

**Ministry of Natural
Resources and Forestry**

Office of the Director
Southern Region
Regional Operations Division
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**Ministère des Richesses
naturelles et des Forêts**

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Région du Sud
Division des opérations régionales
300, rue Water
Peterborough (ON) K9J 3C7
Tél: 705-755-3235
Télé: 705-755-3233



August 21, 2014

Mr. Robert Baxter
183 Dufferin Street
Guelph, ON N1H 4B3

Dear Mr. Baxter:

CLERK'S DEPARTMENT	
TO	
Copy	
Please Handle	
For Your Information	
Council Agenda	Sept 17/14
File	

RECEIVED

SEP 08 2014

Township of Puslinch

RE: Minor Site Plan Amendment under the Aggregate Resources Act (ARA)
Glen Christie Company Ltd. – Licence Number 5482
Lot 1, 2, 3, Concession 4
Township of Puslinch, County of Wellington

Further to the site plan amendment request of July 24, 2014 from Robert Baxter of Glen Christie Company Ltd., please be advised that this Ministry grants approval under Section 16 (2) of the Aggregate Resources Act to proceed with the following minor amendment;

Change to the Operational Site Plan (page 3):

- To replace Note 3 under the heading "Sand and Gravel Operation (Phase 1a, 1b and 2)" with:
There will be no extraction below the water table in Phases 1a or 1b. The proposed floor elevation is approximately 297 metres above sea level.
- To replace Note 1 under the heading "Quarry Operation Phase A" with:
Extraction may be conducted to the licensed depth either by dewatering the existing quarry or by wet extraction techniques, displacing the aggregate into the quarry lake by blasting or other means and subsequent removal by dragline, dredging, or other excavating techniques.
- To replace Note 4 under the heading "Quarry Operation Phase B" with:
Extraction may be conducted to the licensed depth either by dewatering the existing quarry or by wet extraction techniques, displacing the aggregate into the quarry lake by blasting or other means and subsequent removal by dragline, dredging, or other excavating techniques. In the event that the quarry is dewatered, the sump will be located on the quarry floor. The water may be pumped up the quarry face through a pipeline over or under the railway tracks and into the southerly quarry.

The Aggregate Technical Specialist in Guelph will require five hard copies of the revised Operational Site Plan and upon approval will forward copies to you and to the upper and lower municipality for their files.

Should you require any further information concerning this matter please, contact Kristy Sutherland, Aggregate Technical Specialist at 519-826-3569.

Yours truly,


Jane Ireland
Regional Director

c: Clerk, Township of Puslinch
Clerk, County of Wellington

6.2(a)



Dufferin Aggregates
2300 Steeles Ave W, 4th Floor
Concord, ON L4K 5X6
Canada

August 14, 2014

RECEIVED

AUG 14 2014

Township of Puslinch

Kristy Sutherland
Aggregates Technical Specialist
Ministry of Natural Resources
Guelph District
1 Stone Road West
Guelph, Ontario
N1G 4Y2

CLERK'S DEPARTMENT	
TO S.D. for Comments	
Copy	
Please Handle	
For Your Information	
Council Agenda	
File	E10/mil

Aug 14/14 ✓ No exceedances
2 Aug 29/14

Attention: Ms. Sutherland

**Re: Monthly Monitoring Report
Mill Creek Pit, License #5738
Township of Puslinch, Wellington County**

Please find enclosed the required monitoring data for the month of July 2014. As indicated, there were no exceedances to report in this month.

If you have any questions, please do not hesitate to call.

Sincerely,

Ron Van Ooteghem
Site Manager

C.c.

Karen Landry (Township of Puslinch)
Sonja Strynatka (GRCA)
Kevin Mitchell (Dufferin Aggregates)
University of Guelph

Monthly Reporting
Mill Creek Aggregates Pit
July 2014

Date	DP21 (mASL)	Threshold Value (mASL)	Exceedance
9-Jul-14	305.89	305.49	NO
18-Jul-14	305.83	305.49	NO
23-Jul-14	305.94	305.49	NO
29-Jul-14	306.00	305.49	NO

Date	BH13 (mASL)	DP21 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
9-Jul-14	306.41	305.89	0.52	0.10	NO
18-Jul-14	306.39	305.83	0.56	0.10	NO
23-Jul-14	306.43	305.94	0.49	0.10	NO
29-Jul-14	306.48	306.00	0.48	0.10	NO

Date	DP17 (mASL)	Threshold Value (mASL)	Exceedance
9-Jul-14	305.30	305.17	NO
18-Jul-14	305.25	305.17	NO
23-Jul-14	305.32	305.17	NO
29-Jul-14	305.37	305.17	NO

Date	BH92-12 (mASL)	DP17 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
9-Jul-14	305.52	305.30	0.22	0.06	NO
18-Jul-14	305.47	305.25	0.22	0.06	NO
23-Jul-14	305.56	305.32	0.24	0.06	NO
29-Jul-14	305.61	305.37	0.24	0.06	NO

Date	DP3 (mASL)	Threshold Value (mASL)	Exceedance
9-Jul-14	304.78	304.54	NO
18-Jul-14	304.68	304.54	NO
23-Jul-14	304.81	304.54	NO
29-Jul-14	304.94	304.54	NO

Date	DP6 (mASL)	DP3 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
9-Jul-14	305.68	304.78	0.90	0.58	NO
18-Jul-14	305.57	304.68	0.89	0.58	NO
23-Jul-14	305.68	304.81	0.87	0.58	NO
29-Jul-14	305.80	304.94	0.86	0.58	NO

Date	DP2 (mASL)	Threshold Value (mASL)	Exceedance
9-Jul-14	304.30	303.50	NO
18-Jul-14	304.19	303.50	NO
23-Jul-14	304.31	303.50	NO
29-Jul-14	304.37	303.50	NO

Date	BH92-27 (mASL)	DP2 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
9-Jul-14	305.01	304.30	0.71	0.32	NO
18-Jul-14	304.83	304.19	0.64	0.32	NO
23-Jul-14	305.04	304.31	0.73	0.32	NO
29-Jul-14	305.12	304.37	0.75	0.32	NO

Date	DP1 (mASL)	Threshold Value (mASL)	Exceedance
9-Jul-14	304.39	303.91	NO
18-Jul-14	304.26	303.91	NO
23-Jul-14	304.40	303.91	NO
29-Jul-14	304.48	303.91	NO

Date	BH92-29 (mASL)	DP1 (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
9-Jul-14	305.25	304.39	0.86	0.23	NO
18-Jul-14	305.10	304.26	0.84	0.23	NO
23-Jul-14	305.23	304.40	0.83	0.23	NO
29-Jul-14	305.31	304.48	0.83	0.23	NO

Date	DP5C (mASL)	Threshold Value (mASL)	Exceedance
9-Jul-14	303.25	302.79	NO
18-Jul-14	303.10	302.79	NO
23-Jul-14	303.24	302.79	NO
29-Jul-14	303.39	302.79	NO

Date	OW5-84 (mASL)	DP5C (mASL)	Head Difference (m)	Threshold Value (m)	Exceedance
9-Jul-14	303.62	303.25	0.37	0.25	NO
18-Jul-14	303.51	303.10	0.41	0.25	NO
23-Jul-14	303.61	303.24	0.37	0.25	NO
29-Jul-14	303.75	303.39	0.36	0.25	NO

Note: No exceedances to report.

Monthly Reporting
 Mill Creek Aggregates Pit
 July 2014

								Max. Allowable as per PTTW- Main Pond				
Total Monthly Precipitation (mm):		155.4	Waterloo-Wellington Airport (July Actual)				(Imperial Gallons)				(Litres)	
Total Monthly Normal Precipitation (mm):		85	Waterloo-Wellington Airport (30-year Normal)				2,500			per minute	11,365	
								1,800,000			per day	8,183,000
Date	Below Water Table Extraction (wet tonnes) Phase 2	Below Water Table Extraction (wet tonnes) Phase 4	Water Pumped from Main Pond (gals)	Water Pumped from Active Silt Pond (gals)	Main Pond Level (mASL)	Exceedance Y/N (BELOW 305.5 mASL)	Phase 2 Pond Level (mASL)	Exceedance Y/N (BELOW 305.0 mASL)	Phase 3 Pond Level (mASL)	Exceedance Y/N (BELOW 303.85 mASL)	Phase 4 Pond Level (mASL)	Exceedance Y/N (BELOW 304.5 mASL)
1-Jul-14	0	0	0	0	306.85	NO	306.47	NO	305.18	NO	304.93	NO
2-Jul-14	0	6363	1,700,142	0	306.94	NO	306.47	NO	305.19	NO	304.94	NO
3-Jul-14	0	7500	1,695,963	3,507,410	306.90	NO	306.47	NO	305.19	NO	305.28	NO
4-Jul-14	0	3750	1,694,643	1,805,508	306.82	NO	306.46	NO	305.20	NO	305.33	NO
5-Jul-14	0	0	0	0	306.82	NO	306.46	NO	305.20	NO	305.33	NO
6-Jul-14	0	0	0	0	306.82	NO	306.46	NO	305.20	NO	305.33	NO
7-Jul-14	0	3900	0	0	306.75	NO	306.45	NO	305.20	NO	305.33	NO
8-Jul-14	0	3412.5	0	0	306.75	NO	306.46	NO	305.27	NO	305.41	NO
9-Jul-14	0	2925	0	0	306.75	NO	306.46	NO	305.27	NO	305.41	NO
10-Jul-14	0	2925	0	2,350,371	306.76	NO	306.47	NO	305.28	NO	305.43	NO
11-Jul-14	0	0	1,591,917	3,609,035	306.79	NO	306.45	NO	305.29	NO	305.45	NO
12-Jul-14	0	0	0	3,519,508	306.79	NO	306.45	NO	305.27	NO	305.41	NO
13-Jul-14	0	0	0	3,682,945	306.79	NO	306.45	NO	305.27	NO	305.41	NO
14-Jul-14	0	3900	1,700,142	3,564,822	306.92	NO	306.45	NO	305.27	NO	305.41	NO
15-Jul-14	0	3900	1,695,963	3,435,040	306.92	NO	306.45	NO	305.18	NO	305.25	NO
16-Jul-14	0	6900	1,694,643	3,568,781	306.92	NO	306.45	NO	305.17	NO	305.17	NO
17-Jul-14	0	7500	1,704,982	3,794,470	306.93	NO	306.44	NO	305.17	NO	305.09	NO
18-Jul-14	0	5000	1,708,501	0	306.94	NO	306.43	NO	305.15	NO	305.05	NO
19-Jul-14	0	0	0	0	306.93	NO	306.43	NO	305.16	NO	305.01	NO
20-Jul-14	0	0	0	0	306.93	NO	306.43	NO	305.16	NO	305.01	NO
21-Jul-14	0	7500	1,697,283	3,542,385	306.83	NO	306.43	NO	305.16	NO	305.01	NO
22-Jul-14	0	7500	1,691,564	3,694,823	306.83	NO	306.43	NO	305.15	NO	305.34	NO
23-Jul-14	0	3900	1,688,264	463,035	306.84	NO	306.43	NO	305.15	NO	305.23	NO
24-Jul-14	0	3900	1,689,364	0	306.86	NO	306.43	NO	305.12	NO	305.18	NO
25-Jul-14	0	1625	1,689,684	0	306.79	NO	306.43	NO	305.12	NO	305.34	NO
26-Jul-14	0	0	0	0	306.74	NO	306.40	NO	305.16	NO	305.31	NO
27-Jul-14	0	0	0	0	306.74	NO	306.40	NO	305.16	NO	305.31	NO
28-Jul-14	0	7500	1,634,372	0	306.74	NO	306.40	NO	305.16	NO	305.31	NO
29-Jul-14	0	5400	1,640,091	3,166,237	306.76	NO	306.45	NO	305.32	NO	305.47	NO
30-Jul-14	0	7500	1,686,724	3,567,901	306.73	NO	306.45	NO	305.34	NO	305.50	NO
31-Jul-14	0	7500	1,687,164	3,831,644	306.74	NO	306.45	NO	305.32	NO	305.48	NO
Total	0	110300	30,292,405	51,103,916	306.79	NO	306.45	NO	305.30	NO	305.43	NO
Avg./day	0.0	3558.06	977,174	1,703,464	306.82	NO	306.44	NO	305.21	NO	305.27	NO

