

Appendix D

PUBLIC AND AGENCIES COMMENTS

Lynden Wells Class EA
Agency Mailing List

Name	Organization	Mailing Addresss 2	City, Province	Postal Code	PIC #2
Ms. Jayne Carman	Brant County	P.O. Box 160	Burford, ON	N0E 1A0	Mailed the PIC#2 Notice
Mr. Robert Cunningham	Ministry of Agriculture and Food	1 Stone Rd. W., 2nd Floor	Guelph, ON	N1G 4Y2	Mailed the PIC#2 Notice
Ministry of the Environment and Climate Change		2 St. Clair Ave. W. 14th Floor	Toronto, ON	M4V 1L5	Mailed the PIC#2 Notice
Ms. Loraine Graham-Watson	Ministry of Community and Social Services	119 King St. W. 7th Floor	Hamilton, ON	L8P 4Y7	Mailed the PIC#2 Notice
Ministry of Transportation		1201 Wilson Ave., Bldg. D., 3rd Floor	Downsview, ON	M4V 1L5	Mailed the PIC#2 Notice
Ministry of Aboriginal Affairs		160 Bloor Street East, 9th Floor	Toronto, ON	M7A 2E6	Mailed the PIC#2 Notice
Mr. Ian Hagman	Ministry of Natural Resources	1 Stone Rd. W.	Guelph, ON	N1G 4Y2	Mailed the PIC#2 Notice
Ms. Barbara Slattery	Ministry of the Environment and Climate Change	119 King St. W., 12th Floor	Hamilton, ON	L8P 4Y7	Mailed the PIC#2 Notice
Ms. Gemma Connolly	Ministry of the Environment	2 St. Clair Ave. W. 14th Floor	Toronto, ON	M4V 1L5	Mailed the PIC#2 Notice
Rose Whalen	Ministry of Natural Resources	1 Stone Rd. W.	Guelph, ON	N1G 4Y2	Mailed the PIC#2 Notice
Mr. Corwin Troje	Ministry of Aboriginal Affairs Consultation Unit	160 Bloor Street East, 9th Floor	Toronto, ON	M7A 2E6	Mailed the PIC#2 Notice
Ms. Pauline Van Room	Ministry of Transportation	1201 Wilson Ave; Bldg. D. 4th Floor	Downsview, ON	M4V 1L5	Mailed the PIC#2 Notice
Mr. Ken Whitebread	Niagara Escarpment Commission	232 A Guelph Street	Georgetown, ON	L7G 4B1	Mailed the PIC#2 Notice
Ms. Carlene Whittingham	Ministry of Municipal Affairs & Housing	777 Bay St., 13th Floor	Toronto, ON	M5G 2C8	Mailed the PIC#2 Notice
Laura Hatcher	Ministry of Tourism, Culture & Sport	401 Bay Street, 17th Floor	Toronto, ON	M7A 0A7	Mailed the PIC#2 Notice

Lynden Wells Class EA
Agency Mailing List

Name	Organization	Mailing Addresss 2	City, Province	Postal Code	PIC #2
Aboriginal Affairs and Northern Development Canada		300 Sparks Street, Room 205	Ottawa, ON	K1A 0H4	Mailed the PIC#2 Notice
Mr. Rob Dobos	Environment Canada	867 Lakeshore Blvd.	Burlington, ON	L7R 4A6	Mailed the PIC#2 Notice
Ontario Ministry of Environment		2 St. Clair Ave. W. 14th Floor	Toronto, ON	M4V 1L5	Mailed the PIC#2 Notice
Ms. Louise Knox	Canadian Environmental Assessment Agency	55 St. Clair Ave E. Room 907	Toronto, ON	M4T 1M2	Mailed the PIC#2 Notice
Dept. of Fisheries & Oceans		304 - 3027 Harvester Road	Burlington, ON	L7R 4K3	Mailed the PIC#2 Notice
Ms. Carol Pachoil	Canada Post Commercial Service Centre	27 Legend Crt	Ancaster, ON	L9K 1J0	Mailed the PIC#2 Notice
Mr. Mike Shaw	Environment Canada	867 Lakeshore Blvd.	Burlington, ON	L7R 4A6	Mailed the PIC#2 Notice
Ms. Rachel Speller	Lands and Trusts Services Env. Unit INAC	25 St. Clair Ave. E. 8th floor	Toronto, ON	M4T 1M2	Mailed the PIC#2 Notice
Ms. Susan Waters	Aboriginal Affairs and Northern Development Land and Environment Department	10 Wellington St.	Gatineau, QC	K1A 0H4	Mailed the PIC#2 Notice
Transport Canada		4900 Yonge Street, 4th Floor (PHE)	North York, ON	M2N 6A5	Mailed the PIC#2 Notice
Ms. Tina Durand	Huron-Wendat Nation Council	255 Place Chef Michel-Laveau	Wendake, QC	G0A 4V0	Mailed the PIC#2 Notice
Mr. Paul General	Six Nations Eco-Centre	1721 Chiefswood Road	Oshweken, ON	N0A 1M0	Mailed the PIC#2 Notice
Mr. Lonny Bomberly	Six Nations of the Grand River Territory	2498 Chiefswood Road, P.O. Box 5000	Oshweken, ON	N0A 1M0	Mailed the PIC#2 Notice
Hohahes Leroy Hill	Haudenosaunee Chiefs Council	2634 6th Line RR2	Oshweken, ON	N0A 1M0	Mailed the PIC#2 Notice
Mr. Mark LaForme	Mississaugas of New Credit First Nation	6 First Line, R.R. #6	Hagersville, ON	N0A 1H0	Mailed the PIC#2 Notice

