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<b>TO:</b>	<b>CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON APRIL 2, 2012</b>
<b>FROM:</b>	<b>JOHN BRAAM, P.Eng. ACTING EXECUTIVE DIRECTOR PLANNING, ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER</b>
<b>SUBJECT</b>	<b>SINGLE SOURCE PURCHASE AND INSTALLATION OF RIVER LEVEL MONITORING GAUGES</b>

<b>RECOMMENDATION</b>
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That, on the recommendation of the Acting Executive Director, Planning Environmental and Engineering Services Department and City Engineer, the following actions **BE TAKEN** with respect to the purchase and installation of river level monitoring gauges (ES2497):

- (a) That approval hereby **BE GIVEN** to enter into negotiations with the Upper Thames River Conservation Authority for the purchase and installation of additional river level gauges;
- (b) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this contract or purchase;
- (c) The approval hereby **BE GIVEN** conditional upon the Corporation entering into formal contracts or issuing purchase orders relating to these matters.

<b>PREVIOUS REPORTS PERTINENT TO THIS MATTER</b>
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None.

<b>BACKGROUND</b>
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**Purpose:**

The addition of up to three river level gauges will enhance flood forecasting information and improve public safety.

**Context:**

It is common knowledge that the Thames River Watershed has been subject to serious flooding in the past. The Upper Thames River Conservation Authority (UTRCA) has undertaken a major program of flood control through the construction of large water management structures upstream of London, namely Fanshawe, Wildwood and Pittock Dams.

The UTRCA also monitors stream flow and meteorological conditions within the UTRCA watershed on a continual basis. The information is collected at several remote river and creek sites, and collated at the UTRCA's Administration Centre in London. Data are usually posted to the web site early each morning during low flow periods, and more frequently during times of flooding.

This river level data is then used by the city's Municipal Flood Coordinator to predict flooding levels and to initiate certain actions in the city's Flood Plan, such as road closures and evacuations.

**Discussion:**

The addition of three river level gauges is being proposed at these following locations.

1. Pottersburg Creek - As a result of recent climate change studies conducted for the City of London the area of Pottersburg Creek, north of the CNR culvert, was identified as a high risk location for potential flooding. The CNR culvert essentially acts as a dam in high flow conditions.  
There are currently no river level gauges on Pottersburg Creek.

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2. Dingman Creek – The creek passes underneath Highbury Avenue just north of Dingman Drive. This bridge acts as a flow constriction for Dingman Creek and in a number of previous flooding events Dingman Drive has been closed just east of this intersection due to water over topping Dingman Drive. Currently, there is one river level gauge on Dingman Creek but it is located in Lambeth and therefore does not provide information of river levels in this area.
  
3. The Coves – The Coves Mobile Home Park is an area that is at a higher than average risk of flooding and evacuation. There is currently no river level gauge in this area.

The UTRCA operates, maintains and posts the data from their existing network of river level gauges across the entire watershed including the upstream river locations near Stratford and Woodstock to the downstream sites near London. They implement their system in order to provide flood warnings (being watershed conditions statements, flood watch and flood warnings) for the entire watershed.

However within London, more precise and site specific river flow monitoring is required based on existing municipal flood response needs and anticipated events related to changes to our climate. As the UTRCA has the expertise and knowledge concerning these gauges, it is financially and operationally appropriate to negotiate with UTRCA for the installation of these proposed gauges and have them incorporated into their existing network.

Funds for this project were approved in the 2012 Wastewater and Treatment Capital Budget (pg. 48) as ES2497 – Flood Control and Protection - \$115,000.

<b>SUBMITTED BY:</b>	<b>RECOMMENDED BY:</b>
<b>TOM COPELAND, P. Eng.</b> <b>DIVISION MANAGER</b> <b>WASTEWATER AND DRAINAGE</b> <b>ENGINEERING</b>	<b>JOHN BRAAM, P.ENG.</b> <b>ACTING EXECUTIVE DIRECTOR</b> <b>PLANNING, ENVIRONMENTAL AND</b> <b>ENGINEERING SERVICES AND</b> <b>CITY ENGINEER</b>

cc: Berta Krichker, Manager SWM Unit  
 Pat Donnelly, Urban Watershed Program Manager