Note: No exceedences to report.

6.3(c)



Region of Waterloo

PLANNING, HOUSING AND COMMUNITY SERVICES

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Kitchener ON N2G 4J3 Canada
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www.regionofwaterloo.ca

SENT VIA Regular Mail

August 22, 2014

Karen Landry, CAO
Township of Puslinch,
7404 Wellington Road 34,
Guelph N1H 6H9

RECEIVED
AUG 27 2014
Township of Puslinch

CLERK'S DEPARTMENT	
TO	DC Aug 27/14
Copy	
Please Handle	
For Your Information	
Council Agenda	Sept 17/14
File	T03/TRA

SAVED in common drive @

Dear Ms. Landry:

Re: Cambridge to Milton Passenger Rail Business Case and Implementation Strategy

The Region of Waterloo and the City of Cambridge have been working together to develop a business case and implementation strategy for passenger rail between Cambridge and Milton. We are contacting you now to update about our progress and want to meet to discuss next steps.

Our progress to date is outlined in the following documents attached to this message:

- Report TPW-24-14, Cambridge to Milton Passenger Rail Business Case and Implementation Strategy Interim Report (June 23, 2014)
- Report P-14-073, Cambridge to Milton Passenger Rail Business Case and Implementation Strategy Interim Report (June 17, 2014)
- Cambridge to Milton Passenger Rail Business Case and Implementation Strategy: Final Report (June 2014)

On June 23, 2014, Cambridge Council approved the following motion:

THAT Report TPW-24-14, regarding the Cambridge to Milton Passenger Rail Business Case and Implementation Strategy interim report, be received;

AND THAT Council approve the action plan for future rail service to Cambridge as described in Report TPW-24-14.

On June 25, 2014, Regional Council approved the following motion:

That the Regional Municipality of Waterloo endorse the proposed action plan for future rail service to Cambridge, as described in Report P-14-073, dated June 17, 2014.

The Region of Waterloo and the City of Cambridge are now working together to arrange a meeting of the Mayors/Regional Chairs, MPs and MPPs of Halton Region, the Town of Milton, the City of Cambridge and the Region of Waterloo to discuss next steps.

If you have any questions about the attached documents or would like more information, please contact the following staff:

Continued...P2

Geoffrey Keyworth
Senior Transportation Planning Engineer
Region of Waterloo
150 Frederick St, Kitchener ON N2G 4J3
519-575-4089
gkeyworth@regionfowaterloo.ca

Shannon Noonan
Manager of Transportation Engineering
City of Cambridge
50 Dickson St, Cambridge ON N1R 5W8
519-740-4682 Ext. 4607
noonans@cambridge.ca

Yours truly,



Geoffrey Keyworth
Senior Transportation Planning Engineer

/gk

Copy:

The Honourable Lisa Raitt, Minister of Transport, MP Halton
The Honourable Gary Goodyear, Minister of State
(Federal Economic Development Agency for Southern Ontario), MP Cambridge
Phil McColeman, MP, Brant
The Honourable Dave Levac, Speaker of the Legislative Assembly, MPP Brant
Kathryn McGarry, Parliamentary Assistant to the Minister of Transportation, MPP Cambridge
Indira Naidoo-Harris, Parliamentary Assistant to the Minister of Health and Long-Term Care
(Long-Term Care), MPP Halton
Ted Arnott, MPP, Wellington-Halton Hills
Chair Gary Carr, Halton Region
Chair Ken Seiling, Region of Waterloo
Mayor Joni Baechler, London
Mayor Doug Craig, Cambridge
Mayor Ron Eddy, Brant
Mayor Karen Farbridge, Guelph
Mayor Chris Friel, Brantford
Mayor Gordon Grantz, Milton
Mayor Brenda Halloran, Waterloo
Mayor Dennis Lever, Puslinch
Mayor Pat Sobeski, Woodstock
Mayor Carl Zehr, Kitchener

Christopher Jones, Director, Eastern Network and Passenger Canada, CP Rail
Greg Percy, President, GO Transit
Chris Burke, Manager, GO Planning
Jane MacCaskill, CAO, Halton Region
Mike Murray, CAO, Region of Waterloo
Rob Horne, Commissioner, Planning, Housing and Community Services, Region of Waterloo
Thomas Schmidt, Commissioner, Transportation and Environmental Services, Region of Waterloo
John Cicuttin, Acting Director, Transportation Planning Region of Waterloo
Art Zuidema, City Manager, City of London
Gary Dyke, CAO, City of Cambridge
George Elliott, Commissioner, Transportation and Public Works City of Cambridge
Paul Emerson, CAO, Brant County
Ann Pappert, CAO, City of Guelph
Ted Salisbury, CAO, City of Brantford
Bill Mann, CAO, Town of Milton
Tim Anderson, CAO, City of Waterloo
Karen Landry, CAO, Township of Puslinch
David Creery, CAO, City of Woodstock
Jeff Willmer, CAO, City of Kitchener



REPORT

RECEIVED

AUG 27 2014

Township of Puslinch

To: **Council**

Date of Meeting: June 23, 2014

Prepared By: Shannon Noonan, C.E.T.

Approved By: George Elliott, P.Eng.

Department: Transportation & Public Works

Date to Senior Management Team: June 18, 2014

Report No.: TPW-24/14

File No.:

Ward No.:

**Cambridge to Milton
Passenger Rail
Business Case and
Implementation
Strategy Interim
Report**

Recommendation:

THAT Report TPW-24-14, regarding the Cambridge to Milton Passenger Rail Business Case and Implementation Strategy interim report, be received;
AND THAT Council approve the action plan for future rail service to Cambridge as described in Report TPW-24-14

Background:

On June 26, 2013, Regional Council approved the 2013 Implementation Plan of the Transit Supportive Strategy to enhance transit ridership in the City of Cambridge. The approved implementation plan included an allocation for a study related to establishing GO Train service to Cambridge. The study was to consider past reports and provide an update regarding the potential for GO Train service to Cambridge.

The previous "Cambridge to Greater Toronto Area GO Transit Rail Passenger Feasibility Study" was endorsed in October 2009. That study estimated a capital cost of \$110M to provide the necessary infrastructure improvements supporting an initial service along the Canadian Pacific (CP) mainline (Galt subdivision) via Milton of four morning GO trains to Union Station and four afternoon returning trains. Metrolinx has described this link as a "possible regional rail extension beyond the GTHA", with no committed funding or schedule at this time.

The team of Dillon Consulting Limited and Hatch Mott MacDonald has been retained to augment the 2009 study by developing three (3) additional scenarios that build on the previous work; explore the opportunity to start the train service quickly with lower investment; test other important transit travel markets and promote a less auto-centric approach to station access and service design.

Existing Policy/By-Law:

Existing Policy:

N/A

Existing Bylaw:

N/A

Financial Impact:

The 2013 Implementation Plan of the Transit Supportive Strategy to enhance transit ridership in the City of Cambridge included an allocation of \$50,000 for this study.

There is no financial impact associated with the recommendation of this report. Should the proposed action plan yield a successful GO Train implementation concept, associated costs and budget implications will be presented.

Public Input:

N/A

Internal/External Consultation:

City staff has worked with Regional staff throughout this project. Outside the City, staff from the Town of Milton, Halton Region, the Township of Puslinch and the County of Wellington were consulted. An initial meeting was also held with Metrolinx staff as well as discussions with CP Rail.

Comments/Analysis:

The current work being jointly undertaken by the City of Cambridge and the Region of Waterloo is focused on evaluating lower cost alternatives for an initial passenger rail service to Cambridge. The draft business case and implementation strategy report, summarized in Appendix A, notes that a viable service between Cambridge and Union Station could be provided by conventional 12-car GO trains and/or alternatives involving Diesel Multiple Units (DMUs) from Cambridge that would require passengers to transfer to conventional GO trains at Milton Station. Daily ridership by 2021 for either service is estimated at between 600 and 1,200 people per day, and travel times would be about 90 minutes between Cambridge and Union Station.

The report evaluates the following scenarios:

1. Conventional 12-car GO trains: Two trains would travel from Cambridge to Union Station in the morning, and two trains would travel from Union Station to Cambridge in the afternoon.
2. DMUs: Four DMU trains from Cambridge to Milton in the morning, where passengers could transfer to conventional GO trains to continue to Union Station. In the afternoon, four DMU trains from Milton to Cambridge could pick up passengers transferring from conventional GO trains.
3. Hybrid service: A combination of the above scenarios. In the morning, four trains would leave Cambridge (two conventional GO trains and two DMU trains). Passengers would transfer from the DMU trains to conventional trains in Milton. In the afternoon, two DMU trains would pick up passengers transferring in Milton, while two conventional trains would travel from Union Station to Cambridge.