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Fawn Sault	Mississaugas of New Credit First Nation	6 First Line, R.R. #6	Hagersville, ON	N0A 1H0	Mailed the PIC#2 Notice
Ms. Terri Ardelli	TransCanada Pipelines	450-1st Street S.W.	Calgary, AB	T2P 5H1	Mailed the PIC#2 Notice
Mr. John Blakely	Enbridge Pipelines Inc.	801 Upper Canada Drive, P.O. Box 128	Sarnia, ON	N7W 1A3	Mailed the PIC#2 Notice
Mr. Jack Carello	Canadian Pacific Railway	1290 Central Parkway West, Suite 700	Mississauga, ON	L5C 4R3	Mailed the PIC#2 Notice
Mr. Enzo Greco	Union Gas	918 South Service Road	Stoney Creek, ON	L8E 5M4	Mailed the PIC#2 Notice
Mr. Ron Harten	Hamilton Utilities Corporation	The Textile Building 10 George Street Suite 300	Hamilton, ON	L8P 1C8	Mailed the PIC#2 Notice
Mr. Jim Oriotis	Hydro One	483 Bay Street, North Tower 15th Floor	Toronto, ON	M5G 2P5	Mailed the PIC#2 Notice
Mr. Paul Lane	Sun Canadian Pipeline	830 Highway 6 North, P.O. Box 470	Waterdown, ON	L0R 2H0	Mailed the PIC#2 Notice
Mr. Randy Leppert	Cogeco Cable Inc	7170 McLeod Rd	Niagara Falls, ON	L2G 3H5	Mailed the PIC#2 Notice
Mr. Stefan Linder	CN Rail	4 Welding Way off Administration Road	Vaughan, ON	L4K 1B9	Mailed the PIC#2 Notice
Mr. Bruno Milano	Source Cable	1090 Upper Wellington St	Hamilton, ON	L9A 3S6	Mailed the PIC#2 Notice
Ms. Colleen Mitchell	Imperial Oil Products & Chemical Division	100 - 5th Concession Rd. E.	Waterdown, ON	L0R 2H1	Mailed the PIC#2 Notice
Ms. Ann Newman	Enbridge Pipelines Inc.	801 Upper Canada Drive, P.O. Box 128	Sarnia, ON	N7W 1A3	Mailed the PIC#2 Notice
Mr. Mark Jakubowski	Horizon Utilities Corporation	55 John St. N., 6th Floor	Hamilton, ON	L8R 3M8	Mailed the PIC#2 Notice
Ms. Morelle Stratychuk	Bell Canada	20 Hunter St. W.	Hamilton, ON	L8N 3H2	Mailed the PIC#2 Notice

Lynden Wells Class EA
Agency Mailing List

Name	Organization	Mailing Addresss 2	City, Province	Postal Code	PIC #2
Mr. John Winkley	Southern Ontario Railway	241 Stuart St. W.	Hamilton, ON	L8N 3P9	Mailed the PIC#2 Notice

Lynden Wells Class EA
City of Hamilton Mailing List

Last Name	First Name	Title	Job Title	Organization	Street Address	City and Province	Postal Code	PIC #2
Brown	Jack	Mr.	Division Director, Recreation Community & Emergency Services Department	City of Hamilton	Lister Block, 28 James St. N., 3rd Floor Mailing Address: PO Box 2040	Hamilton, ON	L8P 4Y5 (for mailing address)	Emailed a pdf copy of the mailout
Caterini	Rose	Ms.	City Clerk	City Managers Office	71 Main Street West, 1st Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
DiDomenico	Jennifer	Mr.	Manager of Policy and Programs	Public Works	77 James St. N., Suite 400	Hamilton, ON	L8R 2K3	Emailed a pdf copy of the mailout
Ehrenberg	Udo	Mr.	Manager of Infrastructure Planning & Systems Design	Public Works	77 James Street North, Suite 400	Hamilton, ON	L8R 2K3	Emailed a pdf copy of the mailout
Eisenberger	Fred	Mr.	Mayor	City of Hamilton	71 Main Street West, 2nd Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Everson	Neil	Mr.	Director of Economic Development	Planning & Economic Development	71 Main St W 7th flr	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Fabac	Anita	Ms.	Manager of Development Planning, Heritage & Design	Planning and Economic Development	71 Main Street West, 5th Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Grice	Andrew	Mr.	Director, Water & Wastewater Operations	Public Works	77 James St. N., Suite 400	Hamilton, ON	L8R 2K3	Emailed a pdf copy of the mailout
Homerski	Philip	Mr.	Communications Officer	City Managers Office	71 Main Street West, 2nd Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Korah	Binu		Manager of Engineering Approvals Group	Planning & Economic Development	71 Main Street West Floor: 5th Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Morgante	John	Mr.	Acting Director, Development Engineering	Planning & Economic Development	71 Main Street West, 6th Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Newbold	Christine	Ms.	Senior Project Manager	Planning and Economic Development	71 Main Street West, 6th Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Norman	Robert	Mr.	Director, Strategic Planning	Public Works	77 James St. N., Suite 400	Hamilton, ON	L8R 2K3	Emailed a pdf copy of the mailout
Paparella	Guy	Mr.	Director of Growth Planning	Planning & Economic Development	71 main St W 6th flr	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Plosz	Catherine	Ms.	Natural Heritage Planner (Rural)	Planning & Economic Development	71 Main St W 5th Flr	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Richardson	Elizabeth	Dr.	Medical Officer of Health	Pubic Health Services	1 Hughson St. N., 4th Floor	Hamilton, ON	L8R 3L5	Emailed a pdf copy of the mailout
Robichaud	Steve	Mr.	Director of Planning	Planning & Economic Development	71 Main Street West, 6th Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Sergi	Tony	Mr.	Senior Director, Growth Management	Planning & Economic Development	71 Main St W 6th flr	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Thorne	Jason	Mr	General Manager	Planning & Economic Development	71 Main Street West, 7th Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout

