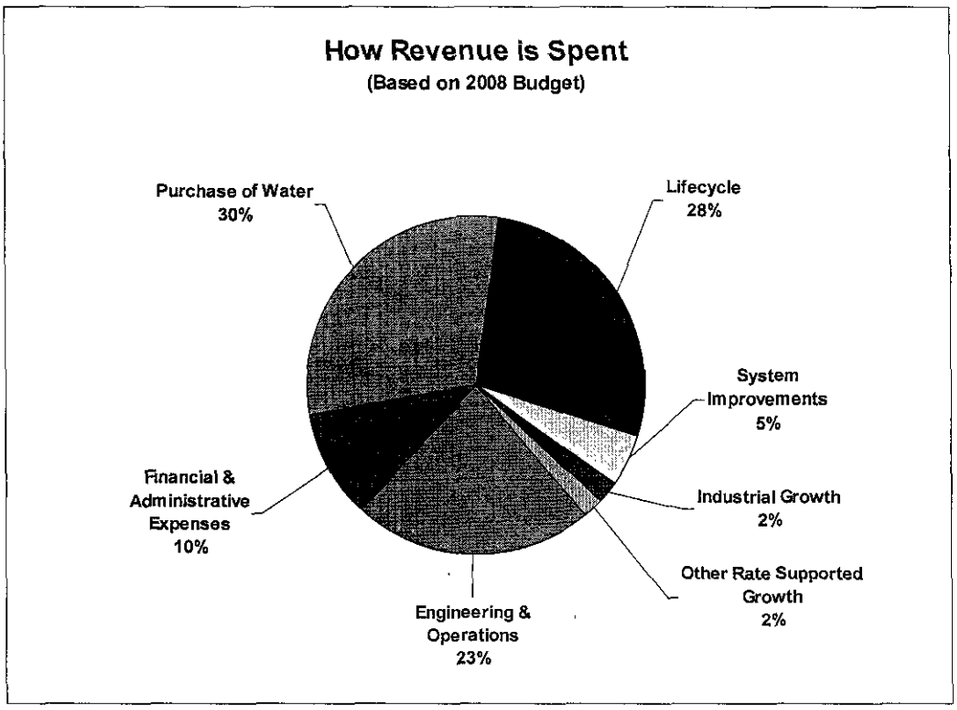
The Projected Capital Expenditures chart below (shown in constant dollars) illustrates the relative importance of these three budget components as inputs to the financial model. It is noted that lifecycle renewal accounts for over 80% of all capital expenditures. Occasional large system improvements can also have significant impacts, as noted by the proposed Springbank Reservoir improvements scheduled for 2013. Minor fluctuations in rate supported growth will not adversely affect the financial model projections unless there is a significant industrial component to be supported.



Recent Trends Impacting Revenue

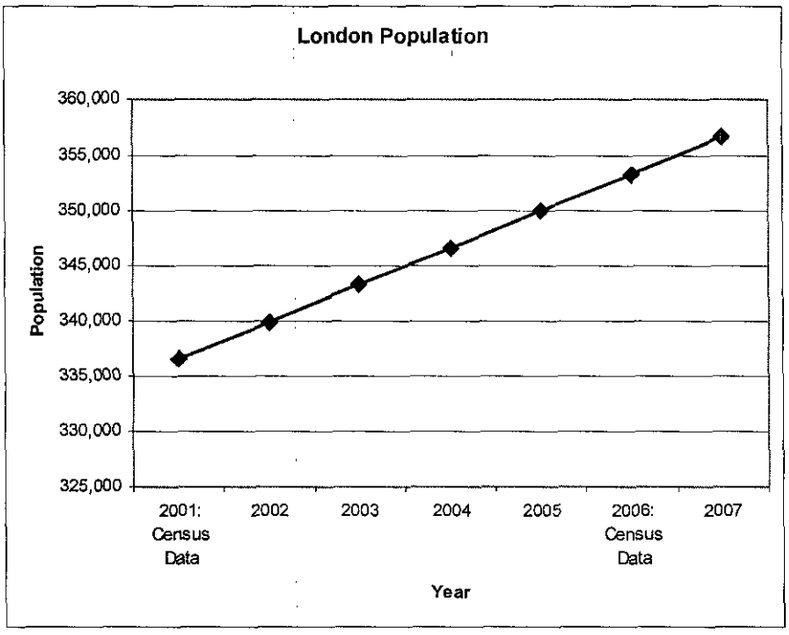
City staff have noted a number of trends related to the revenue that is generated from the water rate payers. This revenue is sensitive to a number of factors which include population growth, water consumption practices, and weather patterns. These will be explored in more detail in the text below.

The pie chart below identifies how revenue is spent within the City of London. Capital works accounts for 37% of revenue (this includes lifecycle which represents 80% of the capital requirements, system improvements, and growth projects). It should be noted that Operations includes capital expenditures for material purchase and equipment rental. Another 30% is spent solely on water purchase from Lake Huron Water Supply and Elgin Area Water Supply Systems. Regional water rates include capital, operating, maintenance and debt servicing costs.

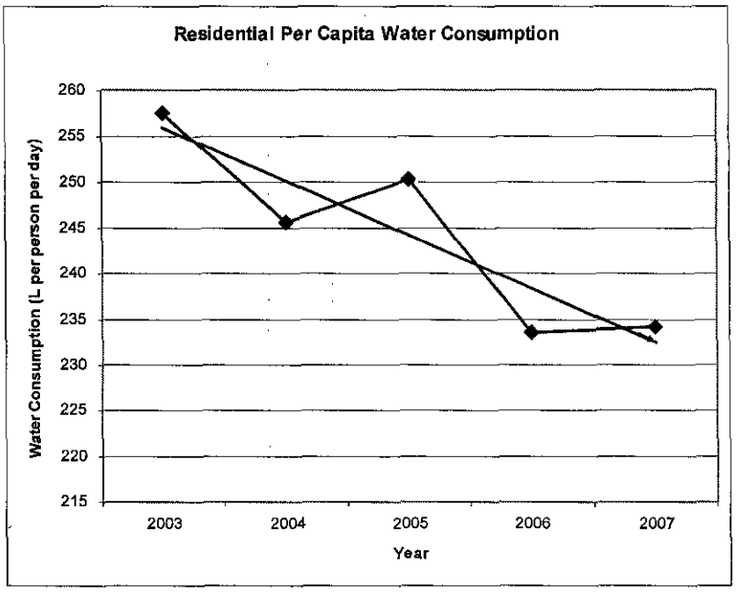


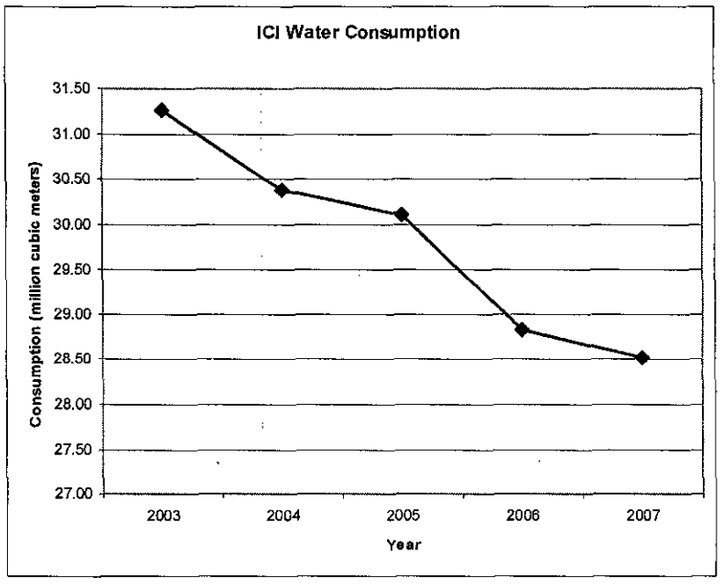
Increases in the cost to purchase water from the Regional Systems increases the retail rate that the City charges its customers. While the City has managed to operate and maintain the water system with essential zero debt, it must be remembered that the Regional systems still hold significant debt through the Joint Boards of Management, some being issued in 1998 upon the acquisition of those systems. The Regional systems, through their own financial plans, have projected moderate rate increases over the next several years to replace aging infrastructure, the majority of which is over 40 years old, and to service the remaining debt.

Population:
London's population growth is on a slow, but steady incline at approximately 1% growth per year. This 1% annual growth has been very consistent over the past 15 years and is expected to follow the same trend in upcoming years. Census data from 2001 and 2006 verifies the population growth trend.

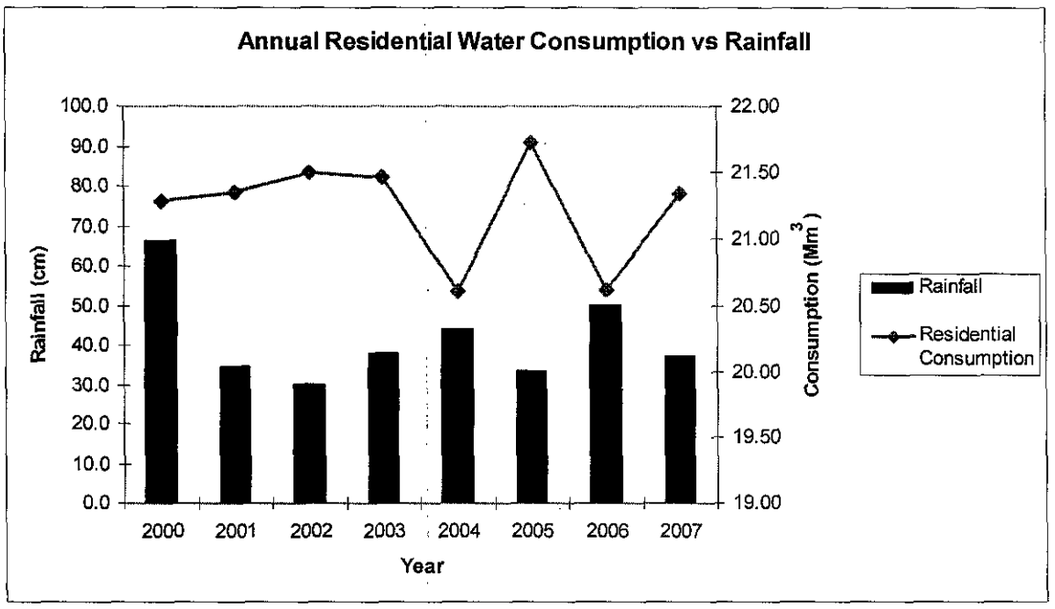


Consumption:
Unlike population growth, a downward trend has been noted for both the residential per capita consumption and consumption by Industrial, Commercial and Institutional (ICI) sector in the City of London. Factors affecting consumption include weather, economy (especially noticeable with industries that use water in their process), and increased efficiency measures (low flow showerheads, low volume flush toilets, front loading washing machines, etc). The minor rise in population growth has been insufficient to offset the resultant lower per capita consumption in recent years. While this decreased consumption can be viewed as a positive influence in long term planning and financing of the system, the short term reality is that a strain is placed on current available revenue to support operating and maintenance of an expanded system, and capital renewal. ICI water consumption, which represents approximately 57% of overall consumption, has dropped 9.6% over the past 5 years. This translates into approximately a $2 million reduction in revenue in 2007 dollars attributed to ICI alone, in terms of the ability to fund pipe replacement and repair. Despite population growth, residential water consumption, which represents approximately 43% of overall consumption, remains at or below previous years levels. City Staff has predicted a 2% combined drop in consumption for 2008 for modelling purposes along with a projected 2.5% drop for 2009. Beyond 2009, growth in water demand is assumed to remain slightly negative for approximately 10 to 12 years, reflecting the anticipating reductions from the proposed "efficient use of water" program described in more detail in a companion ETC report. It is noted that growth in demand is one of the key variables in the model and must be monitored on an ongoing basis and regularly updated.





Weather:
Weather plays a significant role in the volume of water consumed from year to year, which is identified in the chart below. Fluctuations in temperature and rainfall intensity, frequency and volume from one year to the next can result in significant residential revenue variations of up to 5%. Note the correspondingly low water consumption during wet summers (2004 & 2006) and high consumption during dry summers (2003, 2005 & 2007). It is therefore important that, during a wet summer, the City has the available means to follow through with planned capital expenditures to avoid deferring projects. It is noted that the aim of the water capital infrastructure replacement program is to operate under a "pay-as-you-go" principle, whereby capital projects for a given year are paid for by revenues generated in that same year. Debt issuance is not recommended to acquire funds required for shortfalls in revenue generation. During periods of reduced revenue due to weather, contributions to the reserve fund are reduced. Fluctuations in revenue resulting from variances in weather reinforce the need for reserves that are maintained at a sufficient level to provide adequate funding for capital thereby providing a buffer for operational shortfalls.