DMUs, which are self-propelled and can operate as a single unit or coupled together in multiple-unit trains, are an interesting alternative because they offer a number of potential advantages over conventional 12-car GO trains:

Agenda Item # 9.

- Lower operating costs (reduced energy consumption and onboard staff)
- Faster trip times (improved acceleration/deceleration performance)
- Lower infrastructure costs (shorter platform requirements)
- Reduced impacts in an urban environment (shorter delays at level crossings)
- Greater ability to be integrated with local transit buses in multimodal stations
- Greater reliability in the Cambridge – Union corridor

Metrolinx is acquiring 18 DMUs to provide service between Pearson International Airport and Union Station as part of the UP Express. Since Metrolinx proposes to electrify that line, the DMUs may become available for other applications, such as a pilot service between Cambridge and Milton. The ongoing environmental assessment for electrification of the UP Express is expected to be complete by June 2014.

Based on the foregoing, the study is recommending that the DMU alternative is the most promising way of providing flexible passenger rail service that would meet short-term ridership demand while minimizing capital costs. If future discussions with Metrolinx or CP revealed resistance to the concept of using DMUs on the line, conventional GO train service would be a feasible alternative.

The interim report provides cost estimates for the three scenarios ranging from \$20M to \$89M. These estimates include a variety of work, including potential track and station improvements and costs to purchase vehicles. These numbers are lower than the \$110M estimate from the previous 2009 study because the number of proposed stations has been reduced and improvements to the remaining stations have been minimized.

The wide ranges in cost estimates reflect current uncertainty in project elements, such as the need for track improvements and whether DMUs would need to be purchased. Cost estimates would be refined through negotiations with Metrolinx and Canadian Pacific and an environmental assessment conducted by Metrolinx to examine the extension of passenger rail service to Cambridge, similar to the study that was done for the current service to Kitchener.

Proposed Action Plan

The current interim study report, the Executive Summary of which is appended as Appendix A, is to be finalized through further discussions with Metrolinx, CP and other municipalities along the proposed transit corridor. The following action plan is being proposed:

Agenda Item # 9.

Action Item	Timeline
1. Provide approved interim GO Transit Study report to Metrolinx, GO Transit, CP Rail, other municipalities along proposed transit corridor (i.e. Town of Milton, Halton Region, Puslinch, etc.), MPs and MPPs.	June 2014
2. Schedule staff-level meeting with Metrolinx to discuss interim report and receive formal response	August 2014
3. Meeting with Mayors/Regional Chairs, MPs and MPPs of Halton Region, the Town of Milton, the City of Cambridge and the Region of Waterloo	September 2014
4. GO Transit Study report is finalized	November 2014
5. Request and compile Council resolutions and/or letter of support from stakeholder communities and businesses	November 2014
6. Request meeting with Minister of Transportation and senior staff	March/April 2015
7. Final report to be presented to Regional and Cambridge Councils for consideration	Spring 2015

Prepared by: Shannon Noonan, C.E.T., Manager of Transportation Engineering

Reviewed by: George Elliott, P.Eng., Commissioner of Transportation and Public Works

Attachments: Appendix A – Cambridge to Milton Passenger Rail Business Case and Implementation Strategy – Draft Report Executive Summary

APPENDIX A

Cambridge to Milton Passenger Rail Business Case and Implementation Strategy – Draft Report Executive Summary



May 30, 2014

GAMBRIDGE TO MILTON
PASSENGER RAIL BUSINESS
CASE AND IMPLEMENTATION
STRATEGY
Draft Report



EXECUTIVE SUMMARY

The City of Cambridge and Region of Waterloo are requesting the Province to initiate GO Train service on the CP line between Milton and Cambridge as quickly as possible.

A Feasibility Study for the extension of commuter rail service to Cambridge was completed in 2009 and determined that the preferred routing option was to extend the current GO Train service from Milton rather than connecting Cambridge to the GO Train service on the north mainline at Guelph. The 2009 Passenger Rail Feasibility Study (2009 Study) includes estimates for capital and operating costs and provides ridership and revenue forecasts for 2021 and 2031 horizon years. The study assumed that the service extension would follow GO Transit's traditional approach of starting with four peak period trains and increasing peak service in response to demand.

The team of Dillon Consulting Limited and Hatch Mott MacDonald was retained by the City of Cambridge to augment the 2009 Study by developing three additional scenarios that build on the previous work; explore the opportunity to start the train service quickly and with lower investment; test other important transit travel markets and promote a less auto-centric approach to station access and service design.

Scenario 1 starts service with two 12-car GO Trains, no storage yard in Cambridge and three (rather than four) new stations designed for minimal initial costs. While the start-up of service will require negotiation between CP and Metrolinx, this new scenario could be implemented very quickly and is expected to significantly reduce the initial infrastructure expansion requirement.

Metrolinx is acquiring Diesel Multiple Unit (DMU) trains to provide a passenger rail connection from Union Station to Pearson International Airport and these vehicles are designed to be suitable for operation on a freight rail line. This technology which can operate as a self-propelled single vehicle (or as two or three car trains) may provide new and significant commuter transit opportunities when applied more broadly on the GO Rail network. Scenario's 2 and 3 were designed to use the Cambridge rail service extension to test DMU flexibility, performance, operating cost, customer acceptance, infrastructure requirements and its applicability for specific commuter rail markets. Scenario 2 uses only DMU technology for the Cambridge to Milton rail service and tests a variety of transit travel markets. Scenario 3 uses a blend of DMU vehicles and 12-car trains for the service.

DMU's in the appropriate applications will have some significant advantages over the traditional 12-car trains, including: lower operating costs (reduced energy consumption and crewing); improved acceleration/deceleration performance giving faster trip times; lower infrastructure costs through shorter platform/siding requirements; reduced physical impacts in an urban environment (e.g. shorter delays at level crossings); greater ability to be integrated with local transit buses and LRT's in multimodal stations; and improved corridor reliability (e.g. iced switch may only impact DMU section of corridor).

Customer reaction to the DMU's (including AODA compliance), potential ridership impacts of a 'train-to-

train' transfer and a host of scheduling, operational and equipment compatibility Issues are potential concerns and will also need to be tested and assessed.

Either through the traditional approach of implementing 12-car trains or by testing promising DMU technology for commuter transit service, residents and employers in Cambridge are seeking the earliest possible implementation of GO Train service. Other municipalities along the full service corridor will also benefit, through new stations, provision of an improved commuter transit service for their residents and employees, and the development of a transit option for regional travel markets.

The close proximity of the CP rail line to the heavily congested Highway 401, combined with the fast and reliable travel times that will be possible for rail commuters on this corridor, suggest a great opportunity for the Province to achieve positive economic and environmental results from the early implementation of GO Train service to Cambridge.

The Table below summarizes the results of the previous business case and the three new scenarios. The significant advantages of applying DMU technology on the GO Rail commuter network, including the opportunity to address more regional travel markets with a high quality transit service, suggest that Scenario 2 would be an excellent application for the Milton to Cambridge service extension.

Summary of Ridership, Revenue and Costs for GO Train Expansion to Cambridge (2021 Horizon)

Scenario	Annual Ridership		Annual Revenue		Annual Operating Cost	Capital Cost
	Low	High	Low	High		
2009 Feasibility Study 4 peak trains*	225,600	415,100	\$1.9M	\$3.6M	\$3.8M	\$110M
Scenario 1 2 peak trains*	142,835	285,559	\$1.6M	\$3.3M	\$2M	\$32M to \$85M
Scenario 2 4 DMU trains	134,843	293,144	\$1.6M	\$3.4M		\$20M to 73M
Scenario 3 2 DMU, 2 GO Trains	150,068	301,605	\$1.7M	\$3.5M		\$35M to 89M

Notes:

1. All Costs in \$2009
2. Revenue for new scenarios based on current GO Transit fare schedule
3. Ridership forecast for 2021



Report: P-14-073

Region of Waterloo

Planning, Housing and Community Services

Transportation Planning

To: Chair Jim Wideman and Members of the Planning and Works Committee

Date: June 17, 2014

File Code: D10-40/CMP RAIL

Subject: **Cambridge to Milton Passenger Rail Business Case and Implementation Strategy Interim Report**

Recommendation:

That the Regional Municipality of Waterloo endorse the proposed action plan for future rail service to Cambridge, as described in Report P-14-073, dated June 17, 2014.

Summary:

Nil.

Report:

On June 26, 2013, Regional Council approved the 2013 Implementation Plan of the Transit Supportive Strategy to enhance transit ridership in the City of Cambridge. The approved implementation plan included an allocation for a study related to establishing GO Train service to Cambridge. This report provides an update, including discussions with Metrolinx, the Provincial authority that operates GO.

Regional Council previously endorsed the "Cambridge to Greater Toronto Area GO Transit Rail Passenger Feasibility Study" in October 2009. That study estimated a capital cost of \$110M to provide the necessary infrastructure improvements supporting an initial service along the Canadian Pacific (CP) mainline (Galt subdivision) via Milton of four morning GO trains to Union Station and four afternoon returning trains. Metrolinx has described this link as a "possible regional rail extension beyond the GTHA", with no committed funding or schedule at this time.

The current work being jointly undertaken by the City of Cambridge and the Region of Waterloo is focused on evaluating lower cost alternatives for an initial passenger rail

service to Cambridge. The draft business case and implementation strategy report, summarized in Attachment 1, notes that a viable service between Cambridge and Union Station could be provided by conventional 12-car GO trains and/or alternatives involving Diesel Multiple Units (DMUs) from Cambridge that would require passengers to transfer to conventional GO trains at Milton Station. Daily ridership by 2021 for either service is estimated at between 600 and 1,200 people per day, and travel times would be about 90 minutes between Cambridge and Union Station.

The report evaluates the following scenarios:

1. Conventional 12-car GO trains: Two trains would travel from Cambridge to Union Station in the morning, and two trains would travel from Union Station to Cambridge in the afternoon.
2. DMUs: Four DMU trains from Cambridge to Milton in the morning, where passengers could transfer to conventional GO trains to continue to Union Station. In the afternoon, four DMU trains from Milton to Cambridge could pick up passengers transferring from conventional GO trains.
3. Hybrid service: A combination of the above scenarios. In the morning, four trains would leave Cambridge (two conventional GO trains and two DMU trains). Passengers would transfer from the DMU trains to conventional trains in Milton. In the afternoon, two DMU trains would pick up passengers transferring in Milton, while two conventional trains would travel from Union Station to Cambridge.