Lynden Wells Class EA
City of Hamilton Mailing List

Last Name	First Name	Title	Job Title	Organization	Street Address	City and Province	Postal Code	PIC #2
Yong-Lee	Sally	Ms.	Manager, Infrastructure Planning	Planning & Economic Development	71 Main Street West, 7th Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Zegarac	Mike	Mr.	Director, Financial Planning & Policy	Corporate Services	71 Main Street West, 1st Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Collins	Chad	Mr.	Councillor, Ward 5	City of Hamilton	71 Main Street West, 2nd Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Conley	Doug	Mr.	Councillor, Ward 9	City of Hamilton	71 Main Street West, 2nd Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Farr	Jason	Mr.	Councillor, Ward 2	City of Hamilton	71 Main Street West, 2nd Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Ferguson	Lloyd	Mr.	Councillor, Ward 12	City of Hamilton	71 Main Street West, 2nd Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Green	Matthew	Mr.	Councillor, Ward 3	City of Hamilton	71 Main Street West, 2nd Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Jackson	Tom	Mr.	Councillor, Ward 6	City of Hamilton	71 Main Street West, 2nd Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Johnson	Aidan	Mr.	Councillor, Ward 1	City of Hamilton	71 Main Street West, 2nd Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Johnson	Brenda	Ms.	Councillor, Ward 11	City of Hamilton	71 Main Street West, 2nd Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Merulla	Sam	Mr.	Councillor, Ward 4	City of Hamilton	71 Main Street West, 2nd Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Partridge	Judi	Ms.	Councillor, Ward 15	City of Hamilton	72 Main Street West, 2nd Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Pearson	Maria	Ms.	Councillor, Ward 10	City of Hamilton	74 Main Street West, 2nd Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Skelly	Donna	Ms.	Councillor, Ward 7	City of Hamilton	71 Main Street West, 2nd Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Vander Beek	Arlene	Ms.	Councillor, Ward 13	City of Hamilton	75 Main Street West, 2nd Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Whitehead	Terry	Mr.	Councillor, Ward 8	City of Hamilton	76 Main Street West, 2nd Floor	Hamilton, ON	L8P 4Y5	Emailed a pdf copy of the mailout
Natolochny	Fred	Mr.	Manager of Watershed Resources	Grand River Conservation Authority	P.O. Box 729 400 Clyde Road	Cambridge, ON	N1R 5W6	Emailed a pdf copy of the mailout
Keller	Martin	Mr.	Source Protection Program Manager	Grand River Conservation Authority	P.O. Box 729 400 Clyde Road	Cambridge, ON	N1R 5W6	Emailed a pdf copy of the mailout
Bloomfield	Diane	Ms.	Manager, Source Water Protection	Conservation Halton				Emailed a pdf copy of the mailout



NOTICE OF STUDY COMMENCEMENT and PUBLIC INFORMATION CENTRE NO. 1 Class Environmental Assessment for Lynden Communal Water Supply

THE STUDY

The City of Hamilton has initiated a Class Environmental Assessment (EA) process for potable water supply to the Lynden Rural Settlement Area (RSA). This process will identify a water supply source to better secure the supply of drinking water to the community. Currently, the majority of the Lynden RSA receives its drinking water from a single groundwater well and single storage/treatment facility. In 2002, a Comprehensive Water Servicing Master Plan identified the need for additional water supply for the Lynden RSA. The additional water supply would provide backup for the existing well and capacity for future demand of the servicing area. This study will assess reasonable alternative water supply sources in order to select a preferred servicing source. Once a preferred water supply source is selected, the treatment design options will be considered.

PROBLEM STATEMENT

This study is being undertaken to address the following conditions in the existing Lynden potable water supply system:

- The capacity to meet the future demands of the water servicing area, and
- The current single well and treatment system provide no redundancy to ensure a secure supply.

THE PROCESS

This project is being planned under the planning and design process for **Schedule C** projects as defined in the Municipal Engineers Association's *Municipal Class Environmental Assessment* (June 2000). Schedule C projects proceed through the full environmental assessment planning process as outlined in the Class EA. Public and agency consultation is required throughout the project. Schedule C Projects generally include expansions to existing facilities.

PUBLIC INFORMATION CENTRE No. 1

The Public Information Centre will be held to present:

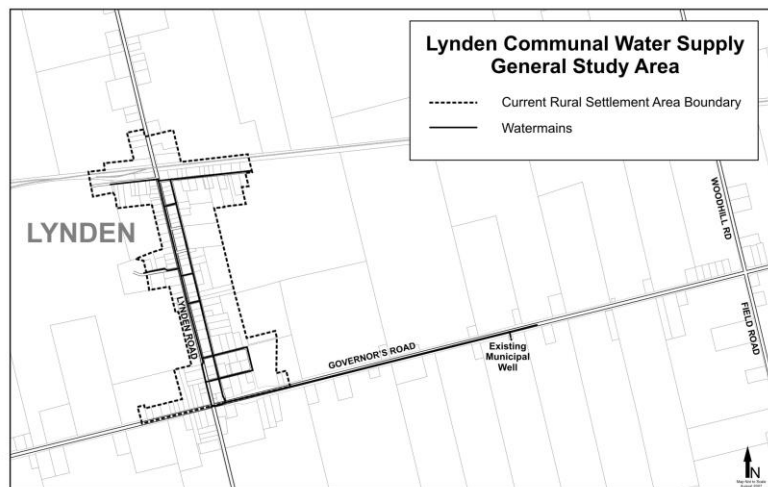
- Problem/Opportunity Statement
- Summary of Existing Conditions
- Evaluation Criteria
- List of Alternatives for Consideration
- Evaluation of Alternatives

Date: Tuesday, October 23, 2007

Time: 4:30 p.m. to 8:30 p.m.

Location: Copetown and District Community Centre,
1950 Governor's Road, Copetown, ON

A second Public Information Centre will be held to present the evaluation of alternative designs and the recommended preliminary design of improvements. Upon completion of the study, the Environmental Study Report will be available for public review and comment. Advertisements will be published at these times.



PUBLIC COMMENT INVITED

If you have any questions or comments or wish to be added to the study mailing list, please contact either:

Chris Shrive, Project Manager
Water & Wastewater Div., City of Hamilton
55 John Street North
Hamilton, ON L8R 3M8
905-546-2424, Ext. 7209
Fax: 905-546-4491
Email: cshrive@hamilton.ca

Gary Scott, Consultant
GENIVAR Ontario Inc.
600 Cochrane Dr. Suite 500
Markham, Ontario L3R 5K3
(905)-475-7270, Ext. 339
Fax: (905)-475-5994
Email: gary.scott@genivar.com

Information will be collected in accordance with the *Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

WELCOME TO THE

Class Environmental Assessment for Lynden Communal Water Supply

PUBLIC INFORMATION CENTRE NO. 1



Please Complete the Sign-in Sheet and review the display materials.
The Project Team is available to answer your questions and address any concerns.

Your input is valued!

