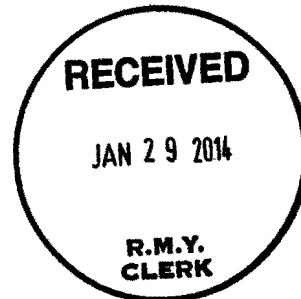




January 29, 2014

Region of York
Denis Kelly Regional Clerk
17250 Yonge Street
Newmarket, Ontario
L3Y 6Z1



Re: Decommissioning of the 8th Line (Hambly) Well and Source Water Protection Update

Please note, at its Regular Council meeting dated on December 17, 2013. Council adopted committee recommendation COW 2013-33 by resolution number 2013-391.

COW-2013-133 Crane/White

That report ENG 2013 37 dated December 3rd 2013 be received; and
That, in accordance with the provisions of section 14(2) of O. Reg. 287/07 of the Clean Water Act (2006), the Town discontinue the use of the municipal well known as the 8th Line (Hambly) Well, by December 17, 2018; and
That an application be submitted under the Ontario Water Resources Act for the cancellation of permits applicable to the above-referenced well; and
That Council requests the Regional Municipality of York to provide Risk Management services for the entire Church Well Head Protection Area (WHPA), including the portion within the Town of Bradford West Gwillimbury.

CARRIED

A copy of the report is attached for your information. We would kindly ask for the Council of the Region of York to consider the same resolution and to pass a similar resolution if they are agreeable to the terms and information set out in the report.

If you have further questions or concerns, please contact Samantha Gergen, Manager of Compliance at (905) 778-2055.

Regards,

Michelle Brandt
Deputy Clerk

cc: Don Goodyear
cc: Samantha Gergen

MB/jb



A Growing Tradition

Report of Engineering Services

REPORT #: ENG 2013 37
DATE: 03 Dec 2013
TO: Deputy Mayor and Members of Committee of the Whole
SUBJECT: Decommissioning of the 8th Line (Hambly) Well and Source Water Protection Update
PREPARED BY: Samantha Gergen, Manager of Compliance
Ed O'Donnell, Manager of Water

1. RECOMMENDATIONS:

That report ENG 2013 37 dated December 3rd 2013 be received; and

That, in accordance with the provisions of section 14(2) of O. Reg. 287/07 of the Clean Water Act (2006), the Town discontinue the use of the municipal well known as the 8th Line (Hambly) Well, by December 17, 2018; and

That an application be submitted under the Ontario Water Resources Act for the cancellation of permits applicable to the above-referenced well; and

That Council requests the Regional Municipality of York to provide Risk Management services for the entire Church Well Head Protection Area (WHPA), including the portion within the Town of Bradford West Gwillimbury.

2. PREAMBLE:

On September 3rd 2013, Council was provided a report presented jointly by the Planning and Development and Engineering Services departments titled "South Georgian Bay – Lake Simcoe Protection Plan: Recommended Implementation Strategy". Within that report, staff recommended to discontinue the use of the municipal wells known as the Simcoe, Bingham, Soda Pop, Doane and 8th Line (Hambly) wells. Council endorsed this recommendation with the amendment of staff preparing a supplementary report on keeping the 8th Line (Hambly) well as an asset to the Town's drinking water system.

This report fulfills Council's request and also provides an update on the Town's Source Water Protection implementation strategy.

3. BASIC DATA PERTAINING TO THE MATTER:

The 8th Line (Hambly) well, hereafter referred to as the Hambly well, was constructed in 1996 and is found within the Bradford Aquifer. The well is equipped with a submersible pump rated at 18.9 L/second. In late fall of 2008, the Hambly well was discontinued as a production source to supply the Town and deemed offline. The reasoning behind this is due to the quality of the production water further discussed below.

Water Quality

A major concern of the water quality from the Hambly Well is the formation of a disinfection by-product called Trihalomethane (THM). THM's are a Class B carcinogen, meaning they have been known to cause cancer in laboratory animals.

THM's produced at the Hambly Well are higher than the recommended guidelines set out by the Ministry of the Environment (MOE) due to the elevated organic compounds found in the raw water.

Organic water samples taken from the Hambly Well and Church Wells on July 28th, 2008 are indicated below.