DMUs, which are self-propelled and can operate as a single unit or coupled together in multiple-unit trains, are an interesting alternative because they offer a number of potential advantages over conventional 12-car GO trains:

- Lower operating costs (reduced energy consumption and onboard staff)
- Faster trip times (improved acceleration/deceleration performance)
- Lower infrastructure costs (shorter platform requirements)
- Reduced impacts in an urban environment (shorter delays at level crossings)
- Greater ability to be integrated with local transit buses in multimodal stations
- Greater reliability in the Cambridge – Union corridor

Metrolinx is acquiring 18 DMUs to provide service between Pearson International Airport and Union Station as part of the UP Express. Since Metrolinx proposes to electrify that line, the DMUs may become available for other applications, such as a pilot service between Cambridge and Milton. The ongoing environmental assessment for electrification of the UP Express is expected to be complete by June 2014.

Based on the foregoing, the study is recommending that the DMU alternative is the most promising way of providing flexible passenger rail service that would meet short-term ridership demand while minimizing capital costs. If future discussions with

Metrolinx or CP revealed resistance to the concept of using DMUs on the line, conventional GO train service would be a feasible alternative.

The report provides cost estimates for the three scenarios ranging from \$20M to \$89M. These estimates include a variety of work, including potential track and station improvements and costs to purchase vehicles. These numbers are lower than the \$110M estimate from the previous 2009 study because the number of proposed stations has been reduced and improvements to the remaining stations have been minimized.

The wide ranges in cost estimates reflect current uncertainty in project elements, such as the need for track improvements and whether DMUs would need to be purchased. Cost estimates would be refined through negotiations with Metrolinx and Canadian Pacific and an environmental assessment conducted by Metrolinx to examine the extension of passenger rail service to Cambridge, similar to the study that was done for the current service to Kitchener.

Proposed Action Plan

The current interim study report, the Executive Summary of which is appended as Attachment 1, is to be finalized through further discussions with Metrolinx, CP and other municipalities along the proposed transit corridor. The following action plan is being proposed:

Action Item	Timeline
1. Provide approved interim GO Transit Study report to Metrolinx, GO Transit, CP Rail, other municipalities along proposed transit corridor (i.e. Town of Milton, Halton Region, Puslinch, etc.), MPs and MPPs.	June 2014
2. Schedule staff-level meeting with Metrolinx to discuss interim report and receive formal response	August 2014
3. Meeting with Mayors/Regional Chairs, MPs and MPPs of Halton Region, the Town of Milton, the City of Cambridge and the Region of Waterloo	September 2014
4. GO Transit Study report is finalized	November 2014
5. Request and compile Council resolutions and/or letter of support from stakeholder communities and businesses	November 2014
6. Request meeting with Minister of Transportation and senior staff	March/April 2015
7. Final report to be presented to Regional and Cambridge Councils for consideration	Spring 2015

Area Municipal Consultation/Coordination

Regional staff has worked with City of Cambridge staff throughout this project.

Cambridge staff is planning to bring a report before City Council on Monday, June 23, 2014. Outside the Region, staff from the Town of Milton, Halton Region, the Township of Puslinch and the County of Wellington were consulted.

Corporate Strategic Plan:

The current project will advance Strategic Objective 3.4 (Encourage improvements to intercity transportation services to and from Waterloo Region) through Action 3.4.3 (Advocate for improved rail service to Kitchener and Cambridge).

Financial Implications:

The 2013 Implementation Plan of the Transit Supportive Strategy to enhance transit ridership in the City of Cambridge included an allocation of \$50,000 for this study.

The Province of Ontario covers the operating subsidy for GO rail service, but generally expects municipalities to contribute one third of GO expansion capital costs. For example, Report P-12-116 (November 6, 2012) describes the Region's contribution of \$1.39 million towards the capital cost of the recently implemented GO train service to Kitchener. These capital costs are not currently budgeted. Pending progress on the Action Plan and future discussions with the Province, the Region will be required to include a contribution in a future Capital Budget and Forecast.

Other Department Consultations/Concurrence:

Nil.

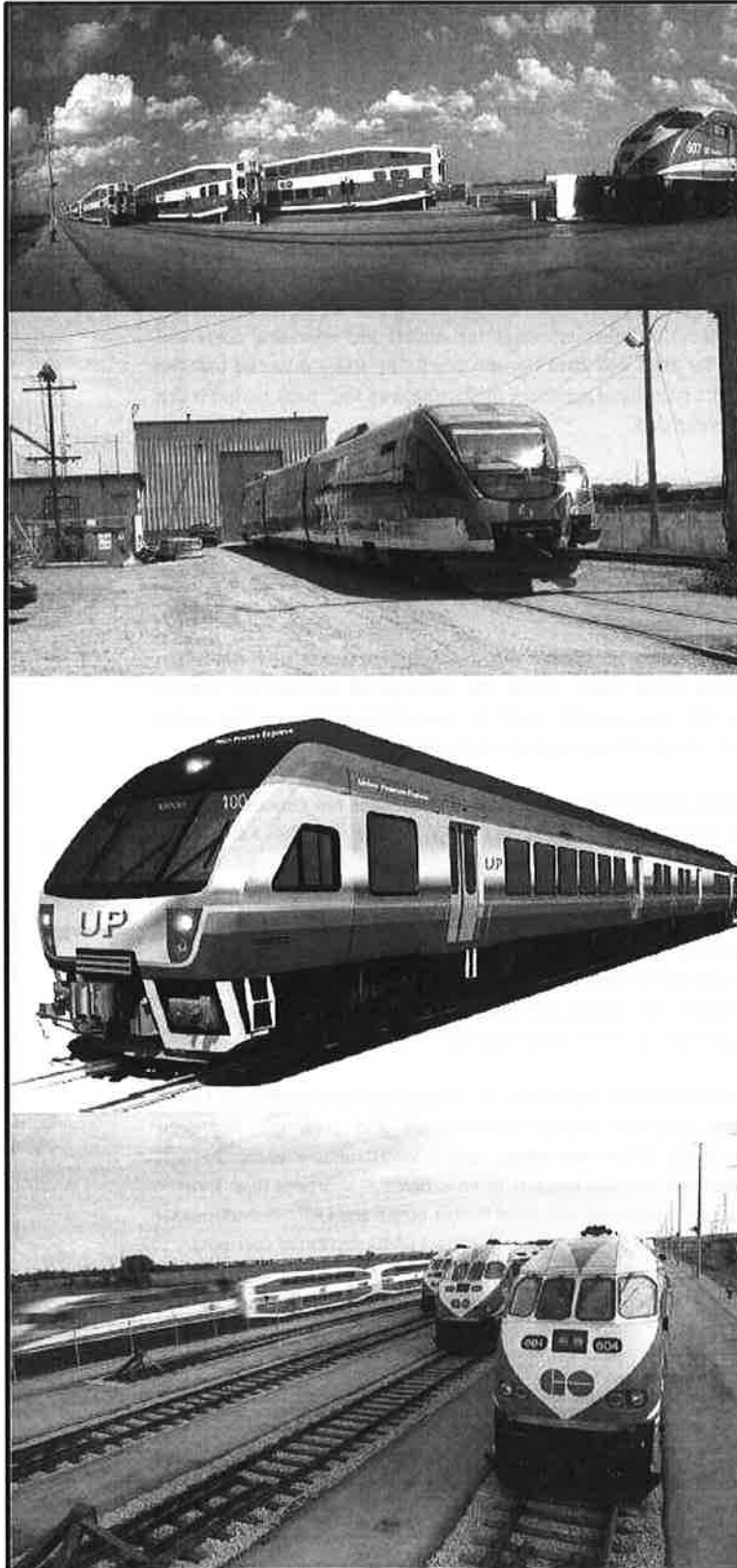
Attachments:

Attachment 1 – Cambridge to Milton Passenger Rail Business Case and Implementation Strategy – Draft Report Executive Summary

Prepared By: Geoffrey Keyworth, Senior Transportation Planning Engineer

Approved By: Rob Horne, Commissioner, Planning, Housing and Community Services

Attachment 1 – Cambridge to Milton Passenger Rail Business Case and Implementation Strategy – Draft Report Executive Summary



May 30, 2014

CAMBRIDGE TO MILTON
PASSENGER RAIL BUSINESS
CASE AND IMPLEMENTATION
STRATEGY

Draft Report



Patric Mott
Iwan Donald

EXECUTIVE SUMMARY

The City of Cambridge and Region of Waterloo are requesting the Province to initiate GO Train service on the CP line between Milton and Cambridge as quickly as possible.

A Feasibility Study for the extension of commuter rail service to Cambridge was completed in 2009 and determined that the preferred routing option was to extend the current GO Train service from Milton rather than connecting Cambridge to the GO Train service on the north mainline at Guelph. The 2009 Passenger Rail Feasibility Study (2009 Study) includes estimates for capital and operating costs and provides ridership and revenue forecasts for 2021 and 2031 horizon years. The study assumed that the service extension would follow GO Transit's traditional approach of starting with four peak period trains and increasing peak service in response to demand.

The team of Dillon Consulting Limited and Hatch Mott MacDonald was retained by the City of Cambridge to augment the 2009 Study by developing three additional scenarios that build on the previous work; explore the opportunity to start the train service quickly and with lower investment; test other important transit travel markets and promote a less auto-centric approach to station access and service design.

Scenario 1 starts service with two 12-car GO Trains, no storage yard in Cambridge and three (rather than four) new stations designed for minimal initial costs. While the start-up of service will require negotiation between CP and Metrolinx, this new scenario could be implemented very quickly and is expected to significantly reduce the initial infrastructure expansion requirement.

Metrolinx is acquiring Diesel Multiple Unit (DMU) trains to provide a passenger rail connection from Union Station to Pearson International Airport and these vehicles are designed to be suitable for operation on a freight rail line. This technology which can operate as a self-propelled single vehicle (or as two or three car trains) may provide new and significant commuter transit opportunities when applied more broadly on the GO Rail network. Scenario's 2 and 3 were designed to use the Cambridge rail service extension to test DMU flexibility, performance, operating cost, customer acceptance, infrastructure requirements and its applicability for specific commuter rail markets. Scenario 2 uses only DMU technology for the Cambridge to Milton rail service and tests a variety of transit travel markets. Scenario 3 uses a blend of DMU vehicles and 12-car trains for the service.