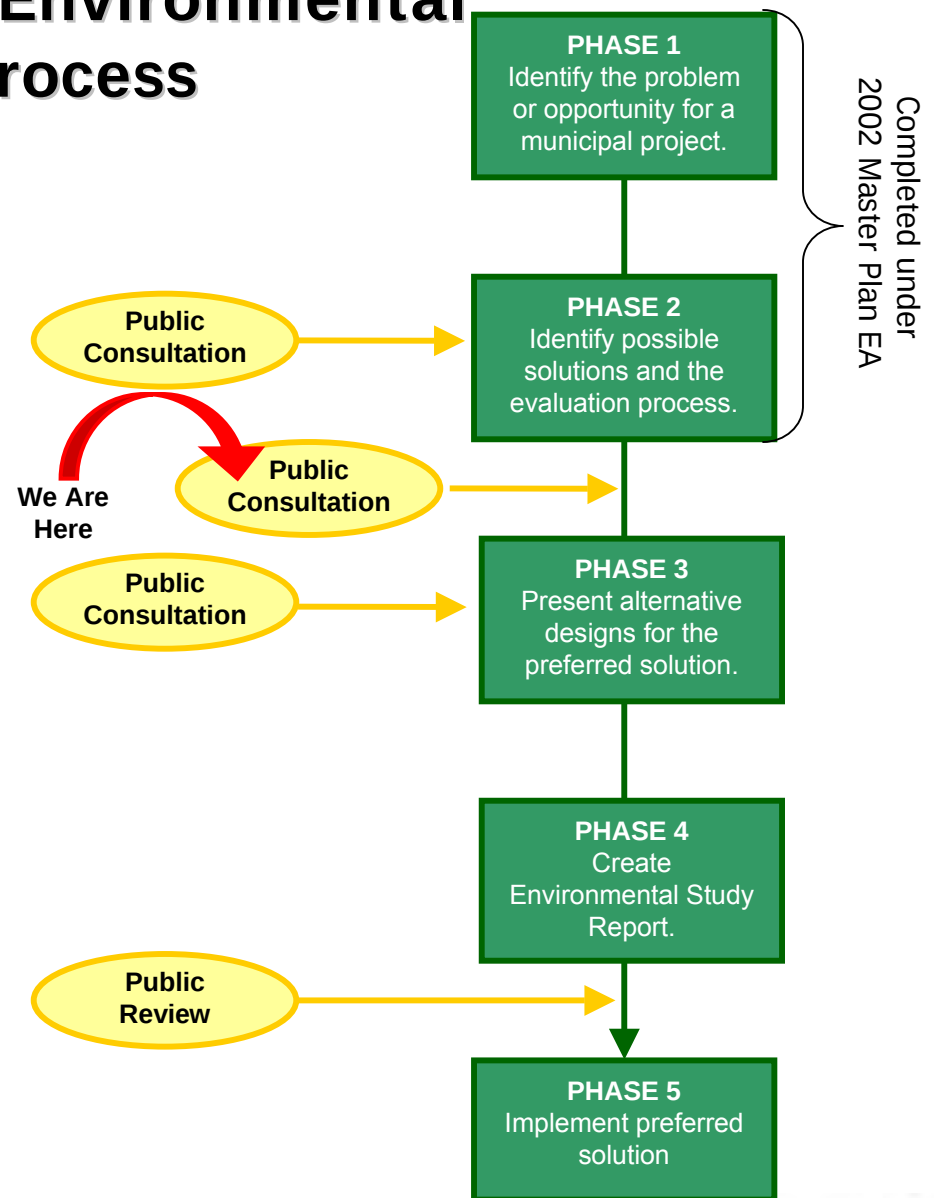
Please fill out a comment sheet.

What is a Class Environmental Assessment?

- ◆ An Environmental Assessment Study examines alternatives and impacts for proposed projects and confirms the best alternative solution.
- ◆ The study will consider the short and long term water supply requirements for the Community of Lynden.
- ◆ Input from the Public and Government Agencies will be a key component of the study.
- ◆ Information gathered during the study will be used to assess the alternatives and develop a recommended solution.

Overview of the Class Environmental Assessment Process

- ◆ This project is being undertaken in accordance with the *Municipal Class Environmental Assessment (2000)* for a Schedule 'C' undertaking (Phases 1 to 5).
- ◆ The *Municipal Class EA* is approved under the *Environmental Assessment Act* and enables the planning of municipal infrastructure projects in accordance with a proven process for protecting the environment.
- ◆ The Schedule 'C' Class EA process includes public and review agency consultation, an evaluation of alternatives, an assessment of the effects on the environment, and identification of reasonable measures to mitigate any adverse effects.
- ◆ There is an opportunity at any time during the Class EA process for public input, including this Public Information Centre.
- ◆ Upon completion of the Class EA process, an Environmental Study Report (ESR) will be available for public review.

