



MEDIA ADVISORY

THE LAKE HURON PRIMARY WATER SUPPLY SYSTEM JOINT BOARD OF MANAGEMENT

February 13, 2017

Planned Transmission Pipeline Repair

The Lake Huron Primary Water Supply System is undertaking a critical repair of the transmission pipeline in the Denfield area. In order to limit the impact to the area municipalities and consumers, the repair is planned for **Wednesday February 15th**.

The quality of the water supplied to area municipalities and consumers is not affected and most consumers should not experience any change from their normal water supply.

Municipalities supplied by the Lake Huron Primary Water Supply System include Bluewater, South Huron, Lambton Shores, Lucan Biddulph, North Middlesex, Middlesex Centre, Strathroy Caradoc and the City of London.

Damaged Pipe Detected

The new Acoustic Fibre Optic Monitoring System detected a pipe in an un-twinned section of the LHPWSS transmission main near Denfield is damaged beyond acceptable tolerances and has been identified for a priority replacement. The replacement of the damaged pipe will be undertaken on Wednesday February 15th starting at 2:00am. Although the replacement of the pipe is anticipated to take approximately 20 hours to complete, it will take up to another 24 hours for the water supply system to refill depleted reservoirs throughout the region before operations return to a more normal operating condition.

The supply of treated drinking water to the City of London from the Elgin Area Primary Water Supply System will be increased, however the majority of the water supplied to the consumers by the Lake Huron Primary Water Supply System will be provided from storage reservoirs while the pipe repairs are being undertaken. Some communities in the region may experience lower than normal water pressures, including Ailsa Craig. Consumers are encouraged to contact their local municipality if they experience discoloured water or have no water.

Additional information about the regional water supply system is available at www.watersupply.london.ca and you can now follow us on Facebook! (www.facebook.com/RegionalWaterSupply)

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Contact: Andrew J. Henry, P.Eng.
Division Manager, Regional Water Supply
Lake Huron and Elgin Area Primary Water Supply Systems
519.930.3505 ext.1355



BACKGROUND INFORMATION

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Condition Assessment

In 2012, the Lake Huron Primary Water Supply System (LHPWSS) completed a \$1.5 million condition assessment of the high pressure reinforced concrete pipe between the water treatment plant located in the Municipality of South Huron near Grand Bend, and the terminal reservoir in the Municipality of Middlesex Centre near the village of Arva. The condition assessment utilized the Smart Ball® leak detection and the Pipe Diver® electro-magnetic inspection technologies by Pure Technologies Ltd.

Until recently, electro-magnetic inspection of reinforced concrete pressure pipe required the complete isolation and draining of the transmission pipeline for extended periods of time to allow the equipment to be “driven” through the length of the pipeline. In the case of the Lake Huron Primary Water Supply System, this would not be feasible as several segments cannot be fully drained nor can the supply of water to the area municipalities be interrupted for extended periods of time (weeks or months). The Pipe Diver® inspection equipment is relatively new technology, and can be deployed within the pipeline while in operation and supplying water to the area municipalities. This allows for a complete and comprehensive assessment of the pipeline with limited impacts to area municipalities and the consumers.

Subsequently, in 2015 an Acoustic Fibre Optic Monitoring System was installed in the reinforced concrete pressure pipe to continuously monitor the condition and degradation of the concrete portion of the transmission system. Although the majority of the 1200mm (48 inch) transmission pipeline constructed in the 1960’s was found to be in excellent condition, the regional water system determined that a pipe in an un-twinning section of the LHPWSS transmission main in the Denfield area is in poor condition and the risk of failure of this pipe has increased. On this basis, the LHPWSS made plans for the proactive replacement of this pipe section.

Pipe Repair

The pipe segment will be replaced starting on Wednesday February 15th. It is anticipated that the complete replacement of the two pipe segments will take approximately 20 hours to complete at a total estimated cost of \$300,000.

During the replacement of the two pipe segments, area municipalities will be relying on water which is stored in reservoirs throughout the various water distribution systems. Typically low consumption during the month of February should ensure that most consumers would not be adversely impacted by the repair operation; however some communities in the region may experience lower than normal water pressure, particularly in the Ailsa Craig area.

Following the completion of the pipe replacement, it could take up to an additional 24 hours to replenish all area reservoirs and return to normal operation.

The Numbers

Lake Huron Water Treatment Plant:

- Originally constructed in 1967
- Utilizes “conventional treatment” processes consisting of chemically assisted sedimentation and dual-media filtration
- Current rated capacity = 340 million litres per day (3,935 litres per second)
- Current average day supply = 135 million litres per day (1,563 litres per second)
- Current peak day supply = 239 million litres per day (2,766 litres per second)
- Consumes approximately \$5 million in electricity per year in treating and pumping drinking water to area municipalities

Lake Huron Transmission Pipeline:

- 47 kilometres of 1200mm (48 inch) diameter reinforced concrete pressure pipe constructed in 1967:
 - 9,729 pipes
 - 56 pipes found to be mildly distressed but within acceptable standards
- 21 kilometres of 1200mm diameter “twinned” in 1996 in high pressure “failure prone areas”:
 - 7 kilometres of steel pipe
 - Two sections of 7 kilometers each using reinforced concrete pressure pipe
- 8 kilometres of 1200mm diameter “twinned” in 2014 in high pressure “failure prone areas”:
 - Two sections of 4 kilometers each of steel pipe
- Treated drinking water takes approximately 12 hours (on average) to travel from the water treatment plant to the terminal reservoir near Arva
- Currently supplies eight municipalities in southwestern Ontario; Bluewater, South Huron, Lambton Shores, Lucan Biddulph, North Middlesex, Middlesex Centre, Strathroy Caradoc and the City of London.

Additional Reference Information:

Lake Huron Primary Water Supply: www.watersupply.london.ca

Facebook: www.facebook.com/RegionalWaterSupply

Pure Technologies: <http://www.puretechltd.com>