DMU's in the appropriate applications will have some significant advantages over the traditional 12-car trains, including: lower operating costs (reduced energy consumption and crewing); improved acceleration/deceleration performance giving faster trip times; lower infrastructure costs through shorter platform/siding requirements; reduced physical impacts in an urban environment (e.g. shorter delays at level crossings); greater ability to be integrated with local transit buses and LRT's in multimodal stations; and improved corridor reliability (e.g. iced switch may only impact DMU section of corridor).

Customer reaction to the DMU's (including AODA compliance), potential ridership impacts of a 'train-to-

train' transfer and a host of scheduling, operational and equipment compatibility issues are potential concerns and will also need to be tested and assessed.

Either through the traditional approach of implementing 12-car trains or by testing promising DMU technology for commuter transit service, residents and employers in Cambridge are seeking the earliest possible implementation of GO Train service. Other municipalities along the full service corridor will also benefit, through new stations, provision of an improved commuter transit service for their residents and employees, and the development of a transit option for regional travel markets.

The close proximity of the CP rail line to the heavily congested Highway 401, combined with the fast and reliable travel times that will be possible for rail commuters on this corridor, suggest a great opportunity for the Province to achieve positive economic and environmental results from the early implementation of GO Train service to Cambridge.

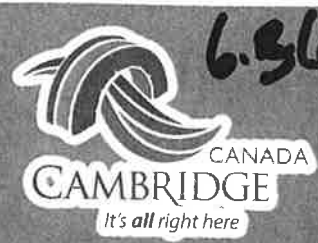
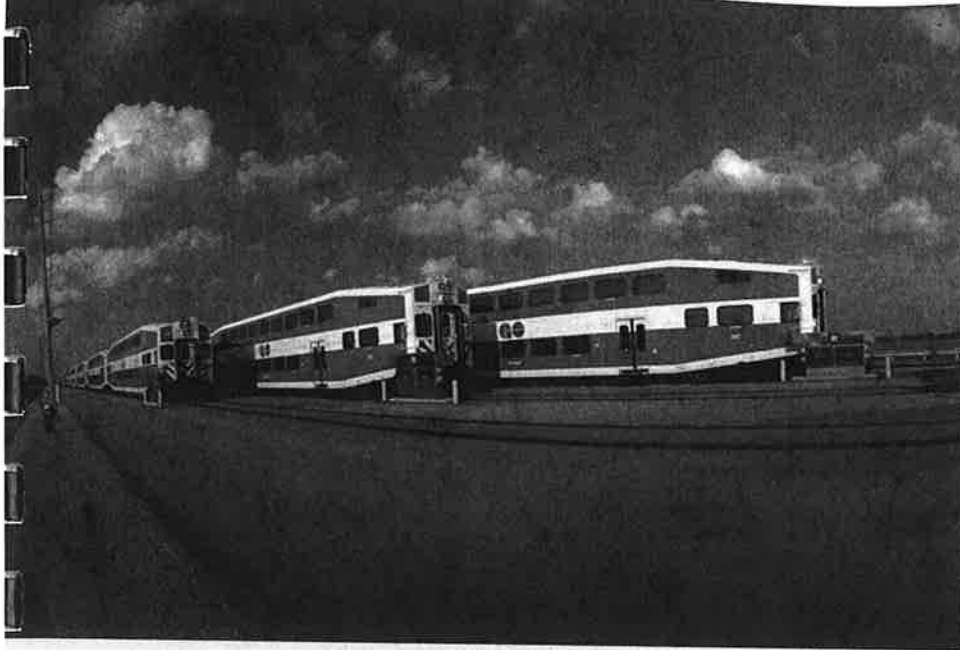
The Table below summarizes the results of the previous business case and the three new scenarios. The significant advantages of applying DMU technology on the GO Rail commuter network, including the opportunity to address more regional travel markets with a high quality transit service, suggest that Scenario 2 would be an excellent application for the Milton to Cambridge service extension.

Summary of Ridership, Revenue and Costs for GO Train Expansion to Cambridge (2021 Horizon)

Scenario	Annual Ridership		Annual Revenue		Annual Operating Cost	Capital Cost
	Low	High	Low	High		
2009 Feasibility Study 4 peak trains*	225,600	415,100	\$1.9M	\$3.6M	\$3.8M	\$110M
Scenario 1 2 peak trains*	142,835	285,559	\$1.6M	\$3.3M	\$2M	\$32M to \$85M
Scenario 2 4 DMU trains	134,843	293,144	\$1.6M	\$3.4M		\$20M to 73M
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Notes:

1. All Costs in \$2009
2. Revenue for new scenarios based on current GO Transit fare schedule
3. Ridership forecast for 2021



6.9(d)

August 2014



CAMBRIDGE TO MILTON PASSENGER RAIL BUSINESS CASE AND IMPLEMENTATION STRATEGY

Final Report



EXECUTIVE SUMMARY

The City of Cambridge and Region of Waterloo are requesting the Province to initiate GO Train service on the CP rail line between Milton and Cambridge as quickly as possible.

A Feasibility Study for the extension of intercity passenger rail service to Cambridge was completed in 2009 and determined that the preferred routing option was to extend the current GO Train service from Milton rather than connecting Cambridge to the GO Train service on the north mainline at Guelph. The 2009 Passenger Rail Feasibility Study (2009 Study) includes estimates for capital and operating costs and provides ridership and revenue forecasts for 2021 and 2031 horizon years. The study assumed that the service extension would follow GO Transit's traditional approach of starting the new service with four peak period trains and increasing the number of peak period trains in response to demand.

The team of Dillon Consulting Limited and Hatch Mott MacDonald was retained by the City of Cambridge to augment the 2009 Study by developing three additional scenarios that build on the previous work; explore the opportunity to start the train service quickly and with lower investment; test other important transit travel markets and promote a less auto-centric approach to station access and commuter service design.

Scenario 1 starts the new service with two 12-car GO Trains, no storage yard in Cambridge and three (rather than four) stations of minimum design. This Scenario was developed to represent the fastest possible implementation with the lowest initial capital investment. The final investment requirements and timing of the start-up of service will require further negotiation between CP and GO Transit.

Metrolinx is acquiring Diesel Multiple Unit (DMU) trains to provide a passenger rail connection from Union Station to Pearson International Airport and these vehicles are designed to be suitable for operation on a freight rail line¹. This technology (which can operate as a self-propelled single vehicle or in multiple car train sets), may provide new and significant intercity passenger rail opportunities when applied more broadly on the GO Rail network. Scenario's 2 and 3 were designed to use the Cambridge rail service extension to test DMU flexibility, performance, operating cost, customer acceptance, infrastructure requirements and its ability to address intercity passenger rail markets. Scenario 2 uses only DMU technology for the Cambridge to Milton rail service and tests a variety of transit travel markets. Scenario 3 uses a blend of DMU vehicles and 12-car trains for the service.

DMU's in the appropriate applications will have some significant advantages over the traditional 12-car trains, including: lower operating costs (reduced energy consumption and crewing); improved acceleration/deceleration performance giving faster trip times; lower infrastructure costs through shorter platform/siding requirements; reduced physical impacts in an urban environment (e.g. shorter delays at level crossings); greater ability to be integrated with local transit buses and LRT's in multimodal

¹ Note: CP expressed concerns with mixing DMU's and freight services on its rail line and these potential concerns need to be discussed with CP prior to moving forward.

stations (due to the shorter platform requirements, which makes integration into an urban multi-modal station much easier); and improved reliability of the total corridor (e.g. delays on the outer DMU section of the corridor would not affect 12-car train service on the inner section of the corridor).

Customer reaction to the DMU's (including AODA compliance), ridership impacts of a 'train-to-train' transfer and a host of scheduling, operational and equipment compatibility issues are potential concerns and will also need to be tested and assessed.

Either through the traditional approach of implementing 12-car trains or by testing promising DMU technology for intercity passenger rail service, residents and employers in Cambridge are seeking the earliest possible implementation of GO Train service. Other municipalities along the full service corridor will also benefit, through new stations, provision of an improved intercity passenger rail service for their residents and employees, and the development of a transit option for regional travel markets.

The close proximity of the CP rail line to the heavily congested Highway 401, combined with the fast and reliable travel times that will be possible for rail commuters on this corridor, suggest a great opportunity for the Province to achieve positive economic and environmental results from the early implementation of GO Train service to Cambridge.

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Scenario 3 2 DMU, 2 GO Trains	150,100	301,600	\$1.3M	\$2.6M		\$35M to 89M

Notes:

1. All Revenue, Operating and Capital Costs in \$2009
2. Ridership forecast is for 2021
3. GO Train refers to traditional 12-car consist
4. Annual operating costs for DMU's are not yet known but will be less than 12-car GO Trains

MEMORANDUM

TO: Karen Landry, CAO / Clerk Township of Puslinch
Kimberly Wingrove, CAO, Township of Guelph-Eramosa

FROM: Kyle Davis, Risk Management Official,
Wellington County municipalities

DATE: September 10, 2014

SUBJECT: Update on Water Quantity (Tier 3) Assessment – Source Protection and
Response to Comments Regarding Guelph Water Supply Master Plan

The purpose of this memorandum is to provide an update regarding our understanding of the ongoing City of Guelph and Region of Waterloo's Tier 3 water quantity projects and our June 26, 2014 comments on the City of Guelph's *Water Supply Master Plan Update (Draft Final Report)* dated May 2014 (GWSMP). The Tier 3 water quantity projects are completed under the source protection framework (*Clean Water Act*) while the GWSMP is a linked but separate project completed under the provincial Environmental Assessment framework (*Environmental Assessment Act*).

Since the completion of our June 26, 2014 comments, numerous meetings and / or discussions have taken place with Township and County staff and Grand River Conservation Authority and City of Guelph staff. The City of Guelph provided a formal response to our June 26, 2014 comments on July 16, 2014 (attached as Appendix A) regarding the Guelph Water Supply Master Plan. On September 4, 2014, the Lake Erie Source Protection Committee received a report from Grand River Conservation Authority (GRCA) staff regarding an update on the Tier 3 water quantity projects within Lake Erie Region including the Guelph and Region of Waterloo projects (attached as Appendix B).

Source Protection Implementation – Wellington County

Source protection implementation for the municipalities within Wellington County is coordinated by the Risk Management Official (RMO), who represents all seven local municipalities within Wellington County including the Townships of Puslinch and Guelph-Eramosa. Implementation is completed in close collaboration with the local municipal and County staff, primarily through the operation of an internal Wellington Source Protection working group that currently meets monthly.