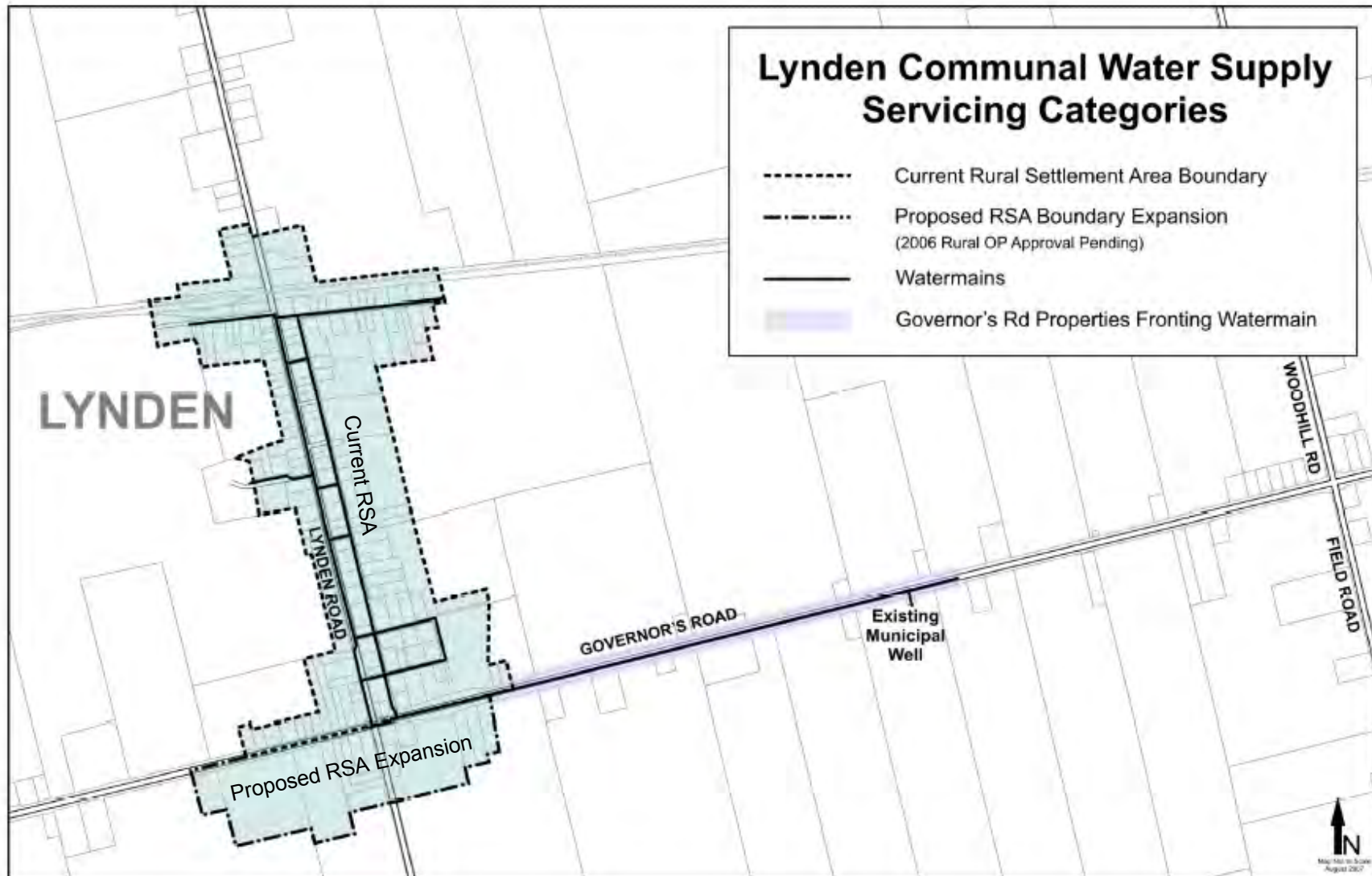


The Existing System - Water Treatment & Storage

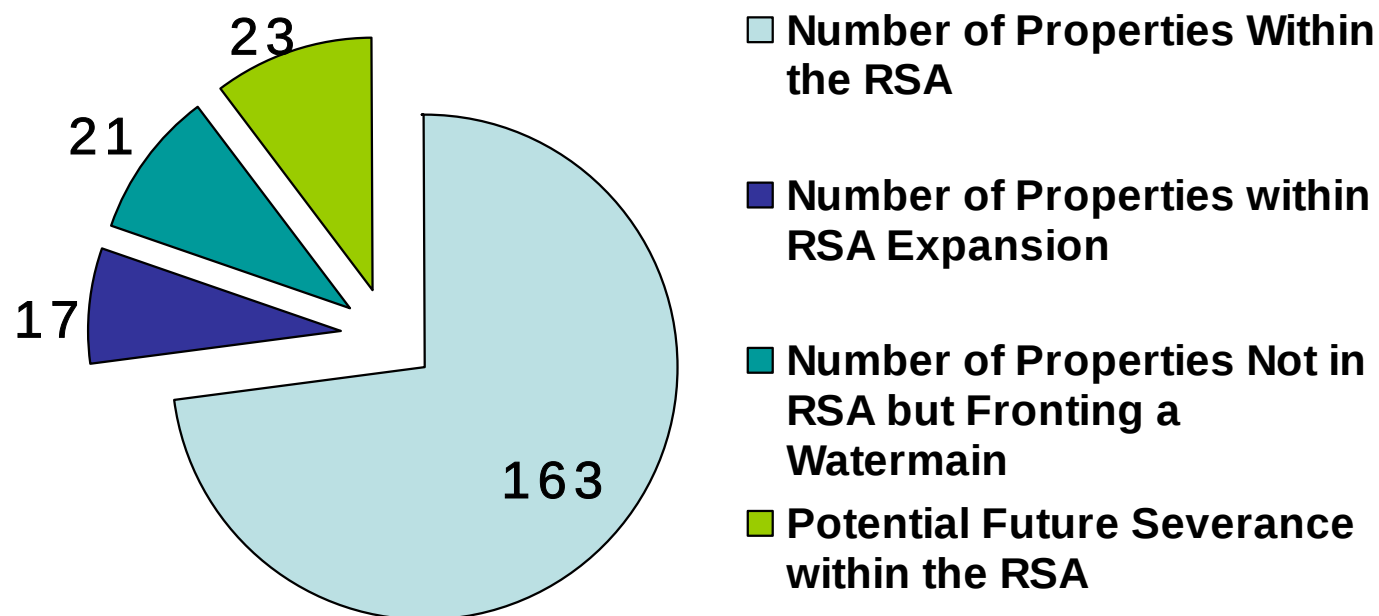
- ◆ Existing facility has a permitted capacity of 227 L/min.
- ◆ Existing well water originates from a deep, protected aquifer.
- ◆ Raw water requires chlorine disinfection and hydrogen sulphite removal prior to being pumped to the distribution system.
- ◆ The treatment/storage facility is comprised of one well and an underground reservoir, comprising two (2) treatment/storage cells and two (2) interconnected pump wells complete with a high lift pumping station.
- ◆ Raw water from the well enters the first cell where aeration is carried out. Disinfection of the raw water is carried out in the second cell before the water is delivered to the distribution system by the high lift pumps.



Proposed Lynden Water Servicing Area



Lynden Water Servicing Area



- ◆ Of the 163 properties currently in the RSA, 116 are connected and metered and 26 are not connect or not metered.
- ◆ Of the 17 properties in the proposed RSA expansion 3 are already connected and metered.
- ◆ Of the 21 properties outside the future RSA boundary but fronting a water main 8 are already connected.
- ◆ Current there are a total of 127 connections, with 224 potential connections in the future.