Church Well Raw – Carbon, dissolved
organic
1.2 mg/l

Hambly Well Raw - Carbon, dissolved
organic
4.8 mg/l

In order to produce water containing lower levels of THM's at the Hambly Well, some form of pre-treatment of the raw water would be required to remove the THM producing precursors, such as a granular activated carbon filter system, or a chemical treatment system with sedimentation and coagulation basins.

A supplier has provided a quote of \$416,000 to install a carbon activated treatment system. Due to the limited footprint of the Hambly Well, this would be the only system that would be compatible.

Any type of treatment produces a liquid waste that must be disposed of; therefore a sewer force main and associated pumps may have to be installed to remove the waste off site.

Operational Impacts

There are considerable operational and financial motives to decommission the Hambly well. If the well is kept as an asset to the DWS, expenditures would be required to bring the well back on-line. This includes:

- Roof repairs - \$2500
- Remove Well pump and motor, refurbish and reinstall - \$30,000

- Remove High lift pump motor, refurbish and reinstall - \$10,000
- Replace roof shingles - \$2,500
- Upgrade SCADA components to match existing system - \$5,000

Considerations Regarding Source Water Protection

As mandated under the Clean Water Act, 2006, the Town will be responsible for implementing a new program as set out in the Source Protection Plan (SPP). This includes implementing policies for associated threats in regards to the well head protection areas (WHPA).

At this time, there are no significant threats associated with the Hambly well. However, this does not exclude the Town's responsibility for future threat policies that would need to be implemented as new threat activities are proposed as well as ongoing monitoring of existing land parcels within the WHPA. If policies were to apply, a Risk Management Official (RMO)/Risk Management Inspector (RMI) will need to enforce those policies.

As noted earlier, Council approved the decommissioning of wells known as Simcoe, Bingham, Soda pop and Doane. If Council approves the decommissioning of the Hambly Well, the Town will be exempt from the SPP requirements as there will be no municipal wells within the Town's boundary. If Council decides to keep the well, the SPP requirements would apply and this would require the Town to set up a RMO office and program immediately upon approval of the SPP. It is speculated that approval of the SPP is to take place sometime this year.

Considering the water quality in addition to the expenditure required to reactivate the well and the additional requirements under the Source Protection Plan, staff recommend the best option is to decommission the well permanently along with the other inactive wells.

Church Wells Update

The wellhead protection area (WHPA) for the Church Wells is primarily located within King Township, with a small portion in BWG and a small portion in the Town of East Gwillimbury. Under the Clean Water Act, 2006, York Region is currently responsible for implementation of relevant policies for a large portion of the WHPA. The small portion found within the BWG boundary, as seen in Attachment A identified as the subject area, is the responsibility of the Town unless that responsibility is shared or transferred through a Council endorsed agreement.

The Lake Simcoe Region Conservation Authority (LSRCA) undertook a detailed review of the two potential threats found on BWG land to confirm whether the previously-identified significant threats exist, or whether they are truly significant enough to warrant mitigation. LSRCA has confirmed that there are currently no significant threats within the BWG boundary. That being said, periodic checks, education and outreach and monitoring of the sites are required on an ongoing basis to ensure the identified lands do not become a significant threat.

With that in mind, staff has been working with York Region to discuss an agreement between municipal boundaries for York Region to provide Risk Management services (Part IV responsibilities of the Clean Water Act, 2006) for the entire Church well head protection area. In order to do this, Council needs to formally request, through a Council resolution, for York Region to provide this service. Staff consensus on the best course of action for implementing the program on the land parcels BWG is responsible for is for Council to make this request. This decision is not only cost-effective but York Region staff are experts in Source Water Protection and already have an RMO office established with RMO/RMI's in place. The agreement is necessary to address items such as indemnification and roles and responsibilities. If Council decides not to make a formal request to York Region, a significant level of effort including budget and staff resources will be required. An RMO office will need to be established with an RMO and an RMI in place.

Staff will report back with a more detailed plan on the agreement if both Town Council and the Regional Municipality of York's Council agree to the arrangement.

4. EFFECT ON TOWN FINANCES:

CURRENT YEAR:
None.

FUTURE YEARS:
There is an allotment within the water division budget for the decommissioning of the 8th Line (Hambly) well.