The *Clean Water Act* (2006) provides the framework for the development and implementation of watershed-based Source Protection Plans. The Assessment Reports and Source Protection Plans identify the risks to municipal drinking water sources and establishes actions and policies to protect current and future sources of drinking water. The policies apply within Wellhead Protection Areas (WHPA) and Intake Protection Zones (IPZ) established around municipal wells or intakes. There are five (5) Source Protection Plans applicable to Wellington County. One plan (Grand River) is applicable to the Township of Guelph/Eramosa and two plans (Grand River and Halton-Hamilton) are applicable to the Township of Puslinch.

Some City of Guelph municipal wells and the surface water intake (Arnell Spring Grounds) are located outside of the City boundaries within the Townships of Puslinch and Guelph – Eramosa while wellhead protection areas (WHPAs) from City municipal wells within the City boundaries extend into the Townships. WHPAs from Region of Waterloo municipal wells within Regional boundaries also extend into the Townships.

Guelph Water Supply Master Plan Update (GWSMP)

The stated purpose of the GWSMP was to define where and how Guelph will continue to access a safe and sustainable supply of water over the next 25 years. The update followed the requirements of the Municipal Class Environmental Assessment (Class EA) and makes recommendations on an implementation strategy. As part of the update, the City of Guelph consulted the Townships of Puslinch and Guelph–Eramosa during individual meetings, agency workshops, Council presentations, public open houses or the Community Liaison Committee. The GWSMP is an update to the 2007 City of Guelph Water Supply Master Plan (WSMP).

Upon review of the City's attached response and following the recent staff meetings / discussions, the following items have been clarified.

1. Following the closure of the public comment period on June 27, 2014, Guelph City Council approved the GWSMP in principle on July 28, 2014 and directed City staff to implement the recommendations, subject to budget approval.
2. Guelph Water supply master plan and Tier 3, water quantity projects have separate focus: GWSMP on future water supply alternatives and Tier 3 on the quantity of water needed for existing and approved (ie planned) water use. Regardless of separate focus, they are linked.
3. New water supply options identified in the Guelph WSMP, when and if the City proceeds, would be subject to Class Environmental Assessments and therefore there will be more opportunity for Township and public comment.
4. Source protection is not currently included in the Municipal Engineers Association Class Environmental Assessment guidance, however, amendments have been proposed to add it. Wellington County municipalities' comment, by the RMO, on these amendments was provided in January 2014.
5. Any new water supplies added would result in additional or modified WHPAs from what is currently in the Source Protection Plan. Therefore, in addition to any Environmental Assessment public consultations, there are also public consultation processes built into any revisions of the WHPAs through the Assessment Report and Source Protection Plan processes.
6. The City states that the Tier 3 model was incorporated, as much as possible at the time, into GWSMP by the City.
7. The City has budgeted additional hydrogeological work to assess the various water supply options in the GWSMP. This includes the Guelph North and South options, despite these options ranking low on the listing of alternatives.

City of Guelph and Region of Waterloo Tier 3 (Water Quantity) Projects

The Tier 3 water budget projects for the City of Guelph and the Region of Waterloo are completed under the source protection framework (*Clean Water Act*) and, once complete, will form part of the Grand River Assessment Report and Source Protection Plan that is authored by the Lake Erie Source Protection Committee. For the Guelph and Region of Waterloo Tier 3 projects, Region of Waterloo and City of Guelph are the technical project leads and are overseen by GRCA, Ontario Ministry of the Environment and Climate Change (MOECC), Ontario Ministry of Natural Resources (MNR) and a third party peer review team consisting of academia and consultants. Tier 3 or water quantity consists of the technical (hydrogeological and engineering) projects and the policy development projects. The technical projects, comprising the hydrogeological investigation, interpretation and modelling, have been underway for multiple years and are nearing completion. Once the Tier 3 technical reports are finalized, the GRCA will initiate water quantity policy development.

Upon review of the City's attached response and following the recent staff meetings / discussions, the following items have been clarified.

1. A water budget under the *Clean Water Act* establishes a means to quantitatively measure the water cycle components and uses of a watershed and to understand the processes and pathways for water flow (Page 83, Water Budget Reference Manual, Aqua Resource, 2013). Depending on the level of analysis required, a water budget assessment under the *Clean Water Act* are classified as Tier 1, 2 or 3.
2. The *Approved Grand River Assessment Report* dated August 2012 by the Lake Erie Source Protection Committee summarizes the results of the Tier 1 and Tier 2 water budget / water quantity stress assessments completed for the Grand River watershed. These water budget and water quantity assessments were required under the MOECC's Technical Rules as per the *Clean Water Act* and built upon more than twenty years of water budget assessment within the watershed.
3. Part of the MOECC's requirements under the *Clean Water Act*, is to identify sub-watersheds that are potentially under stress for water quantity and require further study under a Tier 3 water budget or water quantity assessment. The *Approved Grand River Assessment Report* (2012) identified a number of subwatersheds that required Tier 3 studies including the Central Grand (Region of Waterloo) and Upper Speed (Guelph and Guelph / Eramosa).
4. Tier 3 technical studies began in October 2007 for both the City of Guelph and Region of Waterloo. As required by the MOECC, there are a number of technical studies that comprise a Tier 3 assessment including a Conceptual Model, Water Budget, Water Quantity Risk Assessment and Risk Management Measures Evaluation Process.
5. The Conceptual Model and Water Budget reports for both the City of Guelph and Region of Waterloo were completed and received MOECC / MNR appointed peer review sign off (academia and third party consultants) in 2011 and 2012. The completion of these reports is sequential and requires peer review sign off, prior to moving to the next report. The Water Quantity Risk Assessment reports were completed in summer 2014 and are expected to be completed, including peer review sign off, in fall 2014.

6. Due to their proximity, Township of Guelph / Eramosa water systems were included in the Guelph Tier 3 Water Quantity Risk Assessment beginning in January 2014.
7. It is our understanding that the draft Guelph water quantity (Tier 3) areas include portions of the City of Guelph, Township of Guelph / Eramosa, Township of Puslinch, Region of Halton and the City of Cambridge.
8. It is our understanding that the draft Region of Waterloo water quantity (Tier 3) areas (primarily Cambridge) come into the south west portion of the Township of Puslinch.
9. It is our understanding that the risk level is significant for the Guelph and low for the Region of Waterloo water quantity (Tier 3) areas. A significant risk level results in a requirement for source protection policies while a low risk level does not result in source protection policies. A moderate risk level results in source protection policies for future uses only.
10. The next phase will be completion of the Risk Management Measures Evaluation Process study. In discussions with the GRCA staff overseeing the Guelph / Guelph / Eramosa Tier 3 project, Wellington County municipalities' staff will participate on the project team for this study. The purpose of this study, based on the results of the Water Quantity Risk Assessment, evaluates all potential options / alternatives to reduce the identified water quantity stress and to identify preferred options to inform the policy development process. It is expected that this study will start in fall 2014.
11. Water quantity policy development for the Guelph / Guelph / Eramosa water quantity areas has not yet begun.
12. Similar to other source protection policies, water quantity (Tier 3) policies would be the mechanism to address the threat activities: taking of water from the aquifer and reduction in recharge to the aquifer. There are a broad range of policy options including education, conditions in Permits to Take Water, planning approaches, risk management plans, prohibitions etc. It is too early to speculate what form water quantity (Tier 3) policies may take as the Risk Management Measures Evaluation study needs to be underway or complete first.
13. GRCA and MOECC are aware of complexities and concerns regarding water quantity (Tier 3) policies and do not wish to rush policy development. Instead they are discussing using a phased, collaborative based approach. A phased, collaborative based approach would tentatively include staff level discussion (including GRCA, City of Guelph, Wellington County municipalities, Region of Halton and others) on conceptual policy approaches through discussion papers and would likely involve consultations with stakeholders prior to moving towards policy wording. This is the approach used to develop the current source protection policies related to other threats.
14. Tier 3 / water quantity technical work or policies will not be included in the April 2015 submission of the updated Assessment Report or Grand River Source Protection Plan to MOECC. The Lake Erie SPC, at their September 4, 2014 meeting, agreed to submit the Tier 3 technical work and policies at a later date (date to be determined).

15. Wellington County municipalities' involvement in both the technical and policy Tier 3 work continues to be coordinated by the Wellington County Source Protection working group, chaired by the shared RMO and made up of staff representatives from the Townships, Towns and County.
16. The City of Guelph and the GRCA have agreed to a meeting(s) to discuss the broader Townships / County concerns regarding Tier 3 including potential timing of and opportunity for detailed, Township / County review of technical reports, risk management measures study participation, approach to develop policies and possible policy content. This meeting is being scheduled in September or October 2014 and will also discuss results of collaboration between the Wellington and Guelph RMOs over 2014. This meeting is a follow up to the first joint source protection meeting between Wellington County municipalities and the City of Guelph in January 2014.
17. Stakeholder engagement (ie affected industries, residents, public) is key to the development of water quantity policies and a plan will need to be developed between the GRCA, Wellington County municipalities, City, Region and other municipalities.
18. Currently, the Guelph water quantity areas overlap the Grand and Halton-Hamilton watersheds within Puslinch, therefore, two sets of Tier 3 policies will be in needed in Puslinch. The RMO is in discussions with both the GRCA and Conservation Halton (the lead Source Protection Authority for the Halton-Hamilton Source Protection Region).
19. Currently, the provincial Source Protection Municipal Implementation Fund (SPMIF) cannot be used for Tier 3 technical work, review or policy work, therefore, if consultants are being hired to complete any of these tasks, a different funding source will be needed.

Township of Guelph / Eramosa Municipal Systems related to Tier 3

20. On July 30, 2014, R.J. Burnside and Associated Limited (Burnside), the Township of Guelph / Eramosa's consultants, provided preliminary comments on a May 2014 memo by Guelph's consultant. The scope of the Burnside comments was focused on the data used and assumptions made by Guelph's consultant regarding the Guelph / Eramosa water systems. This memo has been forwarded to the GRCA.
21. Burnside has raised technical questions and a meeting will be held with the RMO, Township staff, GRCA and the City of Guelph to address Burnside's comments. This meeting is scheduled for September 19, 2014.