Water Demand Projections

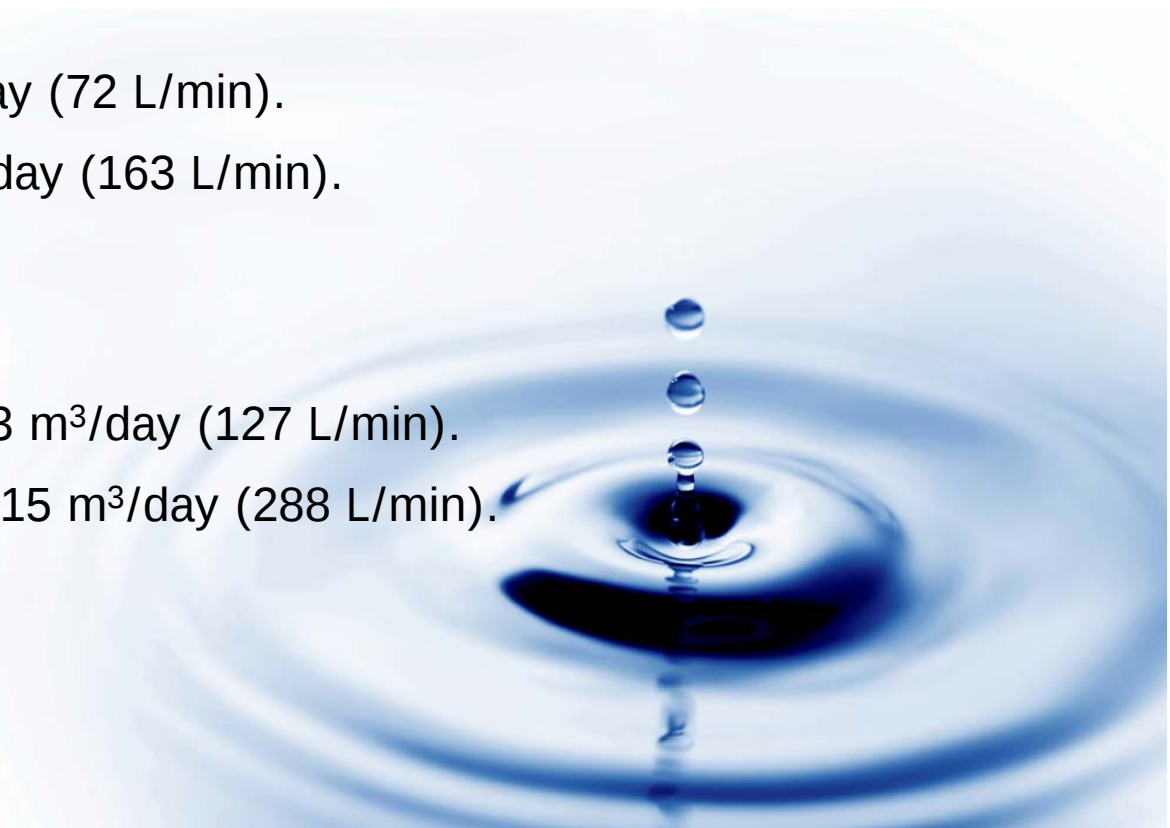
Current Demands

- ◆ Permit to Take Water for the existing system limits the maximum pumping rate to 227 L/min or 327 m³/day, this is also the design capacity of the facility.
- ◆ 127 metered service connections.
- ◆ Average day demand of 103 m³/day (72 L/min).
- ◆ Maximum day demand of 235 m³/day (163 L/min).

Future Projected Demands

- ◆ 224 potential service connections.
- ◆ Future average day demand of 183 m³/day (127 L/min).
- ◆ Future maximum day demand of 415 m³/day (288 L/min).

The new well and treatment facility will need a pumping capacity of 415 m³/day



Problem Statement

This study is being undertaken to address the following conditions in the existing Lynden potable water supply system:

- ◆ The current single well and treatment system provide no redundancy to ensure a secure supply; and,
- ◆ The capacity to meet the future demands of the water servicing area.



Comprehensive Water Servicing Master Plan For the Lynden Rural Settlement Area (RSA), 2002

In 2002 the City of Hamilton commissioned a Comprehensive Water Servicing Master Plan For the Lynden RSA, this was conducted in accordance with a Class Environmental Assessment.

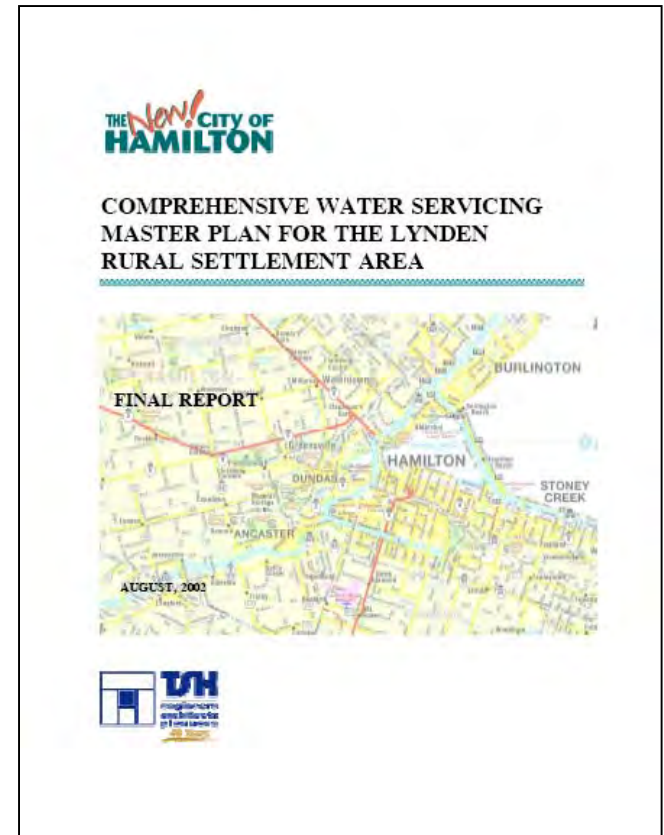
The Master Plan considered the following:

◆ Water Supply Alternatives

- Do Nothing
- Water Conservation /Demand
- **Upgrade the Existing Well System (*Selected*)**
- New Groundwater Supply
- Connect to an Adjacent System

◆ Water Distribution System Alternatives

- Do Nothing
- **Upgrade to Improve Operation/Looping (*Selected*)**
- Upgrade to Fire Protection
- System storage for pressure control



Comprehensive Water Servicing Master Plan For the Lynden RSA - Recommendations

The Master Plan recommended the following:

