

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON OCTOBER 4, 2016
FROM:	JOHN BRAAM, P. ENG. MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER
SUBJECT:	INFRASTRUCTURE CANADA PHASE 1 PROJECT REQUESTS CLEAN WATER AND WASTEWATER FUND

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, with concurrence of the Managing Director, Corporate Services and City Treasurer, Chief Financial Officer, the following actions **BE TAKEN** with respect to the Clean Water and Wastewater Infrastructure Fund:

- (a) the list of projects set out in this report **BE SUPPORTED** for funding application to Phase 1 of the Infrastructure Canada Clean Water and Wastewater Infrastructure Fund, it being noted that not all of the work will be applied for;
- (b) the Civic Administration **BE DIRECTED** to take all necessary steps to submit the City of London's application for funding in advance of the program deadline;
- (c) the Civic Administration **BE DIRECTED** to report back on staff resourcing and a management structure to deliver an enhanced capital program; and,
- (d) The Federal and Provincial Governments **BE REQUESTED** to direct any remaining Phase 1 funding from the City's allocation to Phase 2 of the Clean Water and Wastewater Infrastructure program.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

Corporate Services Committee - December 10, 2013 - State of the Infrastructure Report 2013.

Corporate Services Committee - August 26, 2014 - Corporate Asset Management Plan 2014.

Corporate Services Committee – December 1, 2015 - Corporate Asset Management Plan 2015 Review.

2015-19 STRATEGIC PLAN

The following report supports the Strategic Plan through a focus on *Building a Sustainable City* by addressing and managing our infrastructure gap, managing and improving services, and funding Climate Change adaptation.

BACKGROUND

Purpose

The purpose of this report is to seek City Council's support for projects to be submitted for funding the new Governments of Canada and Ontario Clean Water and Wastewater Fund (CWWF). Applications under this fund require support from City Council in advance of the application deadline.

Background

In Budget 2016, the Federal Government announced the implementation of a plan to invest more than \$120 billion in infrastructure over 10 years, including \$60 billion in new funding for public transit, green infrastructure, and social infrastructure, to better meet the needs of Canadians and better position Canada's economy for the future. Included is water and wastewater infrastructure funding that will be delivered via the provinces and territories.

The 10 year program has two phases. Phase 1, from 2016 - 18 (2 years - \$2 billion) is intended to address the state of repair of infrastructure. Phase 2, from 2018 – 26 (8 years - \$15 billion) is to make transformative investments in areas of interest to the Federal Government. Expected are measureable results in modernizing and renewing public infrastructure, supporting economic growth and providing environmental benefits. Generally speaking, these align with London's Strategic Plan and are considered compatible.

Clean Water and Wastewater Infrastructure Fund

The recently announced new funding envelope for the Clean Water Wastewater Fund is a \$2 billion Government of Canada investment to meet immediate priorities for clean water and wastewater to support a cleaner and healthier environment for communities. CWWF will focus on investing in projects that:

- Rehabilitate and optimize water, storm water and wastewater related infrastructure;
- Improve asset management approaches including pilots and studies;
- Plan for future upgrades to wastewater treatment and collection infrastructure; and,
- Include new construction projects like naturalized systems.

The federal cost sharing is 50%; this is higher than previous funding programs. The Province and City will equally share the remaining 50%. Eligible costs can be incurred as early as April 1, 2016.

The CWWF allocation for Ontario is \$569,642,000. This includes a \$50 million base fund plus a per capita share. London's Phase 1 program allocation results in a \$40M program, with \$20M from the Federal Government, \$10M from the Provincial Government and \$10M from the City.

Examples of Eligible Projects

- Rehabilitation of water treatment and distribution systems;
- Rehabilitation of wastewater and storm water collection;
- Separation of existing combined sewers and/or combined sewer overflow control;
- Optimization and improved asset management, including studies and pilot projects related to innovative and transformative technologies;

- Design and planning for upgrades to wastewater treatment infrastructure to meet applicable regulatory requirements; and,
- Construction of naturalized systems for management and treatment of wastewater and storm water.

Recommended Projects

Projects that promote innovation, optimization, and rehabilitation of existing assets are encouraged. A listing of recommended projects to consider for funding application under the Clean Water and Wastewater Fund – Phase 1 are identified in Appendix A, and are below:

Project	Total Cost
Dingman Creek Subwatershed Green Stormwater Infrastructure Program – Preliminary Design	\$200,000
Reclamation and Naturalization of Existing Urban Watercourses – Rehabilitation Plan Preparation	\$200,000
Applegate Stormwater Management Facility Retrofit -- Construction	\$446,000
Waste Heat Recovery Systems at Greenway PCP – Equipment Purchase and Design	\$5,500,000
East London -- Sanitary Servicing Study	\$350,000
Wastewater Treatment Plants -- Improvement Studies	\$130,000
Treatment Plant Energy Reduction With Turbo Blowers – Supply and Install	\$4,200,000
Vauxhall PCP Climate Change Resiliency – Design and Construction	\$3,000,000
Treatment Plants Odour Control Upgrades – Design and Construction	\$3,500,000
Sewage Treatment Plant and Water System Technology Upgrades (SCADA and Security) – Design and Construction	\$2,500,000
Sanitary Pump Stations Variable Frequency Drives – Equipment Purchase and Install	Up to \$1,300,000
Solids & Floatables Management at Pumping Stations and Treatment Plants -- Equipment Purchase and Install	Up to \$2,000,000
Source Water Protection at Brownfield Sites -- Policy and Standards Development	\$100,000
Reservoir Replacement and Capacity Expansion – Environmental Assessment	\$500,000
Arva Water Pumping Station Optimization & Energy Efficiency – Planning Study	\$250,000