Capital Reserve Fund and Reserves Apportionment

The water supply system has benefited from a reserve fund for over 40 years. It is the intention of City Staff to target a minimum reserve fund balance of $8 - $10 million (0.5% of the total $1.8 billion asset value) to address weather induced consumption fluctuations, unforeseen failure events, future spikes in capital expenditures, and costs associated with legislative changes. The following chart indicates the proposed reserve fund minimum targets:

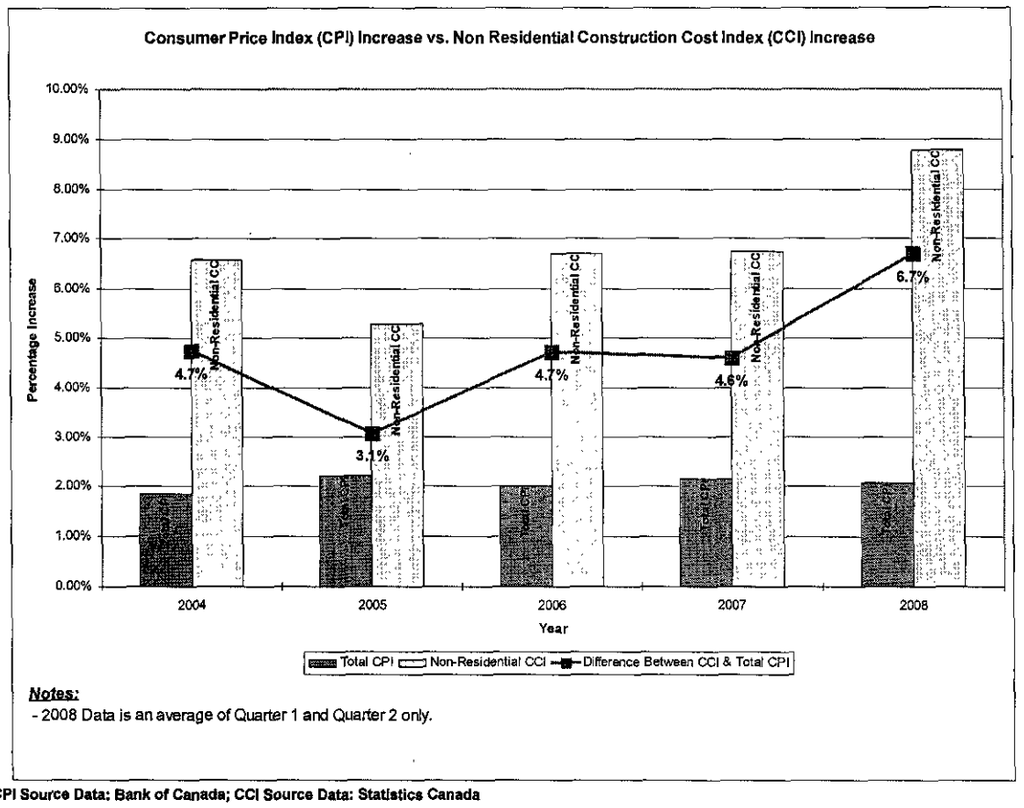
Required Expenditure	Amount
Annual Weather Induced Consumption Fluctuations	$1.5M
Intermittent Funding Needs	
a) Catastrophic Failure	$2M
b) Planning for Future Capital Expenditures	$4.5 - $6.5M
c) Costs Associated with Legislative Changes	-
Total:	$8M - $10M

The reserve fund acts as a buffer to allow for these unforeseen and planned periodic expenditures so that needed capital works projects may proceed, ensuring service delivery and reducing maintenance costs. As identified in the principles, the reserve fund would be allowed to build, exceeding the minimum for known moderate sized periodic capital projects. The 20 year financial model is a useful tool to project reserve fund balances over the long term planning horizon with the goal of using the fund to stabilize water rates in the future.

The growth related Development Charges Reserve Fund is unrelated to this discussion and does not impact water rates.

Stabilization of Capital Reserve Fund

Under various funding scenarios within the financial model, it is apparent that water rate increases similar to anticipated inflation, based on the Consumer Price Index (CPI), cannot provide the level of funding required in future years to maintain the water supply and distribution network. A number of factors, including the age of the infrastructure, backlog of work, reduction in water demand and a Construction Cost Index (CCI) which has risen at a much higher rate than the CPI, contribute to this funding shortfall. The graph below identifies the gap between CPI and CCI over the past five years. The CCI over this time period has been, on average, 4.8% higher than the CPI. The impact on the water utility is a blend of CPI and CCI, since the budget expenditures include both capital construction and labour costs.



CPI Source Data: Bank of Canada; CCI Source Data: Statistics Canada

Modelling Scenarios:
Three modelling scenarios, outlined below, were considered to stabilize the reserve fund, to achieve sustainability and to reduce the infrastructure gap, while attempting to meet the principles outlined in this report. They are as follows:

Scenario #1 - One time significant rate increase (20%)

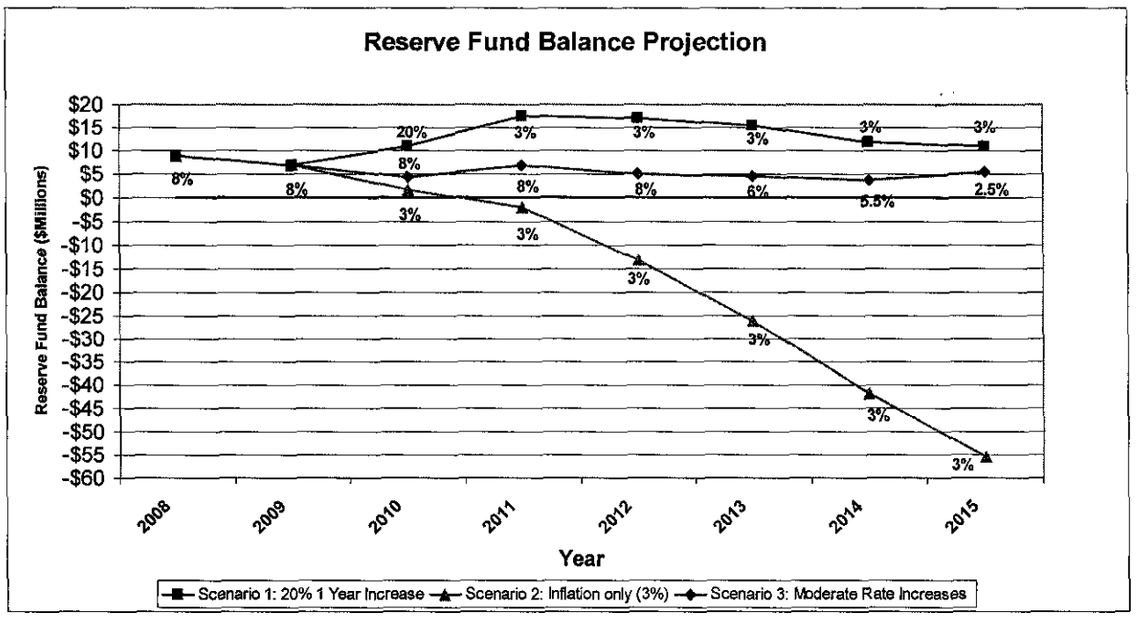
Windsor, Ontario implemented an 86% water rate increase in 2007 to help generate funds to replace aging watermains. It is noted that prior to this increase, Windsor's water rates were among the lowest in Ontario. Although a high one time rate increase in London would achieve the need for increased cash flow and influx of funds into the capital reserve fund, it is anticipated that this could overburden London rate payers and give an overall negative public opinion. It also does not eliminate the need for rate increases in subsequent years. The scenario outlined below models a 20% increase in 2010, followed by 3% annual increases thereafter. Large one year rate increases creates uncertainty for businesses in their budgeting process and is subsequently not recommended.

Scenario #2 - Low annual rate increases (3%)

This option is attractive to current rate payers; however, it does not address the needs of the water supply and distribution system and future generations. In this scenario, the water infrastructure gap will continue to widen as capital replacement projects would have to be deferred. This will overburden future generations to fund the replacement needs. If capital works are delayed in an attempt to reduce the rate increases, this increases risk, repair and maintenance costs and social disruption associated with increased failure frequency, and only temporarily delays the need for higher rate increases into the future to maintain a safe and reliable water supply system. The chart below illustrates the reserve fund entering negative values as early as 2011. In this scenario, $55 million of debt would have to be issued within 7 years to undertake the capital expenditures necessary to replace the aging infrastructure while ensuring that the reserve fund balance does not drop below zero. This level of debt would further encumber the City in its ability to borrow for other projects. While future debt adopted by the Regional Water Systems through the Joint Boards of Management is apportioned to the member municipalities applies to all modelling scenarios, the use of additional debt noted above for City infrastructure renewal is not a practical option to reduce rates in the short term.

Scenario #3 - Moderate annual rate increases (8%) – RECOMMENDED SCENARIO

It is anticipated that this option will achieve a balance between the need to generate revenue and the need to satisfy rate payers with justifiable cost increases to maintain the high quality of water that customers now enjoy. Moderate rate increases, as identified in the chart below, serve to maintain the reserve fund in the $5 million range in the "near" term, while also funding the necessary annual capital expenditures. Beyond the sustainability point of 2015, the reserve fund rises to $10 million while maintaining water rate increases at or near inflation. It is recommended that Scenario #3 be chosen to move forward in the financial planning process.



The graph identifies projected reserve fund balances under different water rate escalation scenarios. The underlying assumptions for the model considers average annual inflation of 3% and average pipe life of 75 years, based on North American experience, adjusted to London's pipe material mix and vintage (see Appendix "B" for more details on pipe inventory). Over time, it is anticipated that the reserve fund minimum targets would also be increased to account for deflation of the dollar and the resulting loss in buying power for pipe repair and renewal.

Conclusion:

Water renewal projects will continue to be required to address aging infrastructure, irrespective of water consumption. Rising costs to purchase water, combined with construction cost increases, require increased revenue through London's water rates. Three scenarios were outlined above to help address the need for increased funding. Scenario #3, which introduces a 8% annual rate increase over the next four years, is recommended to support the level of funding required. Sustainability is achieved by 2015, while the reserve fund is stabilized near the minimum target level and the infrastructure gap is further closed, with an indication that it will be eliminated in the long term. Adoption of smaller annual rate increases would force capital replacement projects to be deferred, since debt should not be used for annual renewal needs. The net impact of this action results in higher risk, higher maintenance and repair costs, along with higher social disruption due to increased pipe failures and higher rates for the next generation. It is not recommended that the existing level of risk be increased at this time. The recommendation outlined above will serve to maintain ***London's Advantage – securing tomorrow*** by achieving a safe, sufficient, and sustainable water supply system.

Corporate Strategic Alignment:

The furtherance of the Water 20 year Financial Plan was identified as a Strategic Initiative for Environmental and Engineering Services as presented to the Environment and Transportation Committee in January 2008. It is also consistent with a number of Corporate Strategic Priorities outlined in the table below.

Corporate Strategic Priority	How Priority is Addressed
Economic Prosperity: *Creating an environment for a resilient, diversified and inclusive economy*	By ensuring an adequate high quality water supply to support new and existing businesses.
Infrastructure Renewal and Expansion: *Investing in a strategic and sustainable municipal infrastructure*	By ensuring a 20 year strategy is in place that is affordable and achievable.
Environmental Leadership: *Valuing our natural heritage and environment*	By delaying significant growth related projects, made possible through a sound water conservation program, thereby saving resources including money and reducing energy, chemicals and greenhouse gases.
Financial Stability: *Realizing a prosperous financial future*	By appropriately financing the water supply system making it affordable and sustainable.

Acknowledgements:

This report has been prepared with the assistance of Kyle Chambers of the Water Engineering Division and Sharon Houde, Manager of Administrative Services. This report was reviewed by Martin Hayward, Director, Financial Planning and Policy.

PREPARED BY:	RECOMMENDED BY:
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CONCURRED BY:	
VIC COTÉ GENERAL MANAGER OF FINANCE AND CORPORATE SERVICES	

November 14, 2008
Attached:

Appendix "A" – 75 Year Needs Chart versus Potential Budget – NO INFLATION
Appendix "B" – Pipe Material by Construction Period