5. ATTACHMENTS:

Attachment A - Wellhead Protection Area

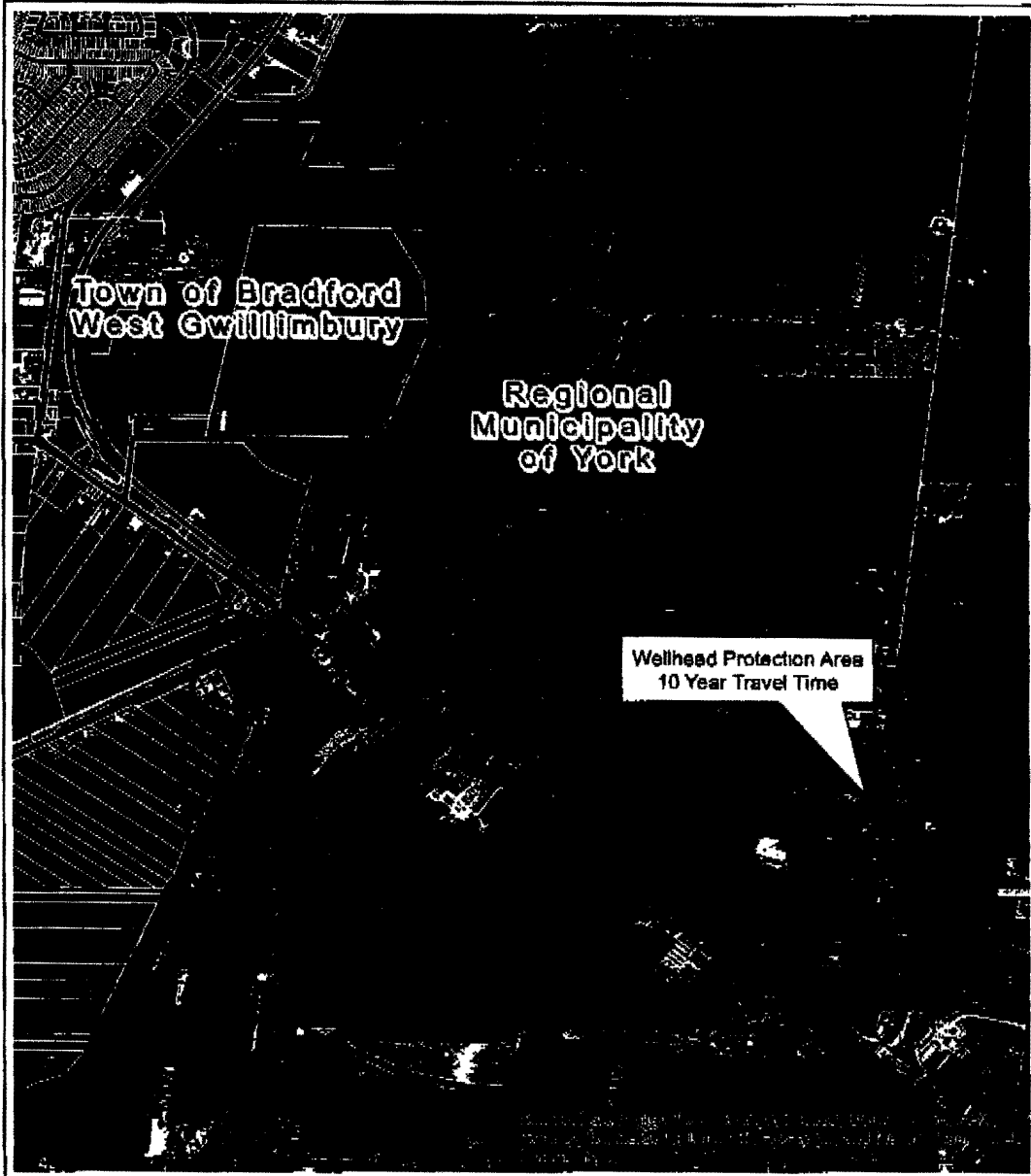
6. APPROVALS:

Samantha Gergen, Manager of Compliance	Approved - 28 Nov 2013
Arup Mukherjee, Director of Engineering	Approved - 28 Nov 2013
Ian Goodfellow, Director of Finance/Treasurer	Approved - 28 Nov 2013
Jay Currier, Town Manager	Approved - 28 Nov 2013

Attachment 'A'

Key Map

Report ENG 2013 37



Subject Area



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**Bradford
west
Gwillimbury**