Attachments

Appendix A – July 16, 2014 Guelph letter – Notice of Completion – Guelph Water Supply Master Plan Update

Appendix B – Lake Erie Region Source Protection Committee Reports No. SPC-14-09-11

July 16, 2014

Sent by Email

Kim Wingrove
Chief Administrative Officer
Township of Guelph – Eramosa
8348 Wellington Road 124
P.O. Box 700
Rockwood, ON N0B 2K0

Karen Landry
Chief Administrative Officer
Township of Puslinch
7404 Wellington Road 34
Guelph, ON N1H 6H9

Dear Kim and Karen:

RE: Notice of Completion – Guelph Water Supply Master Plan Update

Thank you for your comments on the City of Guelph Water Supply Master Plan Update. We would like to respond to your comments and provide the requested clarifications. We would also offer to meet with you to further discuss these comments, if required. We have organized this response according to your comments, but first we would like to provide some background on the Water Supply Master Plan Update in the context of the Clean Water Act (CWA) and source protection process.

We understand that the concerns of the Townships of Puslinch and Guelph-Eramosa on the WSMP Update are also related to:

- Source protection, the Clean Water Act and the implications of new water supply projects.
- Guelph – Guelph-Eramosa Tier 3 Water Budget and Local Area Risk Assessment.

Water Supply Master Plan Update and Integration with Source Protection Programs

The WSMP Update is a City project being conducted under the MEA Municipal Class Environmental Assessment (EA) process for Master Plans. Master Plans address Phases 1 and 2 of the Municipal Class EA process, and provide recommendations for a set of works to be implemented over time, including the completion of project specific Class EA studies. This project is an update of the City's original Water Supply Master Plan completed in 2007. It is different and somewhat separate from the Source Protection Program and the Tier 3 Water Budget project in that a key objective is to define future water supply sources to

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satisfy future water demand for the City to 2038. In contrast, the Source Protection Program, as directed by the Clean Water Act and its technical rules, only includes existing or approved water supply systems.

The preferred alternatives as identified in the WSMP Update are directed to developing new water supplies primarily within the City. Several of the proposed projects include wells that are currently off line with existing Permits to Take Water (PTTW). Since they are existing wells, they are included in the City's Source Protection Program and have defined Wellhead Protection Areas (WHPA) and are also included in the Guelph-GET Tier 3 Water Budget project. As we have stated in our presentations to the Township Councils, any new water supply projects would follow the Municipal Class EA process for individual projects and would be subject to a public consultation process to inform and obtain input from stakeholders. As we have done in the WSMP Update, consulting with the Townships would be a key aspect of the Class EA projects. If the proposed wells are located in the Townships, there would be obvious planning requirements controlled by the Township with respect to land uses, wellhouse construction, pipeline easements, etc.

The Municipal Class EA process for new supply projects would consider source protection requirements for quantity and quality under the CWA and would consider the social, environmental and economic impacts of constructing and operating the new water supply. We would expect that as part of the process, the project would include the development of proposed WHPAs for the new supply source and also consider the potential social and economic impacts of the WHPAs as part of the evaluation of the project. It is anticipated that the public consultation process would include any potential stakeholders within the Townships potentially affected by the development of new WHPAs.

If the Class EA project is approved and a PTTW issued, the new municipal water supply source would have to be incorporated into an updated Grand River Assessment Report under the Clean Water Act. Updates to the Assessment Report would require a public consultation process wherein the Townships would again be able to comment on the report. If the Assessment Report is accepted by the Ministry of Environment and Climate Change (MOECC, formerly MOE), the source protection policies would then apply to the new municipal water supply source and its associated WHPA.

Tier 3 Water Budget and Local Area Risk Assessment and Source Protection Programs

The Tier 3 Water Budget and Local Area Risk Assessment program is a provincial initiative which provides a technically sound methodology for evaluating and managing the quantity of existing and future sources of water within a watershed. The Clean Water Act requires an assessment of water budgets to assess water

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quantity threats to municipal water supplies much in the same way as the assessments of water quality threats has been conducted to date. As you are aware, the local Tier 3 water budget projects are lead by the GRCA and are Provincially-mandated under the Clean Water Act (CWA). The City, as the grant fundee, and its consultant (Matrix Solutions Inc.) are leading the Guelph and Guelph-Eramosa Township (GET) Tier 3 project under the direction of the GRCA, the Ministry of Natural Resources (MNR) and an independent Peer Review Team. The project is being conducted according to the technical rules and guidance of the Province in completing the project (see - <http://www.waterbudget.ca/> and <http://www.sourcewater.ca/index/document.cfm?Sec=7&Sub1=6&Sub2=5>). The science-based Tier 3 project, which includes incorporation of the water supply systems of Guelph and GET, is not yet completed. GET and Wellington County have been participating in the project since January, 2014.

Once the project is completed, the results of the project will be incorporated into an updated Grand River Assessment Report. The Tier 3 project will define WHPA for water quantity using a series of risk assessment scenarios according to provincial technical rules. The update to the Assessment Report will include a public consultation process as mandated by the Clean Water Act and the Townships will have input to the process and are expected to contribute to the development of the report. As you are aware, source protection policies may be developed with respect to water quantity risks, if required. Here too, the Townships will have opportunities and are expected to participate and consult in the development of water quantity policies. Any concerns regarding the Guelph-GET Tier 3 Water Budget, since it is a work in progress, may be best raised through the Source Protection and CWA process.

Comments Applicable to Both Townships

Comment #3: Clarification on the capital costs for 2018 for the Guelph North and Guelph South alternatives when the projects are proposed for post-2038

Response: As noted in the WSMP Update Report (Section 8.1, page 105) “For the proposed wells outside the City, minimal budget is allocated in the short-term for additional modeling work to update and substantiate the estimated capacities and potential impacts related to these alternatives prior to the next WSMP update”. This modeling work accounts for the capital costs assigned to Guelph North and Guelph South in 2018 as shown in Table 8-7.

Comment #4: Please note that the WHPAs for all of the eight alternatives either do or will extend into the Townships and therefore result in source protection requirements for property owners in the Townships and staff time to administer and enforce the Clean Water Act.

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Response: It is correct that new or expanded WHPA may be placed in the Townships from new water supply sources as is the requirement of the Clean Water Act and the Townships may be required to administer and enforce the Clean Water Act. We would note that the City's Source Protection Policies are the same or similar to the policies that would be applied to the WHPA for the GET water supply systems. In addition, not all property owners would be affected by the new or expanded WHPA. Policies would only apply in vulnerable areas where there are significant drinking water threats. The City, the Townships (through their Risk Management Official) and the County are having ongoing discussions on Source Protection Programs including cost sharing initiatives.

Comment #6: The Townships are concerned that policies regulating existing and future water takings and activities reducing recharge to the aquifer may be required.

Response: The Guelph-GET Tier 3 Water Budget project is not yet completed and the final results, conclusions and recommendations have not been written. From the last updated results, the incorporation of the GET water systems into Tier 3 groundwater flow model resulted in some of the City of Guelph water supply systems to be categorized as at significant risk. GET is now part of the technical team for the project and will have opportunities to review the results and conclusions of the project before they are finalized. We will also note that the results and conclusions are also reviewed and validated by an independent Peer Review Team composed of local technical experts. If the current conclusions remain (i.e. that the Tier 3 Water Budget indicates a significant drinking water threat for water quantity is present), and this is accepted by the MOECC then, as required by the Clean Water Act, policies for the protection of water quantity will need to be developed.

Comment #6: It is unclear whether this recent, draft modelling has been incorporated into the Guelph WSMP Update report and how it interacts with the various water conservation scenarios and preferred water supply projects listed in the Guelph WSMP Update report. Due to the potential extent of impact to the Townships, clarification should be provided by the City on this point through the formal Guelph WSMP comments and through staff discussions.

Response: To the extent possible, given that the Tier 3 Water Budget Project has not been completed, the City has incorporated the results of the Tier 3 project into the WSMP Update. The City purposefully avoided subwatersheds for possible new supply sources that were identified in the Tier 3 project as having comparatively higher stress levels (see discussion in Section 5.3 of the Update Report). The City has used the same Tier 3 Water Budget computer model to assess the proposed water supply alternatives in the WSMP Update. The City used the Tier 3 computer model to simulate groundwater withdrawals and to assess the potential environmental impacts (i.e. impacts to baseflows in surface waters) of the groundwater alternatives.

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The model produced simulated drawdown areas for the shallow and deep bedrock formations for each model scenario. These results are described in Section 5.3 and in Appendix D of the WSMP Update Report. The Tier 3 groundwater model results were factored into the Class EA evaluation process (see Table 6-6 of the WSMP Update Report).

Comment #8: The City should consider adding a sentence indicating that Wellington County specific policies have been developed and apply to the City WHPAs, wells, surface water intakes and IPZ that are present outside City boundaries. This applies for both water quality and quantity policies.

Response: Agreed. The text will be revised accordingly.

Comments Applicable to the Township of Puslinch

Comment #2: It is unclear whether the upgrades to the Arkell Lower Road Collector and the Scout Camp well are already included within the delineation of the Intake Protection Zone / WHPAs outlined in the Approved Grand River Assessment Report (August 2012) or whether the upgrades would result in extending the IPZ / WHPAs within the Township of Puslinch. Clarification should be sought from the City regarding this and if needed, a timeline be provided from the City outlining when updated IPZ / WHPAs would be provided for review.

Response: WHPA for the Arkell Lower Road and the Scout Camp Well are not included in the Grand River Assessment Report. The Arkell Lower Road Collector is out-of-service. If it were to be brought back into service, the existing IPZ/WHPA would need to be re-evaluated to determine if a new or expanded area would be required. The WHPA and to a certain extent the IPZ would lie within the existing WHPA for the Arkell bedrock wellfield and the existing IPZ for the Eramosa River intake. The Scout Camp Well is not included in the Assessment Report since it is not an existing water supply system. If the Scout Camp Well were to be a new supply source, it would need to go through the Class EA and Source Protection processes as described above before it could be included in the Grand River Assessment Report.

Comments Applicable to the Township of Guelph-Eramosa

Comment #2: The City should be requested to confirm this interpretation and to provide a timeline for delineating a WHPA for Logan well. This timeline would likely be linked to the investigative work the City is planning between 2015 and 2018.

Response: The Logan Well, located in Guelph-Eramosa Township, is a test well without a Permit to Take Water and not an existing or approved water supply system. Therefore, by definition, the Logan Well cannot be included in the Grand

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River Assessment Report. The process for evaluating the Logan Well is as described above. Since the Logan Well is an older test well (circa 1966), the investigation process would likely be conducted in two phases: Phase 1 would consist of a groundwater exploration program including pumping test(s) and groundwater monitoring and if the results were favourable; Phase 2 would consist of a Class EA project to evaluate the feasibility of the project using environmental, social and economic criteria. The groundwater exploration program would be conducted in the 2015 to 2018 timeframe as noted in the WSMP Update. Timing on the Class EA project would be dependent on the results of the groundwater exploration program and the City's need for new water sources.