- ◆ Upgrade the existing facility
 - Replace the well discharge pipe. (*Completed*)
 - Replace the well pump. (*Completed*)
 - Recalibrate the well sensor. (*Completed*)
 - Implement turbidity treatment to reduce raw water turbidity levels. (*Completed*)
 - Upgrade well cap and install measuring port. (*Completed*)
 - **Construct a backup well (Subject of this Assessment)**
- ◆ Water efficiency public education. (*On Going*)
- ◆ Looping of water distribution system. (*Completed*)
- ◆ Undertake hydrogeological investigation to determine aquifer capacity and local well interference. (*Future Work*)
- ◆ Further assess ability to supply water from the Dundas system. (*No longer Considered due to the policies within the Greenbelt Act, 2005*)
- ◆ Develop wellhead protection strategy. (*In Progress*)

Water Servicing For the Lynden RSA - Alternatives

Alternative	Description	Conclusion
Do Nothing	The “Do Nothing” alternative represents what would occur if none of the alternatives were selected.	<i>Did not meet the requirements of the RSA and considered in Master Plan</i>
Water Conservation / Demand	Implement water conservation measures such as flow metering, encouraging the use of low flush toilets in existing and new developments, toilet replacement, leak detection, undertaking rehabilitation activities.	<i>Did not meet the requirements of the RSA and considered in Master Plan</i>
Upgrade the Existing Well System	Upgrading the existing facility to meet the Ministry of the Environment requirements. The upgrades would include treatment to reduce the treated water turbidity, replacement of the pump and well cap and construction of a backup well with increased capacity.	<i>Selected Alternative in Master Plan and remains Selected Alternative with increased capacity</i>
New Groundwater Supply	Develop a new groundwater supply from an alternate groundwater source in the Lynden area and construct a new treatment facility.	<i>Not economic, even with the increased capacity requirement and provided greater disruption during construction</i>
Connect to an Adjacent System	Build a new transmission main and booster station that would connect the Lynden RSA to the adjacent City of Hamilton lake based system. The closest connection is in Dundas, approximately 15km away.	<i>Considered for Long-term Expansion but no longer feasible due to the restriction of the Greenbelt Act, 2005.</i>

Reason for the Construction of a Backup Well Security of Supply

- ◆ Currently, all supply to Lynden is dependant on a single groundwater well.
- ◆ Ministry of the Environment Guidelines recommend that a minimum of two groundwater supplies be provided for the Lynden municipal system.
- ◆ Providing a second supply that ensures security in the event that one well needs to be taken out of service or is temporarily compromised.





Hamilton

PUBLIC WORKS DEPARTMENT
Water and Wastewater Division
Source Water and Infrastructure Planning Section

What Has Changed Since the 2002 Master Plan

Future Capacity *(Considered in this Information Centre)*

- ◆ Confirm the number of ultimate connections given:
 - Current City Policy to allow the connection of everyone within the RSA, as well as those lots fronting a water main.
 - Proposed expansion of the RSA.
- ◆ Consider the last three years of recorded demands on the existing facility.

Well Siting *(Considered in this Information Centre)*

- ◆ More detailed assessment of potential locations for the proposed well.

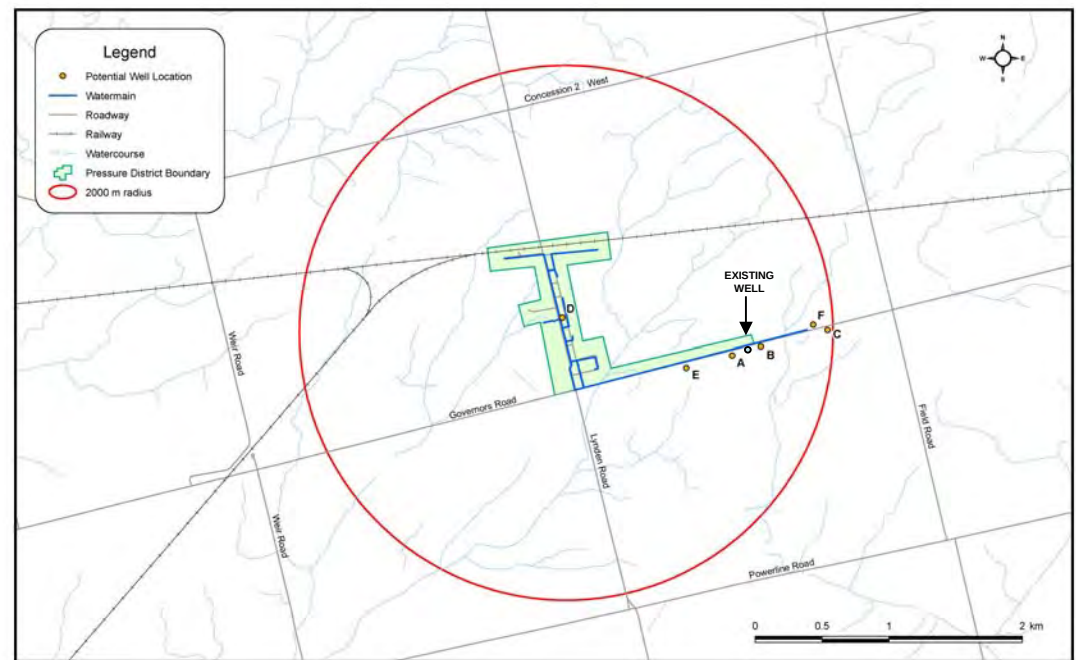
Additional Treatment and Storage *(Further assessment of options in the next Information Centre)*

- ◆ New legislation requires improved security and back up for water treatment.
- ◆ A second facility would provide redundancy and additional flexibility of operation and maintenance.