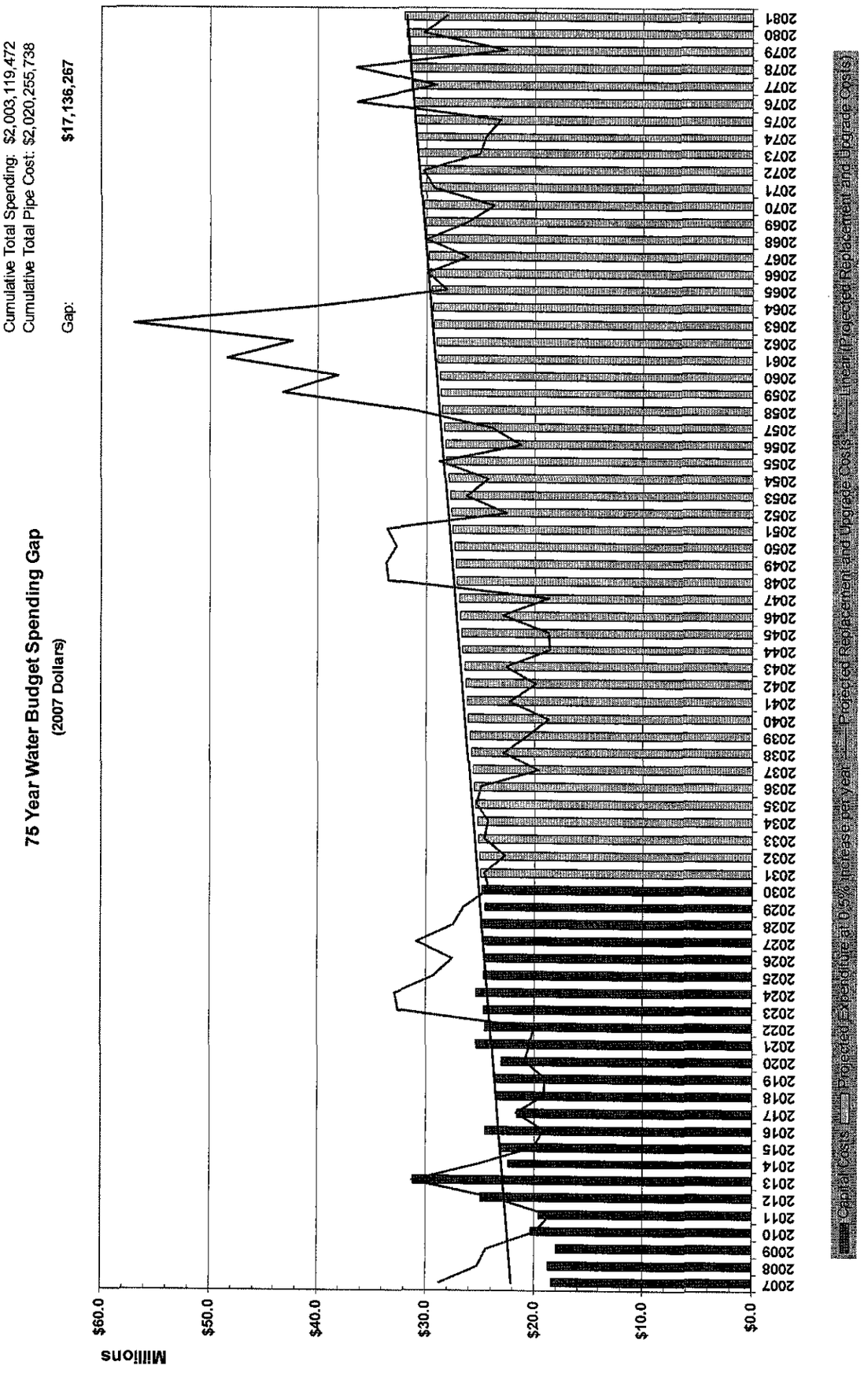
cc: Vic Coté, General Manager of Finance and Corporate Services
Rick Brown, Division Manager Administrative Services
John Braam, Division Manager Water/Sewer Operations

Agenda Item # Page #

15 101

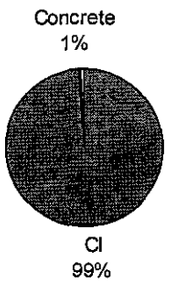
Appendix "A" - 75 Year Needs Chart vs. Potential Budget

(No Inflation)



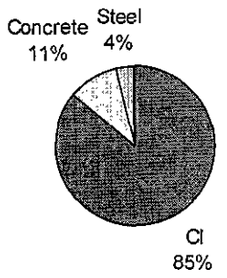
Appendix "B" - Pipe Material by Construction Period

1878-1950



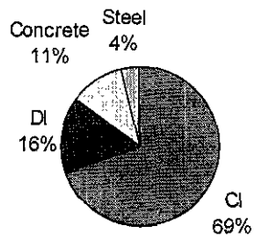
Length: 199km

1951-1960



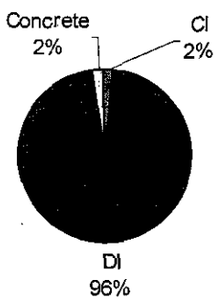
Length: 186.5km

1961-1970



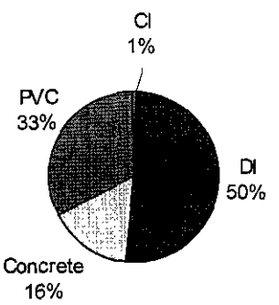
Length: 233km

1971-1980



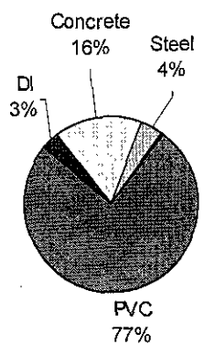
Length: 212km

1981-1990



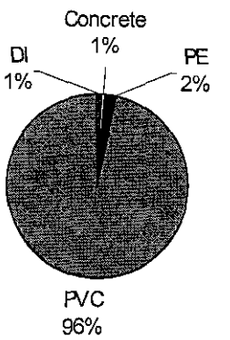
Length: 197km

1991-2000

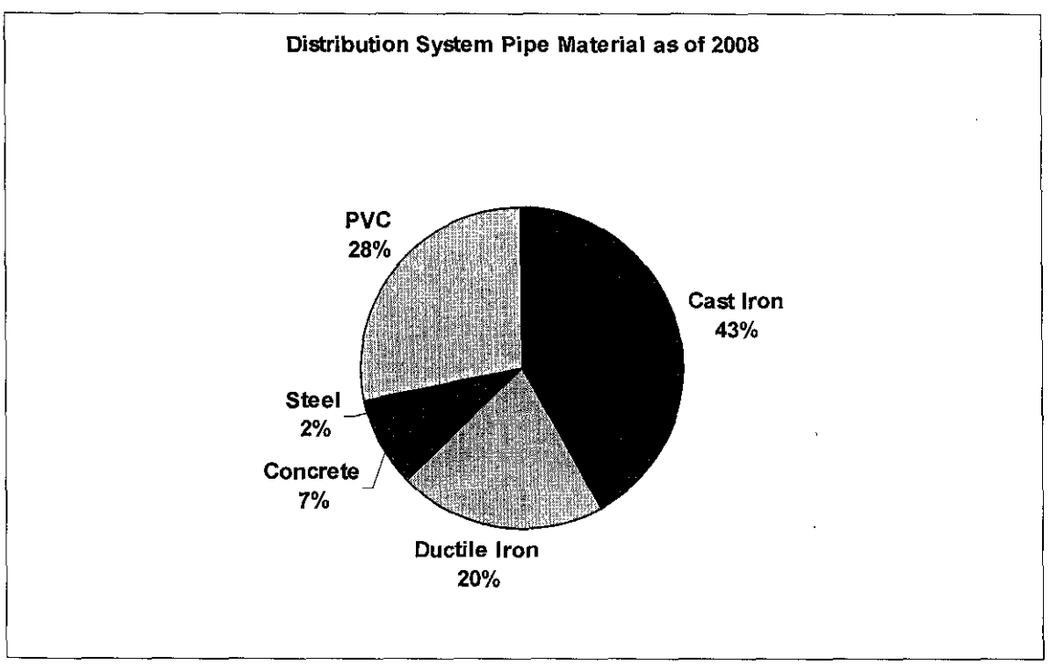


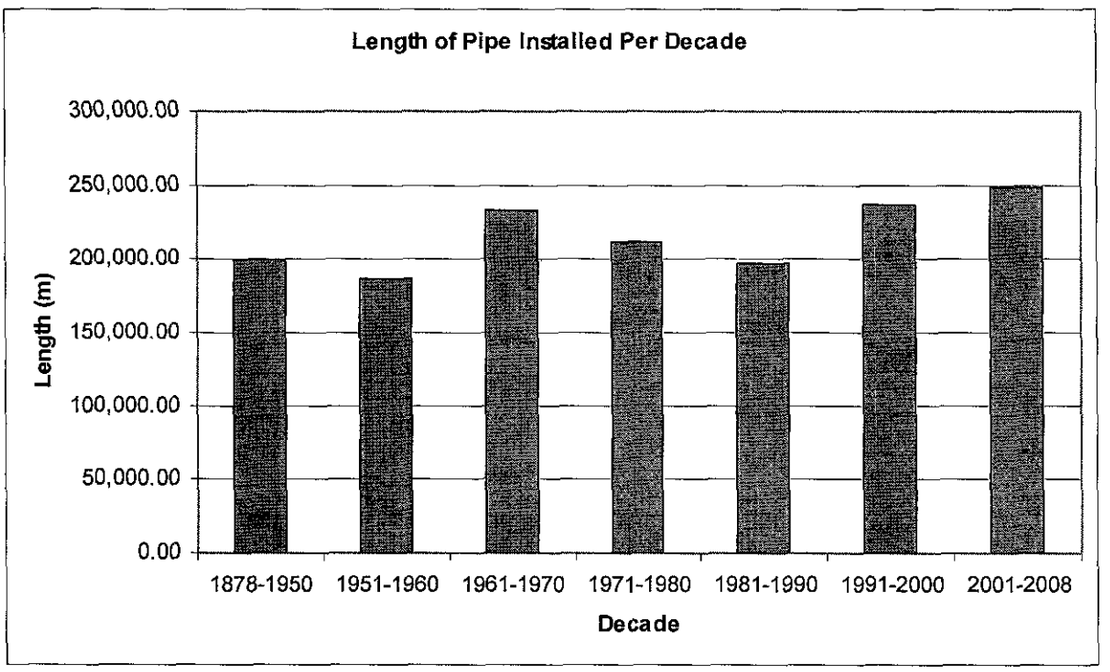
Length: 237km

2001-2008



Length: 248km




Length of Pipe Installed Per Decade
300,000.00
250,000.00
200,000.00
150,000.00
100,000.00
50,000.00
0.00
Length (m)
1878-1950
1951-1960
1961-1970
1971-1980
1981-1990
1991-2000
2001-2008
Decade

Report to Civic Works Committee

To: **Chair and Members**
Civic Works Committee
From: **Kelly Scherr, P. Eng., MBA, FEC**
Deputy City Manager, Environment & Infrastructure
Subject: **RFP-2024-039 Culvert Replacement Program**
Detailed Design and Tendering
Appointment of Consulting Engineer
Date: **October 22, 2024**

Recommendation

That, on the recommendation of the Deputy City Manager, Environment & Infrastructure, the following actions **BE TAKEN** with respect to the appointment of a consulting engineer for the detailed design and tendering of the Culvert Replacement Program:

a) The proposal submitted by EXP Services Inc. **BE ACCEPTED** to provide consulting engineering services to complete the detailed design and tendering at an upset amount of $517,545 excluding HST, as per Section 15.2 (e) of the Procurement of Goods and Services Policy;

b) The financing for this assignment **BE APPROVED** as set out in the Sources of Financing Report attached hereto as Appendix A;

c) The Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this assignment;

d) The approvals given herein **BE CONDITIONAL** upon the Corporation entering into a formal contract with the consultant for the work; and,

e) The Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents including agreements, if required, to give effect to these recommendations.

Linkage to the Corporate Strategic Plan

Municipal Council's Strategic Plan identifies Mobility and Transportation as a strategic area of focus. This report supports the Strategic Plan by identifying the building of infrastructure that provides safe, integrated, connected, reliable and efficient transportation choices.

Analysis

1.0 Context

The purpose of this report is to recommend the appointment of a consulting engineer to undertake the detailed design and tendering for 22 culvert replacements throughout the City. The need for these culvert replacements has been identified through an asset management process which involves regular evaluation and field inspection. Council approval of this consultant appointment is required in accordance with the City's Procurement of Goods and Services Policy.

2.0 Discussion and Considerations

2.1 Project Background

The Transportation Planning and Design Division (TP&D) maintains an inventory of 92 culverts throughout the city. The larger sized culverts, managed by TP&D, are inspected during the biennial structure inventory inspection program as required by provincial requirements. As part of the inspection program, five culverts were recommended for replacement within the near term.

Also, as part of provincial requirements, the Stormwater Engineering Division (SWED) has evaluated a number of smaller culverts during their inspection program. During this past evaluation, 111 smaller, non-structural culverts were identified and added to the City's inventory. This assessment identified 17 culverts recommended for replacement within the near term.

A total of 22 culverts are recommended for replacement in the near term to ensure structural integrity, address safety hazards, protect infrastructure from damage due to stream water fluctuation and precipitation runoff, prevent upstream flooding and ensure compliance with environmental standards. The culverts scheduled for replacement are primary located in the rural areas of the city, south of Highways 401 and 402.

2.3 Consultant Procurement Process

The consultant selection process for this assignment has been undertaken in accordance with Section 15.2 (e) of the City's Procurement of Goods and Services Policy which states:

> Assignments for complex projects, or projects with estimated consulting fees greater than the CFTA threshold for goods and services limit as amended (currently $133,800), shall be awarded based on a two (2) stage process with the first stage being an open, publicly advertised expression of interest/pre-qualification stage (REOI/RFPQ), and the second being a RFP of the short-listed firms, of which there shall be a minimum of three (3) qualified firms stating their approach to the proposed project and their experience and knowledge of projects similar in nature.

The Senior Manager, Procurement and Supply has identified that removing the requirement to conduct a two-stage process increases the efficiency of the procurement process while remaining fully compliant to legislation and trade agreements. The Senior Manager, Procurement and Supply received concurrence from the City Manager to waive the RFPQ process and allow a single stage RFP to be conducted as per Section 4.1 d) ii) of the Procurement of Goods and Services Policy, which states:

> d. No provision of this Policy precludes a Deputy City Manager or the Senior Manager, Procurement and Supply, with the concurrence of the City Manager, from recommending an award to Committee and City Council where:
>
> > ii. it is a matter of procurement procedure and, in the opinion of the Senior Manager, Procurement and Supply, it is in the best interest of the City to do so.