Arva – Huron Pipeline -- Environmental Assessment and Preliminary Design	\$150,000
Trunk Watermains, Syphons and Pipeline – Inspections and Condition Rating	Up to \$2,000,000
Mornington Area Storm Drainage Servicing -- Environmental Assessment	\$400,000
Hyde Park Road Trunk Watermain Cathodic Protection Upgrades – Design and Construction	\$290,000
Watermain Cleaning and Relining – Additional Work at Honeysuckle Crescent – Design and Construction	\$500,000
2017 Watermain Cleaning and Relining – Additional Work to Reline 400 mm and 450 mm Cast Iron and Ductile Iron Watermain – Design and Construction	Up to \$6,700,000
Cathodic Protection Program – Inspection, Design and Construction	\$500,000
Infrastructure Renewal Program Acceleration	Up to \$14,500,000
Sewer Separation Program Acceleration	Up to \$17,300,000
Sewer Relining Program Acceleration -- Design and Construction	Up to \$3,000,000
Springbank Reservoirs No. 1 & 3 Protective Membrane Condition Assessment	\$100,000

The total project costs are estimated at up to \$69,616,000.

Given the March, 2018 Phase 1 program deadline, most of the expenditures are expected within 2017. Projects recommended reflect:

- Schedule A Class Environment Assessment work (eg. pipe rehabilitation);
- Bundling of work by common attributes to maximize expenditure flexibility;
- Programs that can have a range of scope to fill the allocation;
- Acceleration of programs in the 10 year budget window; and,
- Initiation of Class Environmental Assessment or design for new and accelerated projects that will be proposed for funding in Phase 2.

The initiation of preparatory work for Phase 2 of the program is important because the Federal Government investment will increase from \$1 billion per year to almost \$2 billion per year, and will extend over an 8 year period (2018-26).

The list of projects that Council is being asked to support exceeds the allocation of \$40M. Staff will further evaluate the technical and timing criteria of the funding program to create a shorter list of projects to make application for that:

- Meet the criteria the best to maximize approval likelihood;
- Have the least scheduling risks to maximize claims;
- Recognize multiple benefits, such as operating cost reduction;
- Prepares the City for Phase 2 of the program; and
- Completely fills the London allocation.

The project list to be applied for will vary from the Council supported long list, including cost and scope, depending on the details of the funding program and the staff evaluation of it. Timing is critical; the application deadline is the end of October, but sooner would help with the approval response time, presently noted as January, 2017.

In the event that not all projects applied for are approved, and therefore the allocation not met, staff recommend that protection of the London Phase 1 allotment be extended into Phase 2. This is the basis for recommendation (d) of this report.

Project Resources

Phase 1 is the beginning of an unprecedented 10 year multi-level government infrastructure program. All work is to be incremental to previous capital spending plans, meaning more and accelerated spending. The existing capital program for Water / Wastewater during the 10 year program is over \$1 billion. The Phase 1 program of \$40 million for London represents a 20% increase in Water / Wastewater capital spending over two years. With the Phase 2 Federal annual program commitment being double of Phase 1, existing staff in the Finance and Engineering Departments will be overwhelmed with a potential 40% capital program increase during the 10 year program period (2016 - 26).

Meeting time lines and the volume of work will require additional staff time that is not possible with available resources. Civic Administration will be evaluating the program commitments and considering delivery models to make resource and structure recommendations in a future report. Past responses to significant infrastructure programs have included additional staff, secondments and dedicated teams.

Project Delivery Mechanisms and Approvals

When faced with accelerated spending programs in the past, the City has adopted alternative purchasing practices to speed up work delivery in order to meet funding expenditure deadlines. Examples: large change orders that add work to existing contracts; allowing higher values of contracts that can be approved by Civic Administration; and, higher values for direct purchasing. Council can expect similar recommendations as part of individual project delivery plans.

Next Steps

Civic Administration will work with the province to review the program criteria and complete the application forms, letters of support, and budgets for the projects identified above in order to meet the deadline date and the requirements laid out by the Province. Subsequently, staff will seek City Council approval of a Contribution Agreement for successful City of London applications, including how the City share of costs can be funded.

Civic Administration will consider the level of effort to deliver an enhanced capital program over an extended period of time and recommend a management approach and structure within a future report.

A number of projects may be initiated before application approvals are in place. This would include consultant retention.

CONCLUSION

This report recommends that the City of London submit an application to the Phase 1 Clean Water and Wastewater Fund, requesting investment support for projects that meet the program criteria and are consistent with London's strategic focus area of *Building a Sustainable City*.

Part of the Phase 1 work will lay foundations for Phase 2 of the program to start in two years. Phase 2 investment is higher and is to be sustained over an unprecedented length of time.

The annual capital program value for Water and Wastewater in London over the 10 year life of the Federal funding program will increase substantially through to 2026. A resource plan to deliver the program is necessary and will be the subject of a future report.

SUBMITTED BY:	
JOHN LUCAS DIRECTOR, WATER AND WASTEWATER	
REVIEWED & CONCURRED BY:	RECOMMENDED BY:
MARTIN HAYWARD MANAGING DIRECTOR, CORPORATE SERVICES AND CITY TREASURER, CHIEF FINANCIAL OFFICER	JOHN BRAAM, P.ENG. MANAGING DIRECTOR OF ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER