Subject: Extraneous Flow Reduction Program

Date of Meeting: May 11, 2004

From: J. Keech, President and C.E.O., Utilities Kingston

Prepared By: J. Miller, Manager, Utilities Technical Services, Utilities Kingston

RECOMMENDATION

That Council for the City of Kingston endorses the general principles outlined in the Extraneous Flow Reduction Program dated May 04, 2004; and,

That Utilities Kingston provides a yearly status reports on progress and activities related to the program.

ORIGIN/PURPOSE

At the City of Kingston Council meeting of February 17, 2004, Council approved the following motion:

Whereas the combined sewer bypass events after periods of heavy rainfall is an area of public and environmental concern;

Therefore be it resolved that Utilities Kingston report to Kingston City Council as to the extent that the system is impacted by extra flows from sources including, but not limited to rain leaders, sump pumps, foundation drains, ground water remediation projects and area drains that are connected to the sewer system as related to combined sewer by-pass events; and further,

That Utilities Kingston report back to Kingston City Council with a comprehensive Infiltration and Inflow Program and Timetable for implementation by April 30, 2004

In response to Council's direction attached to this report is the Extraneous Flow Reduction Program document.
OPTIONS/DISCUSSION

The work completed to date indicates that our waste water infrastructure is susceptible to extraneous flows particularly in the central City area where combined sewers are prevalent. During dry and moderate wet weather conditions complete collection and treatment of effluent occurs. However there is a strong correlation between prolonged or heavy precipitation and bypass events. As noted in the report the sources of extraneous flows are varied and include rain leaders, sump pumps, old pipes, and the existing conditions which direct rain fall, run off and ground water directly into the sanitary sewers. This latter situation which directs storm water from roads and roof tops to the sanitary sewers is perhaps the most significant source of extraneous flows.

The Program outlines a number of activities to be undertaken over the next five years which in summary are:

- Complete a gap analysis of existing policy,
- Implement a public education and consultation plan,
- Quantify the current extraneous flow,
- Evaluate the social, environmental and financial impacts of the current extraneous flows,
- Prioritize areas within the sanitary sewer service area with respect to the greatest value for impact reduction,
- Identify private participation initiatives which will benefit the program,
- Clearly identify extraneous flow sources in priority areas,
- Remediate those sources which can be demonstrated to contribute flow which results in significant impacts,
- Recommend policy amendments, municipal design guides and other initiatives to maintain or enhance the program in the future.

In recent years the City of Kingston has committed substantial funds directed at managing its sanitary infrastructure. The results of that investment has been a clean up of the water front, greater public use of the beach areas and fewer by-pass events. This activity continues the practice of managing the impact that extraneous flow has on the environment. We now need to refocus on the substantial causes of those extraneous flows. This program provides the framework to begin that process which is a long term commitment to environmentally sustainable infrastructure.

The infrastructure replacement program identified in the first Pollution Control Plan (PCP) dates back to the late 1980's and the final recommended improvements will be completed in 2005-2006. The extraneous flow program is just beginning. The actions, solutions, and capital construction and replacement needed to accomplish substantive reductions in extraneous flows are likely to be just as difficult to attain as were the recommended actions of the PCP report. The enclosed report represents a five year program of activity, which to be successful will require new policies, fresh approaches to
old problems and sustained commitment over the long term by stakeholders including residents, businesses, the City of Kingston and Utilities Kingston.

FINANCIAL CONSIDERATIONS

The current year budget contains sufficient budget allocation to carry the program to year end. As the program and recommendations develop we see future capital and operating budget proposals being driven from this activity area.

DEPARTMENTS/OTHERS CONSULTED AND AFFECTED

- Speros Kanellos, Manager Engineering Services
- Paul MacLatchy, Manager Environmental Services

APPENDICES

- City of Kingston EXTRANEOUS FLOW REDUCTION PROGRAM

J.A. Keech
President and C.E.O.
Utilities Kingston

Bert Meunier
Chief Administrative Officer