Request for Proposals, RFP-2024-0239 was issued for this project. Proposals were received from AECOM Canada Ltd., Aquafor Beech Limited, ConceptDash Inc, EXP Services Inc., Greck and Associates Ltd., and J.L. Richards & Associates Limited. City staff have reviewed all proposals, including the financial and technical components, and confirmed that the EXP Services Inc. submission was the highest scoring proposal as it addresses the required scope of work and provides the best value for the City. Subject

to performance, EXP Services Inc. may be considered for contract administration during the construction phase of the project.

As per Section 8.5 a) vii) of the Procurement of Goods and Services Policy, Committee and City Council must approve the Appointment of Professional Consulting Services greater than $100,000.

3.0 Financial and Schedule Considerations

Funds are identified in the capital budget for the engineering detailed design, tendering and construction of the 2025 Culvert Replacement Program as per the Source of Financing attached as Appendix A.

As part of the design phase, a construction and project delivery schedule will be developed. It is anticipated that the construction will commence in the summer of 2025.

Coordination with residents, conservation authorities, and other utility owners is planned early in the design process. A traffic management and communications plan for construction will be developed during detailed design to inform road users and others of any delays or restrictions, including detours during potential road closures.

Conclusion

The need to replace a number of culverts which are in poor condition has been identified through a regular inspection and evaluation process. These culverts are recommended for replacement in the near term to ensure structural integrity, address safety hazards, protect infrastructure from damage due to stream water fluctuation and precipitation runoff, prevent upstream flooding and ensure compliance with environmental standards.

EXP Services Inc. has demonstrated a comprehensive understanding of the requirements for this project which includes the design and tendering process to replace 22 culverts across the city. Based on the evaluation of their submitted proposal, it is recommended that EXP Services Inc. be appointed the consulting engineer to undertake the detail design and tendering for the Culvert Replacement Program in the amount of $517,545 (excluding HST).

Council approval of this consultant appointment is required in accordance with the City's Procurement of Goods and Services Policy.

Prepared by:	**Garfield Dales, P. Eng., Division Manager, Transportation Planning and Design**
Submitted by:	**Doug MacRae, P. Eng., MPA, Director, Transportation and Mobility**
Recommended by:	**Kelly Scherr, P. Eng., MBA, FEC, Deputy City Manager, Environment and Infrastructure**
Concurred by:	**Sandra Datars Bere, City Manager**
Appendix A:	Source of Financing
c:	EXP Services Inc. Andrew Denomme, City of London, TP&D John Bos, City of London, TP&D Shawna Chambers, P. Eng, Division Manager, SWED Paul Titus, City of London, SWED Steven Mollon, City of London, Procurement & Supply

Appendix "A"

#24184
October 22, 2024
(Appoint Consulting Engineer)

Chair and Members
Civic Works Committee

RE: RFP-2024-039 Culvert Replacement Program Detailed Design and Tendering

(Subledger RD250004)
Capital Project ES260924 - Culvert Replacement Program
EXP Services Inc.- $517,545.00 (excluding HST)

Finance Supports Report on the Sources of Financing:

Finance Supports confirms that the cost of this project can be accommodated within the financing available for it in the Capital Budget and that, subject to the approval of the recommendation of the Deputy City Manager, Environment and Infrastructure, the detailed source of financing is:

Estimated Expenditures	Approved Budget	Committed To Date	This Submission	Balance for Future Work
Engineering	526,654	0	526,654	0
Construction	1,673,346	26,511	0	1,646,835
Total Expenditures	$2,200,000	$26,511	$526,654	$1,646,835
Sources of Financing				
Drawdown from Sewage Works Reserve Fund	2,200,000	26,511	526,654	1,646,835
Total Financing	$2,200,000	$26,511	$526,654	$1,646,835

Financial Note:

Contract Price	$517,545
Add: HST @13%	67,281
Total Contract Price Including Taxes	584,826
Less: HST Rebate	-58,172
Net Contract Price	$526,654

Jason Davies
Manager of Financial Planning & Policy
mp

Report to Civic Works Committee

To: **Chair and Members**
Civic Works Committee
From: **Kelly Scherr, P. Eng., MBA, FEC**
Deputy City Manager, Environment & Infrastructure
Subject: **Mobility Master Plan Phase 2 Update**
Date: **October 22, 2024**

Recommendation

That, on the recommendation of the Deputy City Manager, Environment & Infrastructure, that this report **BE RECEIVED** for the purpose of providing Municipal Council an update on the Mobility Master Plan ongoing and upcoming Phase Two community engagement and consultation.

Linkage to the Corporate Strategic Plan

The completion of the MMP is specifically identified in the Strategic Plan within the Mobility and Transportation Area of Focus as a strategy to increase access to sustainable mobility options. The completion and implementation of the MMP will advance and support numerous strategies under several Areas of Focus including Wellbeing and Safety, Climate Action and Sustainable Growth, Economic Growth, Culture and Prosperity, Housing and Homelessness and a Safe London for Women, Girls and Gender-Diverse and Trans People.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

- November 2, 2021, Civic Works Committee, Initiation of the Mobility Master Plan Development
- March 1, 2022, Civic Works Committee, Mobility Master Plan Appointment of Consultant
- April 20, 2022, Civic Works Committee, Appointment of Transportation and Mobility Big Data Provider – Irregular Result
- November 29, 2022, Civic Works Committee, Mobility Master Plan Update
- July 18, 2023, Civic Works Committee, Mobility Master Plan Update: Strategies, Mode Share Target Options and Project Evaluations Frameworks
- October 24, 2023, Civic Works Committee, Mobility Master Plan 2050 Mode Share Target
- March 26, 2024, Strategic Priorities and Policy Committee, Mobility Master Plan 2050 Mode Share Target

2.0 Discussion and Considerations

2.1 Purpose

The purpose of this report is to provide Municipal Council with an update on the Mobility Master Plan (MMP) Phase Two community consultation and next steps. The engagement has been supporting the development of policies and actions. The next steps will layer on consultation on the development of priority networks for the various mobility modes to inform infrastructure project recommendations.

2.2 Context

The London Plan identifies that a Transportation Master Plan may be prepared and updated regularly to implement the mobility policies of the plan including supporting sustainable land use, mobility choices, and safety. This is particularly prudent now with London's rapid growth and in light of the Climate Emergency Action Plan (CEAP).

The Council-approved vision for the MMP is rooted in providing people with more choices for how they move around London. Key considerations are safety, sustainability, equity, efficiency and affordability. The plan is being created using a thorough consultation process, technical analysis, and consideration of The London Plan, Council's Strategic Plan and associated initiatives such as the CEAP.

2.3 Overview

The creation of the MMP is in the second of three phases which is focussed on exploring solutions and making connections as illustrated in Figure 1 below.

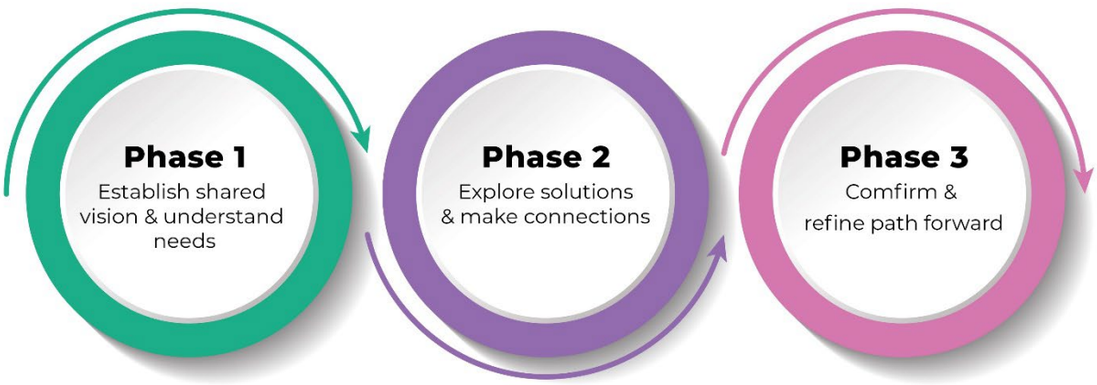


Figure 1: Mobility Master Plan Process

Phase 1 was initiated in April 2022 and included the development of the MMP Vision and Guiding Principles which were approved by Council in December 2022.

Phase 1 included extensive community consultation to provide a deeper understanding of what the community cares about, uses, has challenges with and wants out of a transportation and mobility system. This information is summarized in the Phase 1 Engagement Summary Report which can be found on the project website at london.ca/mobility.

Phase 1 also included extensive technical analysis of mobility patterns and trends, the existing mobility system and infrastructure, land use, current and forecasted population and employment distribution, policy direction, broader societal conditions and future mobility planning considerations. This information is summarized in the Needs and Opportunities Report which can also be found on the project website.

Development of the MMP is in Phase 2. A key Phase 2 decision point was Council's identification of the mode share target on April 2, 2024. This has informed the project modelling and analysis to determine mobility system pressures and constraints based on future forecasted population and employment growth.

The evaluation of potential mobility infrastructure projects is ongoing as discussed in Section 2.4 of this report. In parallel to the infrastructure planning, the MMP team has also been working on the development of policies and actions to compliment the mobility system infrastructure.

2.4 Development of Policies and Actions

Achieving London's mobility vision for the future and the 2050 mode share target will require policies and actions to integrate with recommended infrastructure. Multi-modal

considerations need to be embedded in the planning, programming and design decision making process through policies and actions.

Policies are our city building rules. They are the primary considerations, or directions, for how we grow as a city. The policy framework for all planning in the City of London is The London Plan. Examples of existing mobility related policies in The London Plan include:

698. We will build our city to facilitate active mobility. The city will be designed to provide infrastructure such as sidewalks, bicycle lanes and pathways, to locate amenities within neighbourhoods so that they are accessible, and to achieve levels of density and connectivity that minimize travel distances between destinations.
706. Our rapid transit routes will connect our major educational, research and health care institutions.
337. A Transportation Master Plan may be prepared and updated regularly, to conform with the policies of this Plan and implement these policies in a more detailed way.

Actions are generally more specific and have a defined scope or purpose. Examples of actions include:

- creating, implementing and/or updating guidelines, manuals, standards and other design or decision-making tools
- programs such as a road safety program, bike share program and Smart Commute London

The draft policies and actions are being developed and organized under the eight Areas of Focus as outlined below. More information on the policies and actions in development can be found in the project website videos which have been prepared for each Area of Focus.

1. Land Use: Using the mobility system to support London's desired future land use covers actions and potential policy amendments that recognize the relationship between land use and mobility. The plan recognizes that community planning can play an important role in the range and sustainability of the future resident's mobility options.
2. Transit: Making transit the option of choice for more trips covers key directions about transit strategy that will influence future LTC planning activities. The goal is to support and attract transit users with an improved service and supportive infrastructure.
3. Walking and Cycling: Making walking and cycling attractive mobility options to meet daily travel needs addresses topics related to incentives, improvements and programs necessary to improve walking and cycling conditions. The actions and policies aim to improve the convenience and comfort of the experience through improved infrastructure management and supporting culture through partnership programs.
4. Road Capacity: Managing road capacity strategically is central to creating a highly-functional, connected and efficient mobility network. It includes topics such as network design criteria, transportation management policies, minimizing construction impacts and curb management to optimize street space. Goods movement and supporting employment lands is also a consideration.
5. Regional Transportation Hub: Supporting London's role as a Regional Hub recognizes London's importance in Southwest Ontario. It covers the critical role of mobility hubs in a multi-modal network, inter-community transit as well as actions to improve connectivity to surrounding regions via the train station and London Airport.

6. Putting People First: Putting people first in London's mobility system identifies items related to road safety, programming and communications, enabling seamless multimodal travel, and transportation demand management supports that can leverage and improve the service and experience.
7. Equity: Providing a mobility system that enables more equitable participation in city life recognizes mobility poverty. This section of policies and actions identifies actions and policy changes that embed equity into transportation planning process, identifies actions specific to equity-denied populations and promotes public health.
8. Climate Change: Preparing for change builds upon the Climate Emergency Action Plan and identifies actions and policies to help London achieve its GHG emissions targets and create a system that is more adaptive and resilience to climate change. It also looks forward to emerging technologies and prepares for change such electric mobility and connected and automated vehicles.

The long list of actions and policies under each of these headings will continue to be developed in conjunction with the creation of the networks that they are intended to support.

2.5 Community Engagement Overview

Consultation on the draft policies and actions in development began in June 2024. This phase of engagement aims to raise awareness about the draft policies and actions in development while giving the public a chance to provide input on each of the eight focus areas. It helps the project team understand how important each area and its proposed actions are to the community. Online feedback forms and in-person conversations also enable staff to compile additional ideas that would help accomplish mobility goals and identify missing and necessary improvements to draft policies and actions.

Consultation has been undertaken through a variety of channels including the project website, social media outreach, targeted meetings with organizations and associations, community events, ward meetings and four community advisory committees. During this time, staff also participated in the Fanshawe College and Thames Valley District School Board (TVDSB): Innovation Valley 2024 project and received training from 8:80 Cities to explore new youth-centred community engagement techniques as an ongoing focus for the project team. The following is some metrics associated with the above:

- 20 community events
- 34,500 engagements on social media
- 14,500 people prompted with a project email
- More than 4,800 web page and video views
- 1,121 online feedback form responses
- More than 300 conversations with members of the public at MMP events

This now brings the total number of feedback forms from Phase 1 and Phase 2 to more than 3,500. Staff have attended more than 110 events and the project website has been visited more than 25,000 times since the beginning of the project.