Comment #3: Regarding the Clythe Creek and Sacco Wells, clarification should be sought from the City regarding this and if needed, a timeline be provided from the City outlining when updated WHPAs would be provided for review. If WHPAs are extended, additional Township properties may be subject to source protection requirements under the Clean Water Act.

Response: The Clythe Creek Well and Sacco Well are included in the Grand River Assessment Report (see Table 8-2 and Map 8-2 in the Assessment Report). The proposed pumping rates for these wells as assumed in the WSMP Update are similar to the pumping rates used in the Grand River Assessment Report, and, given the modelling sensitivity analyses conducted in determining the WHPA, if these wells are returned to service, the existing WHPA are not likely to change.

Comments from Stan Denhoed on behalf of the Township of Puslinch

Comment: The expansion of the WHPA's has not been presented or considered in the Legal/Jurisdictional category of Table 6-6.

Response: A new or expanded WHPA (or IPZ for surface water sources) would apply to all new supply sources and therefore would not differentiate between alternatives. The greatest concern is likely to be where the wellhead is located in an adjacent municipality since the vulnerability scores will be higher in the immediate area of the well. Table 6-6 recognizes this point in the Legal/Jurisdictional category. Wellhead Protection Areas are also considered in the "Built Environment" category with the indicator defined as "Future, planned or approved land uses, including those affected by the addition of new Wellhead Protection Areas. These may include but are not limited to existing and future agricultural operations and Environmental Protection Areas".

Comment: We understand that the Tier 3 groundwater model capable of updating the projected WHPA's will be available some time in 2014. We respectfully request an analysis of the expanded WHPA's into the Township of Puslinch and the associated legal/zoning implications of Projects 1 through 10 on Table 8-1.

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Response: As described above, the potential WHPA for proposed new water supply projects will be determined and evaluated as part of the Class EA process based on the existing conditions at the time of the project-specific Class EA studies. The approximate timing for the projects is shown in Tables 8-3 and 8-8 of the WSMP Update Report. The Tier 3 model was used to evaluate the new supply alternatives as described above. See Section 5.3 and Appendix D of the WSMP Update Report for the details.

Comment: It is expected that any future municipal water extractions from the Township of Puslinch will be chosen through a process that includes minimizing the impact on the environment, on the rural nature of the Township and on the economy (present and future) of the Township.

Response: We agree in recognition of groundwater and surface water as a common resource to be used for the betterment of our communities. Furthermore, we reiterate that the considerations noted in your comment, i.e. environment, social and economic are key criteria for the evaluation of any proposed undertaking through the Municipal Class EA process, and will be applied to each of the separate projects collectively making up the recommended alternatives of this Master Plan update.

Summary

We trust the above responses provide additional clarity and understanding to the comments posed in the correspondence.

We appreciate your input and will consider your comments in light of our responses as we finalize the WSMP Update Report.

With respect to the ongoing Tier 3 Water Budget Project and existing and future Source Protection Programs, we too look forward to working with Puslinch and Guelph-Eramosa Townships as this work continues. Source Protection meetings have been ongoing and additional meetings on the Tier 3 project are proposed.

Finally, the City has stated, throughout the original WSMP and WSMP Update process, that new water supply sources in the Townships would only be developed with the participation and cooperation of the Townships. For any new water supply project – inside the City or in the Townships, for the benefit of the City or the Townships - that has the potential to impact water quantity or quality, we would hope the Townships would work closely with the City in managing our local water resources to ensure we have sustainable water supplies for the City, the County and the Townships. We believe this approach is consistent with the requirements of the Clean Water Act, the Provincial Policy Statement and our collective Official Plans.

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Thank you for your participation in the Water Supply Master Plan Update.

Sincerely



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LAKE ERIE REGION SOURCE PROTECTION COMMITTEE

REPORT NO. SPC-14-09-11

DATE: September 4, 2014

TO: Members of the Lake Erie Region Source Protection Committee

SUBJECT: Lake Erie Region Water Quantity Update for Long Point, Region of Waterloo and the City of Guelph

RECOMMENDATION:

THAT the Lake Erie Region Source Protection Committee receive report SPC-14-09-11– Lake Erie Region Water Quantity Update for Long Point, Region of Waterloo and the City of Guelph – for information.

SUMMARY:

Current Tier 3 studies in the Grand River watershed and Long Point Region for Water Quantity Risk Assessments (WQRAs) are being drafted or peer reviewed. In addition, Terms of Reference are being approved for consultants to bid on a Tier 3 water budget project for the Whitemans Creek subwatershed to commence this fall. Upon completion of the WQRAs work will be undertaken to populate the MNR's Water Quantity Data Model with information from completed Tier 3 studies and to commence the risk management measures evaluation process (RMMEPs) for any completed Tier 3 studies that have identified water quantity risks.

REPORT:

The main phases of a Tier 3 project include the preparation of a Conceptual Report to confirm the modelling conditions for the study, a Tier 3 Water Budget Report based on revised surface and groundwater models and a Water Quantity Risk Assessment (WQRA) Report to identify any risk to the long term sustainability of the municipal water supply. Production of these reports is sequential and requires peer review and peer reviewer sign-off prior to work moving on to the next phase. Table 1 identifies that all current Tier 3 work has entered the WQRA phase and the status of final reports due this year.

The draft WQRA report for Guelph, Hamilton Drive and Rockwood has been peer reviewed, edited and is awaiting sign-off of the final report in September. A detailed characterization of the upstream source by Matrix Solutions Inc. (MSI) has revealed modeling uncertainties that result in a "significant" water quantity risk for the City of Guelph's water supply. Preparations are underway by the City and MSI to commence a Risk Management Measures Evaluation Process (RMMEP). The final Water Budget and WQRA Reports should be ready for filing in September.

The revised draft WQRA for the Region of Waterloo (including small rural systems) along with a summary of comments has been reviewed by Region staff and circulated for peer reviewer sign-off in August. MSI are reporting a "low" water quantity risk for the Region of Waterloo's water supply which means there are no significant threats. The final Water Budget and WQRA Reports should be ready for filing in October.

The Long Point Region draft WQRA Report will be circulated for peer review in early September. Initial results from MSI have identified the potential for a "significant" water quantity risk to the Simcoe water supply due to falling groundwater levels in municipal wells and increasing nitrate levels, which means that existing and future activities could be identified as significant threats. A peer review meeting will be scheduled for early fall for a presentation of

the risk assessment results to be followed by comment amendments to the WQRA report. The peer review team will be asked to sign-off on the final Water Budget and WQRA reports by the end of 2014. If a "significant" water quantity risk is confirmed, LESPR staff will work with Norfolk County and MSI to commence a Risk Management Measures Evaluation Process (RMMEP).

With respect to the Fergus-Elora municipal water supply, water use estimates in the Irvine Creek subwatershed have been reassessed and the results are still close enough to the Tier 2 "moderate" stress threshold to trigger Tier 3 work in the future use scenario. The funding requirements for this project will be reassessed as part of the 2015-16 technical studies budget.

Tier 3 work will start in the fall to consider risks to the municipal water supplies in the Village of Bright and the Bethel well, which serves Paris. Consultant Terms of Reference are being approved for Invitations to Consultants to complete a water budget project for the Whitemans Creek subwatershed which will assess these two municipal systems along with the significant agricultural water takings on the Norfolk Sand Plain.

Subsequent to completion of the Tier 3 Water Budget studies, work will commence on the population of the MNR's Water Quantity Data Model with information from the completed Tier 3 studies. Work will also commence on the RMMEPs for any completed Tier 3 studies that have identified water quantity risks to municipal water supplies.

Following the peer reviewer sign-off of these Water Budget projects later this year, staff will return to the Lake Erie Region Source Protection Committee for their direction to include the results of these studies in the amended Grand River and Long Point Region Assessment Reports.

Prepared by:



James Etienne
Senior Water Resources Engineer

Approved by:



Martin Keller, M.Sc.
Source Protection Program Manager

Table 1: Water Quantity Report and Peer Review Status

Tier 3 Project	Study Started	Conceptual Model		Water		Budget		Risk Assessment		Expected Completion with Peer Review	
		Report	Peer Review	Report	Peer Review	Report	Peer Review	Report	Peer Review		
Existing Projects Guelph Rockwood & Hamilton Drive <i>(Desktop review based on Guelph model)</i> RMOW Integrated Urban System RMOW Small Rural Systems Long Point (Simcoe, Waterford, Delhi)	Oct-07	Jul-11	Yes	Aug-11	Yes	Aug-14	Yes	Aug-14	Yes	Sep-14	
	May-13	Jul-11	Yes	Aug-11	Yes	Aug-14	Yes	Aug-14	Yes	Sep-14	
	Oct-07	Jan-12	Yes	Nov-12	Yes	Aug-14	Draft	Aug-14	Draft	Oct-14	
	May-11	Sep-12	Yes	Nov-12	Yes	Aug-14	Draft	Aug-14	Draft	Oct-14	
	Jul-10	Mar-13	Yes	Dec-13	Yes	Sep-14		Sep-14		Dec-14	
2014 Projects											
Whitemans Creek (Paris-Bethel, Bright)	Jul-14	Terms of Reference completed for a consultant selection process in September for work to start this fall. GRCA have commenced geotechnical monitoring. Data collection and mapping work starts in September.									Spring 2016
Cancelled Projects											
Lynden	Apr-13	Updated water use information have confirmed the Tier 2 stress potential in the Big Creek subwatershed is "low" and a Tier 3 study is no longer required.									n/a
Tillsonburg	Jul-10	Updated future water use projections have confirmed the Tier 2 stress potential in the Big Otter Creek subwatershed does not trigger a Tier 3 Risk Assessment. Awaiting MOE approval of the Tier 2 re-evaluation.									n/a
Deferred Projects											
Fergus-Elora	Deferred as future work. Reassessed municipal future water use estimates and the recalculations still confirm the "Moderate" stress threshold is exceeded under future use scenarios.									Post 2015	

Karen Landry

From: Robert McFarlane <rwdmcfarlane@hotmail.com>
Sent: September-03-14 10:43 PM
To: Karen Landry
Subject: All Candidates Meeting

Dear Karen,

On behalf of the Optimist Club of Puslinch I wish to ask Council to wave the rental fee for the Community Centre For the All Candidates meeting on October 8th.

As the name implies all of the candidates will be Invited. It is a community service that we are providing with equal opportunity for all.

Thank you for your consideration.

Robert