In partnership with the City's Neighbourhood and Community-Wide Services, Planning and Economic Development, and Anti-Racism and Anti-Oppression Division, additional focus groups, survey distributions and pop-up events are being planned.

Opportunities to engage on the draft policies and actions will continue into the fall and winter. Londoners interested in providing feedback specific to any of the eight areas of focus continue to be encouraged to visit london.ca/mobility to complete a feedback form.

2.6 Development of Priority Networks

In parallel to the development of policies and actions, the MMP team has been actively working on the development of preliminary infrastructure project recommendations in support of providing complete networks for each mode of mobility which will integrate into one multi-modal network. These recommendations are being developed based on a future 2050 scenario where the vision of the MMP has been achieved and people are choosing to walk, cycle or take transit for 32.5% of their trips as per Council's 2050 mode share target. The mobility networks are being developed based on the following:

- Complete Streets*:* As part of the MMP a holistic review of our entire roads network is being undertaken to identify a range of needs including increased safety, vehicular capacity, walking and cycling connectivity, and access to transit. A range of projects have been identified for consideration and with the community's input, will result in a number of recommended complete streets projects which include a variety of improvements such as strategic road capacity improvements, transit measures, and urbanization with curbs, storm sewers, sidewalks and cycling facilities.
- Transit: A transit priority network is being planning out to 2050 which builds on the current rapid transit projects in implementation. The recommendations will include a range of transit priority levels and will be complimented by local transit routes. Corridor recommendations will range from isolated transit priority measures such as queue jump lanes and transit priority signals, to dedicated transit lanes where appropriate.
- Cycling: The MMP will recommend a cycling network which builds on, and ultimately supersedes, the 2016 Cycling Master Plan. All ages and abilities are being considered as part of the development of the cycling recommendations which will include the identification of new cycling connections as well as upgrades to current cycling infrastructure based on the 2021 Ontario Traffic Manual Book 18 on Cycling Facilities.
- Walking: Walking infrastructure includes sidewalks and pathways. The London Plan policy is that sidewalks shall be located on both side of all streets, with a few exceptions, so new developments support walking. Sidewalk gaps in the existing major road network will be considered through the complete streets projects noted above. Various other capital programs address existing walking infrastructure gaps including neighbourhood connectivity plans, the infrastructure lifecycle renewal program, local road reconstruction program, the new sidewalks program and pathway development. The actions being developed as part of the MMP include a review of these programs to identify potential improvements and ways to expedite the process.
- Goods Movement: Goods movement is important to support London's economic growth and job creation. Considerations such as connecting employment lands with efficient supply chain routes is being layered into the considerations for the complete streets network of road improvements.

The identification of potential infrastructure projects is informed by community input, technical analysis, The London Plan, Council's Strategic Plan and associated initiatives such as the CEAP. The team is currently evaluating various alternative infrastructure improvement projects based on the guiding principles and project mode share target.

2.7 Next Steps

A preliminary version of the mobility networks to form one complete integrated multi-modal network will be shared with the community in December 2024, with an opportunity for Londoners to provide input. This will include in-person public meetings, online content available on the project website, and a variety of methods for providing

feedback online, in-person, via email or phone. The mobility networks will be refined based on community feedback and subsequently presented to Council for approval in Spring 2025.

Conclusion

Phase 2 in the creation of the MMP is exploring solutions and making connections. Recent engagement activities have been focussed on informing the development of policies and actions, grouped into eight areas of focus. Phase 2 will culminate with sharing and consultation on the draft mobility networks in December 2024.

The plan will continue to be informed by public feedback and the final recommended networks are anticipated to be presented to Council for approval in Spring 2025. The finalization of actions and policies will proceed in parallel to compliment the infrastructure networks. The MMP is planned to be presented to Council for approval in Summer 2025.

Prepared by:	**Sarah Grady, P. Eng, Transportation Design Manager**
	Megan Fontaine, Senior Communications Advisor
	Garfield Dales, P. Eng., Division Manager, Transportation Planning & Design
Submitted by:	**Doug MacRae, P. Eng., MPA, Director, Transportation & Mobility**
Recommended by:	**Kelly Scherr, P. Eng., MBA, FEC, Deputy City Manager, Environment and Infrastructure**

cc: Mobility Master Plan Internal Steering Committee Members:
Kelly Scherr, Deputy City Manager, Environment & Infrastructure
Eliza Bennett, Director, Strategic Communications
Garfield Dales, Division Manager, Transportation, Planning & Design
Megan Fontaine, Senior Communication Specialist
Sanjay Govindaraj Director, Anti-Racism, Anti Oppression
Sarah Grady, Manager, Transportation Design
Doug MacRae, Director, Transportation & Mobility
Heather McNeely, Director, Planning & Development
Kelly Paleczny, General Manager, London Transit Commission
Jay Stanford, Director, Climate Change, Environment & Waste Mgmt.
Integrated Transportation Community Advisory Committee

Report to Civic Works Committee

To: **Chair and Members**
Civic Works Committee
From: **Kelly Scherr, P.Eng., MBA, FEC**
Deputy City Manager, Environment & Infrastructure
Subject: **Emergency Repair of Access Road over the Marr Drain**
Date: **October 22, 2024**

Recommendation

That, on the recommendation of the Deputy City Manager, Environment & Infrastructure, the following actions **BE TAKEN** with respect to the emergency procurement undertaken for repairs to the access road over the Marr Drain:

a) The purchase order issued to R.A. Walker Construction Ltd. under Section 14.2 of the Procurement of Goods and Services Policy at a total cost of $65,285.71 (HST excluded), **BE CONFIRMED**;

b) The financing for this project **BE APPROVED** as set out in the Sources of Financing Report attached hereto as Appendix ‘A’;

c) the Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations; and

d) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this project.

Executive Summary

Purpose

This report informs Council of a purchase order that was issued to complete emergency repairs to an access road that washed out at the Marr Drain during a heavy rainfall event on July 15, 2024.

Context

The access road at the Marr drain provides critical access and also contains the electrical infrastructure required to operate the Dingman Storage Facility near Dingman Creek Pupming Station. City operations and public safety were at risk due to further failure of the road, prompting the immediate procurement of civil construction services to repair.

Linkage to the Corporate Strategic Plan

This report supports the 2023-2027 Corporate Strategic Plan by contributing to the following outcome:

- Wellbeing and Safety
    - Improved emergency services response time and reporting.

Analysis

1.0 Background Information

1.1 Purpose

The purpose of this report is to inform Council of a decision by administration to award services for the repair of an access road at the Marr Drain under the emergency provisions of the Procurement of Goods and Services Policy. This procurement was

undertaken without competitive bids in an effort to complete the repair as quickly as possible considering the risk to public safety and the maintenance of essential City operations. The sequence of events leading to this decision is described in this report.

2.0 Discussion and Considerations

2.1 Site Location

The area north of Dingman Drive and west of Highway 401 holds many critical elements of the City's stormwater and wastewater infrastructure. The Murray and Marr drains combine in this area prior to discharging to Dingman Creek. The Murray-Marr Stormwater Management Facility is a critical piece of stormwater infrastructure that mitigates surface flooding in the Dingamn Creek sub-watershed.

The area also hosts the recently constructed Dingman Creek Pumping Station and the Dingman Storage Facility, a flow equalization basin that allows a portion of wastewater flows to be temporarily stored to protect downstream infrastructure during high flow events.

The location of the washout in this report was at the point where the Marr Drain crosses the access road between Dingman Creek Pumping Station and the Murray-Marr Stormwater Management Facility and the Dingman Storage Facility.

2.2 Sequence of Events

The following list details the events that led to emergency procurement provisions being utilized in this instance:

- July 15, 2024: Over 60 mm of rain fell over the course of about an hour on the morning of July 15. This contributed to significant surface water flows impacting many areas of this City.

- Later in the day on July 15, London Hydro personnel called City dispatch to advise of an observed washout near the stormwater facility behind EMDC. Sewer Operations staff were notified, who then notified Wastewater Operations staff. Wastewater Operations then also notified Parks Operations, since this access road also forms part of the multi-use pathway network.

- July 16: Wastewater Operations staff visited the site to assess the situation. It was determined that immediate work to repair would be required: Over half of the roadway was gone, and power and communications cables were exposed by the erosion. Staff contacted a civil contractor that had successfully completed other work in the past for the Division (R.A. Walker Construction Ltd.) and arranged to meet on site the next day.

- July 17: Wastewater Operations staff met on site with the contractor. They identified that there was significant work to complete but could mobilize in a short time to stabilize the area. Also that day, meetings were held with Stormwater Engineering and Parks staff to confirm if there were other long-term plans for the culvert that should be incorporated in the repair.

- By July 18 the contractor had mobilized to site and started work. Over the course of the repair the work consisted of: debris removal; access improvements to the stormwater management facility to enable Sewer Operations to complete remediation work there; temporary support for electrical cables; reconstruction of the access road; and finally roadway resurfacing and restoration.

- The majority of work was completed by August 1, although paving and final restoration was not completed until September 16.

It was determined during the stabilization work that the design of the existing culvert still fit within Stormwater Engineering's long-term plans for surface drainage in the area, so the system was restored rather than replaced or upsized.

2.3 Purchasing Process

Given the severity of the damage and the risk to electrical infrastructure that was established at the July 16 site visit, the decision was made at the time to invoke Clause 14.2 of the Procurement of Goods and Services Policy to allow for the repairs to commence immediately.

> "14.2 Procurement in Emergencies
>
> For the purposes of this section, "Emergency" means an event or occurrence that the City Manager or Deputy City Manager deem as an immediate threat to:
>
> - Public health;
> - The maintenance of essential City services; or
> - The welfare and protection of persons, property, or the environment; and the event or occurrence necessitates the immediate need for goods or services to mitigate the emergency and time does not permit for a competitive procurement process.
>
> Where the procurement cost to mitigate the Emergency is anticipated to exceed $50,000, the emergency procurement shall be reported by the responsible Deputy City Manager to Committee and City Council (including the source of financing) at the next scheduled meeting following the event."

3.0 Financial Impact/Considerations

The total cost of all repairs undertaken totaled $65,285.71, plus HST.

Since the total value exceeded the $50,000 threshold, this report is made to Council. While the unexpected nature of the repairs warranted treating this situation as an emergency procurement, this type of work is accounted for and funding is available in the current multi-year budget.

Conclusion

The weather event of July 15, 2024 caused significant erosion damage to the access road connecting the Dingman Creek Pumping Station with the Dingman Storage Facility across the Marr Drain. Electrical and communications infrastructure was damaged and at risk of failure. By invoking the emergency procurement measures available under the Procurement of Goods and Services Policy, Wastewater Treatment Operation staff were able to arrange for the temporary support and restoration of the area, maintaining operations and limiting the risk of further damage. A total of $65,285.71, plus HST was paid to R.A. Walker to complete the necessary repairs.

Prepared by:	**Kirby Oudekerk, MPA, P.Eng.** **Division Manager, Wastewater Treatment Operations**
Submitted by:	**Ashley Rammeloo, MMSc., P. Eng.** **Director, Water, Wastewater and Stormwater**
Recommended by:	**Kelly Scherr, P. Eng., MBA, FEC** **Deputy City Manager, Environment & Infrastructure**
Appendix 'A'	Source of Financing

cc: Steve Mollon, Senior Manager, Procurement and Supply
Alan Dunbar, Manager III, Financial Planning and Policy
Zeina Nsair, Financial Business Administrator, Finance and Corporate Services

Appendix "A"

#24195
October 22, 2024
(Award Contract)

Chair and Members
Civic Works Committee

RE: Emergency Repair of Access Road over the Marr Drain
(Subledger FS20DC01)
Capital Project ES253222 - Stormwater Treatment Remediation Program
Capital Project ES260924 - Culvert Replacement Program
R.A. Walker Construction Ltd.- $65,286.71 (excluding HST)

Finance Supports Report on the Sources of Financing:

Finance Supports confirms that the cost of this project can be accommodated within the financing available for it in the Capital Budget and that, subject to the approval of the recommendation of the Deputy City Manager, Environment and Infrastructure, the detailed source of financing is:

Estimated Expenditures	Approved Budget	Committed To Date	This Submission	Balance for Future Work
ES253222 - Stormwater Treatment Remediation Program				
Engineering	157,890	43,998	0	113,892
Construction	890,686	852,512	33,218	4,956
ES253222 Total	1,048,576	896,510	33,218	118,848
ES260924 - Culvert Replacement Program				
Engineering	559,872	526,654	0	33,218
Construction	1,640,128	26,511	33,218	1,580,399
ES260924 Total	2,200,000	553,165	33,218	1,613,617
Total Expenditures	$3,248,576	$1,449,676	$66,436	$1,732,465

Sources of Financing				
ES253222 - Stormwater Treatment Remediation Program				
Capital Sewer Rates	1,048,576	896,510	33,218	118,848
ES253222 Total	1,048,576	896,510	33,218	118,848
ES260924 - Culvert Replacement Program				
Drawdown from Sewage Works Renewal Reserve Fund	2,200,000	553,165	33,218	1,613,617
ES260924 Total	2,200,000	553,165	33,218	1,613,617
Total Financing	$3,248,576	$1,449,676	$66,436	$1,732,465

Financial Note:	ES253222	ES260924	Total
Contract Price	32,643	32,643	65,286
Add: HST @13%	4,244	4,244	8,488
Total Contract Price Including Taxes	36,887	36,887	73,774
Less: HST Rebate	-3,669	-3,669	-7,338
Net Contract Price	$33,218	$33,218	$66,436

Jason Davies
Manager of Financial Planning & Policy

wb

Environmental Stewardship and Action Community Advisory Committee

Report

The 9th Meeting of the Environmental Stewardship and Action Community Advisory Committee
October 2, 2024

Attendance

B. Samuels (Chair), B. Amendola, I. ElGhamrawy, A. Ford, A. Hames, M.A. Hodge, N. Karsch, A. Pert and N. Serour and H. Lysynski (Clerk)

ABSENT: L. Bushan-Jazey, A. Butnari, R. Duvernoy and M. Griffith

ALSO PRESENT: M. Davenport, P. Kavcic and J. Stanford

The meeting was called to order at 4:33 PM; it being noted that B. Amendola, I. ElGhamrawy, A. Ford, A. Hames, M.A. Hodge, N. Karsch, A. Pert and N. Serour were in remote attendance.

1. Call to Order

1.1 Disclosures of Pecuniary Interest

That it BE NOTED that no pecuniary interests were disclosed.

2. Scheduled Items

2.1 Mayor's New Year's Honour List Criteria

That the presentation by E. Hunt, Manager, Legislative Services, with respect to the Mayor's New Year's Honour List Policy BE RECEIVED; it being noted that the Environmental Stewardship and Action Community Advisory Committee held a discussion with respect to this matter.

3. Consent

3.1 9th Report of the Environmental Stewardship and Action Community Advisory Committee

That it BE NOTED that the 9th Report of the Environmental Stewardship and Action Community Advisory Committee, from its meeting held on September 4, 2024, was received.

4. Sub-Committees and Working Groups

4.1 Design Specifications and Requirements Manual

That, the Design Specifications and Requirements Manual Working Group additional comments as appended to the Environmental Stewardship and Action Community Advisory Committee (ESACAC) Added Agenda BE FORWARDED to the Civic Administration for consideration; it being noted that the ESACAC heard verbal delegations from P. Kavcic, Manager, Subdivisions and Development Inspections and M. Davenport, Manager, Manager, Development Engineering and Digital Planning Initiatives, with respect to this matter.

4.2 Climate Emergency Action Plan Working Group

That it BE NOTED that the Environmental Stewardship and Action Community Advisory Committee held a discussion with respect to the Climate Emergency Action Plan Working Group; it being noted that the Working Group will provide a report at the November 6, 2024 meeting.

5. Items for Discussion

5.1 Notice of Planning Application and Public Meeting - 415 Oxford Street West

That it BE NOTED that the Notice of Planning Application and Public Meeting, dated September 24, 2024, from M. Hynes, Planner, with respect to an Official Plan and Zoning By-law Amendment related to the property located at 415 Oxford Street West, was received.

5.2 Budget

That it BE NOTED that the Environmental Stewardship and Action Community Advisory Committee (ESACAC) held a discussion with respect to the remainder of the 2024 Budget; it being noted that a guest speaker event is being planned in partnership with the London Environmental Network for late November-early December relating to Green Development Standards; it being further noted that an update and official budget request will be provided at the November 6, 2024 ESACAC meeting.

6. Adjournment

The meeting adjourned at 6:10 PM.

Report to Civic Works Committee

To: **Chair and Members**
Civic Works Committee
From: **Kelly Scherr, P.Eng., MBA, FEC**
Deputy City Manager, Environment, and Infrastructure
Subject: **Reassessment of the CB Smith No. 2 Municipal Drain**
Date: **October 22, 2024**

Recommendation

That, on the recommendation of Deputy City Manager, Environment and Infrastructure, the following actions **BE TAKEN** with respect to the CB Smith No. 2 Municipal Drain:

(a) The drainage report, attached as Appendix A, prepared by Spriet Associates London Ltd, Consulting Engineers for the for the re-assessment of the CB Smith No. 2 Municipal Drain (2024) **BE ADOPTED**, being noted the notice of the public meeting was provided in accordance with Section 41 of the Drainage Act; and,

(b) The proposed by-law, attached as Appendix B **BE INTRODUCED** at this meeting, and **BE GIVEN** two readings at the October 22, 2024, Council Meeting to authorize the construction of the CB Smith No. 2 Municipal Drain project, it being noted that the third reading of the by-law for enactment would occur at the Council meeting after holding of the Court of Revision in connection with the project.

Linkage to the Corporate Strategic Plan

This recommendation supports the following 2023-2027 Strategic Plan areas of focus:

- Waterways, wetlands, watersheds, and natural areas are protected and enhanced.
    - Protect the natural environment and avoid natural hazards when building new infrastructure or development.
    - Improve the natural environment and build resiliency when replacing aging infrastructure.

Executive Summary

In response to a request for maintenance of the CB Smith No. 2 Drain, it was discovered that the assessment schedule was outdated. For maintenance to be completed on the drain, Spriet and Associates London Ltd. was appointed to reassess maintenance costs to reflect the current property lines and conditions. Adoption of the by-law confirms the revised assessment schedule, all to allow for future maintenance costs to be allocated to private property owners contributing flows to the Municipal Drain in accordance with the Drainage Act.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter.

- No previous Reports.

2.0 Discussion and Considerations

2.1 Purpose

To adopt an updated drainage report governing the Municipal Drain assessment

schedule to support maintenance to the CB Smith No. 2 Municipal Drain. The Ontario Drainage Act requires a Council resolution to adopt the drainage report and enact the related by-law.

2.2 Context

The general location of the CB Smith No. 2 Municipal Drain is shown in the map provided in Appendix C. The drain provides a great benefit to the lands and roads through which it runs, and the proposed maintenance will provide an improved outlet to the land within the watershed.

2.3 Additional Background

For maintenance work to proceed, the assessment schedule must be current per Section 65 of the Drainage Act. The updated report includes an assessment schedule indicating how the maintenance costs are to be divided amongst the benefitting landowners.

The Drainage Act requires a public meeting prior to the adoption of the reassessment report. This Civic Works Committee meeting will serve that purpose. All assessed property owners have been notified of this meeting and may be present to ask questions. There is a further opportunity for property owners to appeal the assessment schedule prior to construction through the Court of Revision. Per Section 97, at the Court of Revision meeting, property owners may appeal the assessments in the assessment schedule that is part of the drainage report; however, they are not able to appeal the project itself. Representatives from Spriet and Associates London Ltd. will also attend the meeting to answer any questions regarding the assessment schedule in the drainage report.

The adoption of the updated drainage report and the passing of the associated by-law will allow for the assessment schedule to be applied, dividing the maintenance costs amongst the benefitting landowners. This is also a major step towards ensuring access to provincial grants from the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), which presently contributes one-third of the total costs assessed to agricultural land.

Conclusion

Once City Council approves the re-assessment of the CB. Smith No. 2 Municipal Drain report as governed by the Drainage Act; staff can proceed with maintenance projects in alignment with the City's procurement policies.

Prepared by:	**Shawna Chambers, DPA, P.Eng.** **Division Manager, Stormwater Engineering**
Submitted by:	**Ashley M. Rammeloo, MMSc., P.Eng.** **Director, Water, Wastewater, and Stormwater**
Recommended by:	**Kelly Scherr, P.Eng., MBA, FEC** **Deputy City Manager, Environment, and Infrastructure**

Appendix 'A' – Engineer's Report

Appendix 'B' – By-law

Appendix 'C' – Location Map

cc: Paul Titus, Program Manager, Stormwater Engineering
Jessica Trela, Drainage Superintendent, Stormwater Engineering
M. DeVos – Spriet Associates London Ltd.
A. Kruspel – Spriet Associates London Ltd.

APPENDIX A

C.B. SMITH No. 2 DRAIN
REASSESSMENT 2024

City of London

SPRIET
ASSOCIATES
ENGINEERS & ARCHITECTS
155 York Street
London, Ontario N6A 1A8
Tel. (519) 672-4100
Fax (519) 433-9351
Email: mail@spriet.on.ca
www.spriet.on.ca

Our Job No. 223151

June 28, 2024

London, Ontario
June 28, 2024

C.B. SMITH No. 2 DRAIN REASSESMENT 2024

City of London

To the Mayor and Council of
The City of London

Mayor and Council:

We are pleased to present our report on the reassessment of the C.B. Smith No. 2 Municipal Drain serving parts of Lots 62 to 66, Concession ENBTR and parts of Lots 20 to 24, Concessions 4 to 6 (geographic Westminster) in the City of London. The total watershed area contains approximately 354 hectares.

AUTHORIZATION

This report was prepared pursuant to Section 76 of the Drainage Act. Instructions were received from your Municipality with respect to a motion of Council.

HISTORY

The C.B. Smith No. 2 Drain presently consists of open drains – the Main Drain and Branches A, B, and C. It was originally constructed as the C.B. Smith Award Drain under an Award by J.A. Bell dated October 17, 1914. The drain was reconstructed and the Award Drain was incorporated as part of the municipal drain pursuant to the C.B. Smith Outlet Drain report by F.A. Bell dated May 2, 1938. The Drain consisted of the Main Drain open ditch from the Dingman Creek to what is now known as Branch A and included Branches A and B. These Branches and the lower portion of the Main Drain from the junction with Branch A, to the outlet were reconstructed pursuant to a report by S.G. Chipman, dated January 14, 1950. This report also included the construction of Branch C and the extension of the Main Drain upstream to the east limits of the south half of Lot 23.

Branch A and the Main Drain downstream of Branch A (see attached plan), were last reconstructed pursuant to a report by Graham Berman and Associates Ltd., dated May 29, 1968.

FINDINGS AND RECOMMENDATIONS

We have reviewed the existing Schedules of Assessment and found them to be out of date and unfair due to the following:

- the construction of Highway 402 and access ramps to Wonderland Road at the outlet end of the Main Drain. The ditch now crosses through large culverts under Highway 402 and the access ramp
- Westminster Drive has been realigned and Wonderland Road has been reconstructed into a major arterial road
- Highway 401 has been reconstructed and has increased run-off
- a Hydro One right-of-way now crosses the Main Drain in Lot 24, Concession 5

FINDINGS AND RECOMMENDATIONS (cont'd)

- various development has taken place in the watershed including property splits and reconfiguration

Therefore, a new Schedule of Assessment should be provided.

SCHEDULES

Two schedules are attached hereto and form part of this report, being Schedule 'A' - Cost Estimate and Schedule 'B' - Assessment for Maintenance.

Schedule 'A' - Cost Estimate. This schedule provides for a detailed cost estimate for engineering, administrative costs, interest, and net HST.

Schedule 'B' - Assessment for Maintenance. In accordance with Section 38 of the Drainage Act, this schedule outlines the distribution of future repair and/or maintenance costs for portions of, or the entire drainage works over the lands and roads which are involved as well as the administrative cost shown in Schedule A.

Drawing No. 1, Job No. 223151 and specifications form part of this report. They show and describe in detail the location and extent of the existing drains and the lands which are affected.

ASSESSMENT DEFINITIONS

In accordance with the Drainage Act, lands that make use of a drainage works are liable for assessment for part of the cost of constructing and maintaining the system. These assessments are known as benefit, outlet liability and special benefit as set out under Sections 22 and 23 of the Act.

SECTION 22

Benefit as defined in the Drainage Act means the advantages to any lands, roads, buildings or other structures from the construction, improvement, repair, or maintenance of a drainage works such as will result in a higher market value, increased crop production, improved appearance, better control of surface water, or any other advantages relating to the betterment of lands, roads, buildings, or other structures.

Special Benefit is assessed to lands for which some additional work or feature has been included in the construction repair or improvement of a drainage works. The costs of such work are separated and assessed independently from the regular work.

SECTION 23

Outlet liability is assessed to lands or roads that may make use of a drainage works as an outlet either directly or indirectly through the medium of any other drainage works or of a swale, ravine, creek, or watercourse.

In addition, a Public Utility or Road Authority shall be assessed for and pay all the increased cost to a drainage works due to the construction and operation of the Public Utility or Road Authority. This may be shown as either benefit or special assessment.

ASSESSMENT

A modified "Todgham Method" is typically used to calculate the assessments shown on Schedule 'C'- Assessment for Construction. This entails breaking down the costs of the drain into sections along its route where warranted and then extracting Special Assessments and Special Benefit Assessments from each section.

The remainder is then separated into Benefit and Outlet Assessments. The Benefit is distributed to those properties receiving benefit as defined under "Assessment Definitions", with such properties usually being located along or close to the route of the drain. The Outlet is distributed to all properties within the watershed area of that section on an adjusted basis. The areas are adjusted for location along that section and relative run-off rates. Due to their different relative run-off rates forested lands are assessed for outlet at lower rates than cleared lands. Also, roads and residential properties are assessed for outlet at higher rates than cleared farmlands.

The actual cost of the work involving this report is to be assessed on a pro-rata basis against the lands and roads liable for assessment benefit and outlet as shown in detail on Schedule 'B' – Assessment for Maintenance.

MAINTENANCE

The C.B. Smith Drain No.2, including the Main Drain, Branches A, B & C, shall be maintained by the City of London at the expense of all upstream lands and roads assessed in Schedule 'B' - Assessment for Maintenance and in the same relative proportions until such time as the assessment is changed under the Drainage Act.

The above existing portions of the drain shall be maintained in accordance with the grades and dimensions set out in the plans and specifications contained in the 1950 and 1968 reports.

Repairs or improvements to any road culvert or bridge or sub-surface road crossing shall be the responsibility of the applicable Road Authority, entirely at their cost.

The existing farm culverts on the drain shall be maintained by the owners of the affected property, entirely at their cost.

Respectfully submitted,

SPRIET ASSOCIATES LONDON LIMITED

M.P. DeVos, P. Eng.

MPD:ms

SCHEDULE 'A' - COST ESTIMATE

C.B. SMITH No. 2 DRAIN REASSESSMENT 2024

City of London

We have made an estimate of the cost of the proposed work which is outlined in detail as follows:

ADMINISTRATION

Net Harmonized Sales Tax	$	200.00
Plan, Assessment and Report	$	10,430.00
Expenses	$	70.00
TOTAL ESTIMATED COST	**$**	**10,700.00**

SCHEDULE ' B ' - ASSESSMENT FOR MAINTENANCE

C.B. SMITH No. 2 DRAIN REASSESSMENT 2024

City of London

Job No. 223151 June 28, 2024

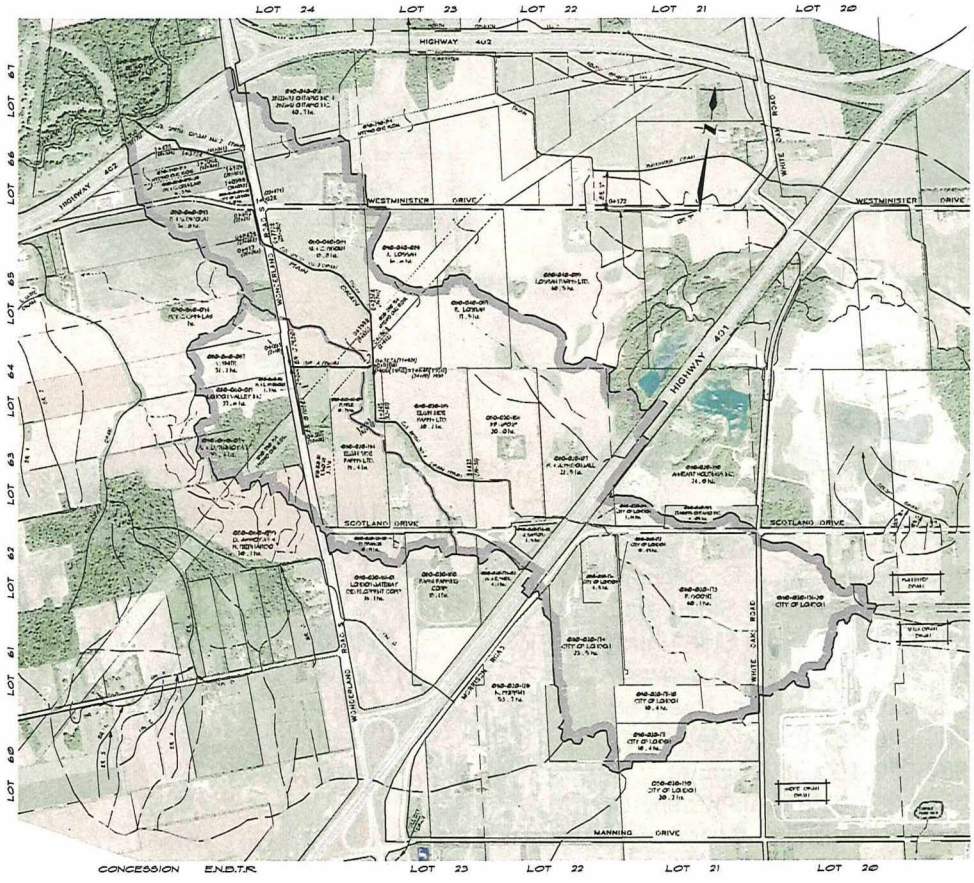
** = Non-agricultural*

	CON.	LOT	HECTARES AFFECTED	ROLL No. (OWNER)	BENEFIT	OUTLET	TOTAL
MAIN DRAIN							
	Geographic Westminster						
*	ENBTR	EPt.62	2.8	080-060-059 (C. Arroyas & N. Bernardo)	$	$ 30.00	$ 30.00
	ENBTR	SPt.63	4.7	080-060-079 (A & D. Arroyas)		27.00	27.00
	ENBTR	NPt.63	7.6	080-060-081 (London Valley Inc.)		67.00	67.00
	ENBTR	SPt.64	6.6	080-060-087 (V. White)		71.00	71.00
	ENBTR	Pt.64&65	9.0	080-060-094 (M. & C. Crinklaw)	20.00	62.00	82.00
	ENBTR	NEPt.65	6.8	080-060-093 (F. & S. Dicola)	110.00	32.00	142.00
	ENBTR	NEPt.65	1.0	080-060-093-10 (City of London)	75.00	13.00	88.00
	ENBTR	SEPt.66	6.3	080-060-095-20 (M. & C. Crinklaw)	260.00	14.00	274.00
	4	SPt.23&24	12.0	080-040-091 (2822632 & 2822612 Ont. Inc.)		56.00	56.00
	5	SPt.20&21	2.4	080-020-190 (Annaert Holdings Inc.)		41.00	41.00
	5	PS½21	1.5	080-020-189 (2740055 Ontario Inc.)		23.00	23.00
	5	N½22	5.6	080-040-085 (Lobban Farms Ltd.)		53.00	53.00
	5	SPt.21&22	19.3	080-020-187 (R. & M. McDougall)		242.00	242.00
*	5	SPt.22	1.14	080-020-188 (City of London)		21.00	21.00
	5	SW¼22	20.0	080-020-186 (JNF Group Inc.)	90.00	288.00	378.00
	5	NEPt.23	11.6	080-040-087 (E. Lobban)		98.00	98.00
	5	NWPt.23	10.1	080-040-088 (J. Lobban)	90.00	95.00	185.00
	5	SEPt.23	20.2	080-020-185 (Elgin Side Farms Ltd.)	750.00	236.00	986.00
	5	SWPt.23	19.4	080-020-184 (Elgin Side Farms Ltd.	470.00	211.00	681.00
	5	NPt.24	18.8	080-040-089 (W. & C. Brown)	930.00	150.00	1,080.00
*	5	SPt.24	1.3	080-020-182 (R. & L. Nyeboer)		18.00	18.00
*	5	SPt.24	0.79	080-020-182-05 (R. Mele)		9.00	9.00
	5	SPt.24	3.9	080-020-183 (T. Thomas)		37.00	37.00
	6	20	20.4	080-020-131-20 (City of London)		479.00	479.00
*	6	Pt.N½21	0.49	080-020-172 (City of London)		8.00	8.00
	6	N½21	40.1	080-020-173(F. Goose)		628.00	628.00
	6	NPt.S½21	9.9	080-020-171-10 (City of London)		155.00	155.00
	6	NPt.S½21	4.4	080-020-171 (City of London)		69.00	69.00
	6	S¼21	0.2	080-020-130 (City of London)		3.00	3.00
	6	NEPt.22	4.5	080-020-176 (City of London)		70.00	70.00
	6	NEPt.22	19.5	080-020-174 (City of London)		305.00	305.00
	6	NWPt.22	1.9	080-020-178-01 (J. Santos)		58.00	58.00
	6	NWPt.22	0.8	080-020-178-02 (G. & E. Sheil)		19.00	19.00
	6	SPt.22&23	0.7	080-020-128 (K. Murphy)		11.00	11.00
	6	NEPt.23	2.7	080-020-180 (Farhi Farming Corp.)		32.00	32.00
	6	NWPt.23	3.3	080-020-181-01 (London Gateway Development Corp.)		36.00	36.00
*	6	NWPt.23	0.31	080-020-181-10 (D. Francis)		7.00	7.00
*	Right-of-Way		14.9	030-280-154 (Hydro One)	370.00	124.00	494.00
				TOTAL ASSESSMENT ON LANDS	$ 3,165.00	$ 3,898.00	$ 7,063.00

SCHEDULE ' B ' - ASSESSMENT FOR MAINTENANCE (cont'd)

C.B. SMITH No. 2 DRAIN REASSESSMENT 2024
City of London

	CON.	LOT	HECTARES AFFECTED	ROLL No. (OWNER)	BENEFIT	OUTLET	TOTAL
MAIN DRAIN (cont'd)							
	Highway 401		8.3	Ministry of Transportation	$	$ 489.00	$ 489.00
	Highway 402		10.7	Ministry of Transportation	435.00	77.00	512.00
	Wonderland Road		8.0	City of London	370.00	234.00	604.00
	White Oak Road		1.4	City of London		82.00	82.00
	Scotland Drive		6.5	City of London		356.00	356.00
	Westminster Drive		2.1	City of London	15.00	31.00	46.00
	Morrison Road		0.3	City of London		18.00	18.00
				TOTAL ASSESSMENT ON ROADS	$ 820.00	$ 1,287.00	$ 2,107.00
	TOTAL ASSESSMENT FOR THE MAINTENANCE ON THE MAIN DRAIN						**$ 9,170.00**
BRANCHES A, B & C							
	Geographic Westminster						
*	ENBTR	EPt.62	2.8	080-060-059 (C. Arroyas & N. Bernardo)	$	$ 31.00	$ 31.00
	ENBTR	SPt.63	4.7	080-060-079 (A & D. Arroyas)		27.00	27.00
	ENBTR	NPt.63	7.6	080-060-081 (London Valley Inc.)	15.00	68.00	83.00
	ENBTR	SPt.64	6.6	080-060-087 (V. White)	10.00	72.00	82.00
	ENBTR	Pt.64&65	3.7	080-060-094 (M. & C. Crinklaw)		37.00	37.00
	5	SEPt.23	4.5	080-020-185 (Elgin Side Farms Ltd.)		49.00	49.00
	5	SWPt.23	16.0	080-020-184 (Elgin Side Farms Ltd.	15.00	155.00	170.00
	5	NPt.24	4.6	080-040-089 (W. & C. Brown)	180.00	40.00	220.00
*	5	SPt.24	1.3	080-020-182 (R. & L. Nyeboer)	50.00	17.00	67.00
*	5	SPt.24	0.79	080-020-182-05 (R. Mele)	5.00	9.00	14.00
	5	SPt.24	3.9	080-020-183 (T. Thomas)	10.00	38.00	48.00
	6	NEPt.23	1.7	080-020-180 (Farhi Farming Corp.)		17.00	17.00
	6	NWPt.23	3.3	080-020-181-01 (London Gateway Development Corp.)		36.00	36.00
*	6	NWPt.23	0.3	080-020-181-10 (D. Francis)		7.00	7.00
*	Right-of-Way		7.2	030-280-154 (Hydro One)	130.00	71.00	201.00
				TOTAL ASSESSMENT ON LANDS	$ 415.00	$ 674.00	$ 1,089.00
	Wonderland Road		3.4	City of London	$ 235.00	$ 149.00	$ 384.00
	Scotland Drive		1.4	City of London		57.00	57.00
				TOTAL ASSESSMENT ON ROADS	$ 235.00	$ 206.00	$ 441.00
	TOTAL ASSESSMENT FOR THE MAINTENANCE ON BRANCHES A, B & C						**$ 1,530.00**
	TOTAL ASSESSMENT FOR THE MAINTENANCE ON THE C.B. SMITH No. 2 DRAIN						**$ 10,700.00**



PLAN SCALE 1:7,500

GENERAL NOTES

1) a) THE MAIN DRAIN FROM STA. 0+000 TO STA. 1+760 AND BRANCH A (MAIN) THE MAIN DRAIN FROM STA. 1+440 TO STA. 1+743 AND BRANCHES B & C (MAIN) AS INDICATED ON THE PLAN INCLUDING IMPROVEMENTS IS TO BE MAINTAINED AS PART OF THE C.B. SMITH NO.2 DRAIN 2024 FOR FUTURE MAINTENANCE PURPOSES.

b) THE ABOVE DRAINS SHALL CONTINUE TO BE MAINTAINED TO THE GRADES AND DIMENSIONS SET OUT ON THE PLANS, PROFILES AND SPECIFICATIONS CONTAINED IN THE 1899 CLARK TILE AND FINE REPORTS.

c) EXISTING FARM CULVERTS WERE NOT CONSTRUCTED AS PART OF THE ABOVE REPORTS AND ARE THEREFORE TO REMAIN PRIVATE AND BE MAINTAINED AT THE OWNERS EXPENSE.

NOTE: ALL STATIONS ARE IN METRIC WITH IMPERIAL SHOWN IN BRACKETS eg.1+000 (3+50)

PLAN LEGEND

C.B.SMITH No.2 DRAIN
REASSESSMENT 2024
City of London

Drainage Superintendent
JESSICA TRELA
519-661-2489 EXT. 5933

No.	REVISIONS	DATE

Drawn By: AS & TB | Field Book | Job No. 223151 | Drawing No. 1 of 1
Date: JUNE 26, 2024

WATERSHED & LOCATION PLAN

SPRIET ASSOCIATES LONDON LIMITED
CONSULTING ENGINEERS

Bill No.
2024

By-law No.

A by-law to provide for Drainage Works in the City of London (Reassessment of the CB. Smith No. 2 Municipal Drain)

WHEREAS the Municipal Council of The Corporation of the City of London appointed Spriet Associates Ltd, pursuant to section 4 of the *Drainage Act*, R.S.O. 1990, c. D.17, to prepare a report on Reassessment of the CB. Smith No. 2 Municipal Drain ;

AND WHEREAS the Municipal Council of the Corporation of the City of London at it's meeting October 22, 2024 adopted the Reassessment report dated June 28, 2024.

NOW THEREFORE the Municipal Council of The Corporation of the City of London enacts as follows:

1. The report dated June 28, 2024 is hereby adopted and the undertaking and completion of the drainage works outlined in the report are hereby authorized.

2. The allowances in connection with this drainage works set out in Schedule "A" of this by-law are hereby approved.

3. The cost estimates for the drainage work set out in Schedule "B" of this by-law are hereby approved.

4. This by-law comes into force and effect on the day it is passed.

PASSED in Open Council on [insert date]

Josh Morgan
Mayor

Michael Schulthess
City Clerk

First Reading – insert date
Second Reading – insert date
Third Reading – insert date

SCHEDULE 'A' - COST ESTIMATE

C.B. SMITH No. 2 DRAIN REASSESSMENT 2024

City of London

We have made an estimate of the cost of the proposed work which is outlined in detail as follows:

ADMINISTRATION

Net Harmonized Sales Tax	$	200.00
Plan, Assessment and Report	$	10,430.00
Expenses	$	70.00
TOTAL ESTIMATED COST	**$**	**10,700.00**

SCHEDULE ' B ' - ASSESSMENT FOR MAINTENANCE

C.B. SMITH No. 2 DRAIN REASSESSMENT 2024

City of London

Job No. 223151 June 28, 2024

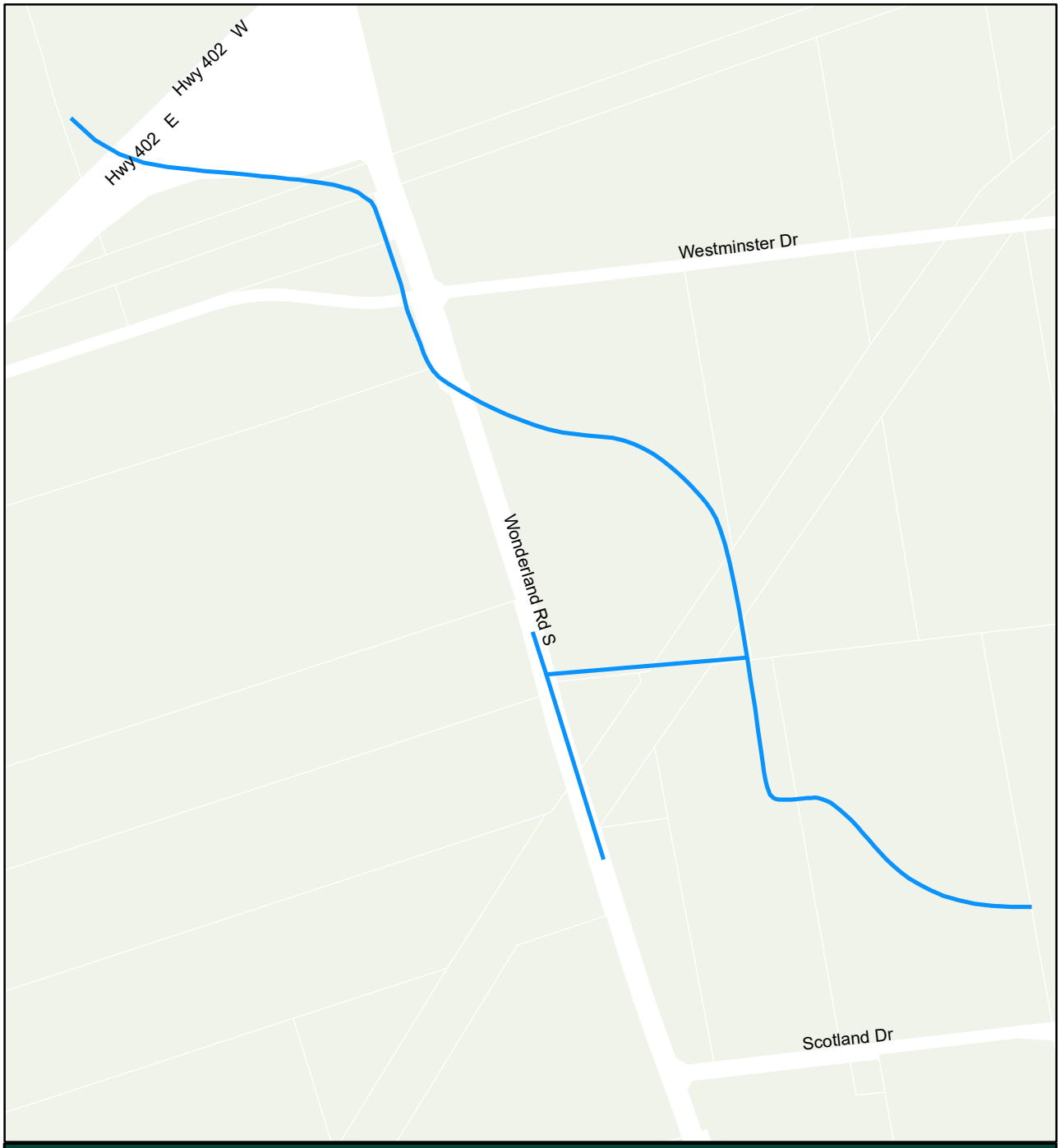
** = Non-agricultural*

	CON.	LOT	HECTARES AFFECTED	ROLL No. (OWNER)	BENEFIT	OUTLET	TOTAL
MAIN DRAIN							
	Geographic Westminster						
*	ENBTR	EPt.62	2.8	080-060-059 (C. Arroyas & N. Bernardo)	$	$ 30.00	$ 30.00
	ENBTR	SPt.63	4.7	080-060-079 (A & D. Arroyas)		27.00	27.00
	ENBTR	NPt.63	7.6	080-060-081 (London Valley Inc.)		67.00	67.00
	ENBTR	SPt.64	6.6	080-060-087 (V. White)		71.00	71.00
	ENBTR	Pt.64&65	9.0	080-060-094 (M. & C. Crinklaw)	20.00	62.00	82.00
	ENBTR	NEPt.65	6.8	080-060-093 (F. & S. Dicola)	110.00	32.00	142.00
	ENBTR	NEPt.65	1.0	080-060-093-10 (City of London)	75.00	13.00	88.00
	ENBTR	SEPt.66	6.3	080-060-095-20 (M. & C. Crinklaw)	260.00	14.00	274.00
	4	SPt.23&24	12.0	080-040-091 (2822632 & 2822612 Ont. Inc.)		56.00	56.00
	5	SPt.20&21	2.4	080-020-190 (Annaert Holdings Inc.)		41.00	41.00
	5	PS½21	1.5	080-020-189 (2740055 Ontario Inc.)		23.00	23.00
	5	N½22	5.6	080-040-085 (Lobban Farms Ltd.)		53.00	53.00
	5	SPt.21&22	19.3	080-020-187 (R. & M. McDougall)		242.00	242.00
*	5	SPt.22	1.14	080-020-188 (City of London)		21.00	21.00
	5	SW¼22	20.0	080-020-186 (JNF Group Inc.)	90.00	288.00	378.00
	5	NEPt.23	11.6	080-040-087 (E. Lobban)		98.00	98.00
	5	NWPt.23	10.1	080-040-088 (J. Lobban)	90.00	95.00	185.00
	5	SEPt.23	20.2	080-020-185 (Elgin Side Farms Ltd.)	750.00	236.00	986.00
	5	SWPt.23	19.4	080-020-184 (Elgin Side Farms Ltd.	470.00	211.00	681.00
	5	NPt.24	18.8	080-040-089 (W. & C. Brown)	930.00	150.00	1,080.00
*	5	SPt.24	1.3	080-020-182 (R. & L. Nyeboer)		18.00	18.00
*	5	SPt.24	0.79	080-020-182-05 (R. Mele)		9.00	9.00
	5	SPt.24	3.9	080-020-183 (T. Thomas)		37.00	37.00
	6	20	20.4	080-020-131-20 (City of London)		479.00	479.00
*	6	Pt.N½21	0.49	080-020-172 (City of London)		8.00	8.00
	6	N½21	40.1	080-020-173(F. Goose)		628.00	628.00
	6	NPt.S½21	9.9	080-020-171-10 (City of London)		155.00	155.00
	6	NPt.S½21	4.4	080-020-171 (City of London)		69.00	69.00
	6	S¼21	0.2	080-020-130 (City of London)		3.00	3.00
	6	NEPt.22	4.5	080-020-176 (City of London)		70.00	70.00
	6	NEPt.22	19.5	080-020-174 (City of London)		305.00	305.00
	6	NWPt.22	1.9	080-020-178-01 (J. Santos)		58.00	58.00
	6	NWPt.22	0.8	080-020-178-02 (G. & E. Sheil)		19.00	19.00
	6	SPt.22&23	0.7	080-020-128 (K. Murphy)		11.00	11.00
	6	NEPt.23	2.7	080-020-180 (Farhi Farming Corp.)		32.00	32.00
	6	NWPt.23	3.3	080-020-181-01 (London Gateway Development Corp.)		36.00	36.00
*	6	NWPt.23	0.31	080-020-181-10 (D. Francis)		7.00	7.00
*	Right-of-Way		14.9	030-280-154 (Hydro One)	370.00	124.00	494.00
				TOTAL ASSESSMENT ON LANDS	$ 3,165.00	$ 3,898.00	$ 7,063.00

SCHEDULE ' B ' - ASSESSMENT FOR MAINTENANCE (cont'd)

C.B. SMITH No. 2 DRAIN REASSESSMENT 2024
City of London

	CON.	LOT	HECTARES AFFECTED	ROLL No. (OWNER)	BENEFIT	OUTLET	TOTAL
MAIN DRAIN (cont'd)							
	Highway 401		8.3	Ministry of Transportation	$	$ 489.00	$ 489.00
	Highway 402		10.7	Ministry of Transportation	435.00	77.00	512.00
	Wonderland Road		8.0	City of London	370.00	234.00	604.00
	White Oak Road		1.4	City of London		82.00	82.00
	Scotland Drive		6.5	City of London		356.00	356.00
	Westminster Drive		2.1	City of London	15.00	31.00	46.00
	Morrison Road		0.3	City of London		18.00	18.00
				TOTAL ASSESSMENT ON ROADS	$ 820.00	$ 1,287.00	$ 2,107.00
				TOTAL ASSESSMENT FOR THE MAINTENANCE ON THE MAIN DRAIN			**$ 9,170.00**
BRANCHES A, B & C							
	Geographic Westminster						
*	ENBTR	EPt.62	2.8	080-060-059 (C. Arroyas & N. Bernardo)	$	$ 31.00	$ 31.00
	ENBTR	SPt.63	4.7	080-060-079 (A & D. Arroyas)		27.00	27.00
	ENBTR	NPt.63	7.6	080-060-081 (London Valley Inc.)	15.00	68.00	83.00
	ENBTR	SPt.64	6.6	080-060-087 (V. White)	10.00	72.00	82.00
	ENBTR	Pt.64&65	3.7	080-060-094 (M. & C. Crinklaw)		37.00	37.00
	5	SEPt.23	4.5	080-020-185 (Elgin Side Farms Ltd.)		49.00	49.00
	5	SWPt.23	16.0	080-020-184 (Elgin Side Farms Ltd.	15.00	155.00	170.00
	5	NPt.24	4.6	080-040-089 (W. & C. Brown)	180.00	40.00	220.00
*	5	SPt.24	1.3	080-020-182 (R. & L. Nyeboer)	50.00	17.00	67.00
*	5	SPt.24	0.79	080-020-182-05 (R. Mele)	5.00	9.00	14.00
	5	SPt.24	3.9	080-020-183 (T. Thomas)	10.00	38.00	48.00
	6	NEPt.23	1.7	080-020-180 (Farhi Farming Corp.)		17.00	17.00
	6	NWPt.23	3.3	080-020-181-01 (London Gateway Development Corp.)		36.00	36.00
*	6	NWPt.23	0.3	080-020-181-10 (D. Francis)		7.00	7.00
*	Right-of-Way		7.2	030-280-154 (Hydro One)	130.00	71.00	201.00
				TOTAL ASSESSMENT ON LANDS	$ 415.00	$ 674.00	$ 1,089.00
	Wonderland Road		3.4	City of London	$ 235.00	$ 149.00	$ 384.00
	Scotland Drive		1.4	City of London		57.00	57.00
				TOTAL ASSESSMENT ON ROADS	$ 235.00	$ 206.00	$ 441.00
				TOTAL ASSESSMENT FOR THE MAINTENANCE ON BRANCHES A, B & C			**$ 1,530.00**
				TOTAL ASSESSMENT FOR THE MAINTENANCE ON THE C.B. SMITH No. 2 DRAIN			**$ 10,700.00**



Appendix C Location Map - CB Smith No. 2 Drain

Legend

CB Smith No. 2 Drain

Parcels

City of London Limits

N

0 0.075 0.15 0.3 0.45 0.6 Kilometers

Map Produced by PB Stormwater Engineering
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London CANADA