Proposed Locations for the Backup Well

Six Potential Locations:

- ◆ Alternative A – 175m west of existing well
- ◆ Alternative B – 100m east of existing well
- ◆ Alternative C – 550m east of existing well
- ◆ Alternative D – Lynden, 575m north of Governor's Road
- ◆ Alternative E – 525m west of existing well
- ◆ Alternative F – 475m east of existing well
- ◆ Alternative G – Existing well site





Hamilton

PUBLIC WORKS DEPARTMENT
Water and Wastewater Division
Source Water and Infrastructure Planning Section

Criteria for Assessment of Potential Well Locations

<u>Criteria</u>	<u>Factor</u>	<u>Criteria</u>	<u>Factor</u>
Supply Potential	1. Target greater aquifer thickness 2. Required capacity of 415 m³/day based on surrounding wells	Interference Potential	1. Minimize impacts to nearby water wells 2. Minimize impacts to surface water features
Land Ownership	1. City owned land preferred 2. Cost effective	Potential for Contamination	1. Low susceptibility to surface contamination
Physical Constraints	1. Site accessibility 2. Minimize disturbance 3. Environmental conditions	System Redundancy	1. Maximize distance from existing well
Water Quality	1. Fresh water probability	Groundwater under the Influence Potential	1. Greater than 100 m to surface water
		Proximity to Distribution System	1. Minimize distance to distribution system

Assessment of Potential Well Locations

Evaluation Criteria		Supply Potential	Land Ownership	Physical Constraints	Probable Water Quality	Interference Potential	Potential for Contamination	System Redundancy	Groundwater under the Influence Potential	Distance to Distribution System (m)
Evaluation Factor		Low / Medium / High	Private / City	Low / Medium / High	Low / Medium / High	Low / Medium / High	Low / Medium / High	Low / Medium / High	Yes / No	< 2000
Site	Ranking									
A	4	Medium	Private	Medium	High	Low	Low	Medium	Yes	30
B	3	Medium	Private	Low	High	Low	Low	Medium	No	30
C	5	Low	Private	Low	High	Medium	Low	High	No	220
D	6	Low	Private	Medium	High	Medium	Medium	High	No	<100
E	2	Medium	Private	Medium	High	Low	Low	High	No	20
F	1	Medium	City	Low	High	Low	Low	High	No	140
G	7	High	Private	Medium	High	Low	Medium	Low	No	0

Preferred Location for the Backup Facility

Preferred First Priority:

- ◆ **Alternative F (3505 Governors Rd.)**
- ◆ City of Hamilton owned property
- ◆ No physical constraints
 - ◆ Easy site access
 - ◆ Existing open space/passive agricultural use
- ◆ No foreseeable environmental concerns
- ◆ Has the potential to provide the required supply



Drilling Program at the Preferred Site

Well Survey

- ◆ A private well survey will be conducted to determine which residences in the area use wells.

Drilling of Test Well

- ◆ A large drill rig will be mobilized on site to drill the test well.



Well Evaluation and Monitoring Program

New Well Evaluation

- ◆ Environmental features will be assessed within a 500m radius of the proposed well site
- ◆ A 72-hour pumping test will be conducted to determine the yield and water quality of the new well
- ◆ Discharge during the test will be directed to nearby ditches.

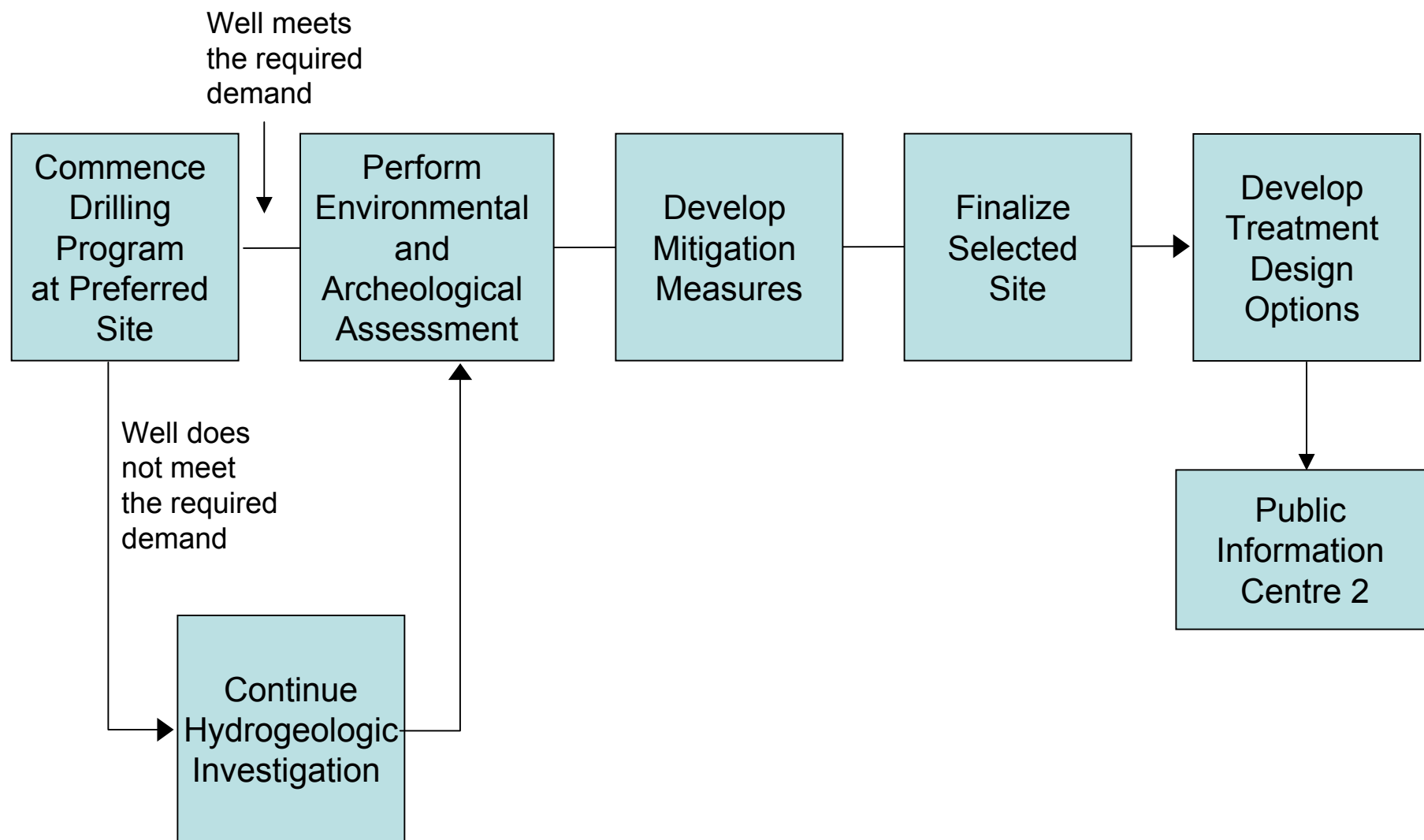
Monitoring

- ◆ Water levels in private wells will be monitored during the test to determine potential interference. This will be on a volunteer basis.*



* Please speak to our project team if you are interested in participating in the private well survey

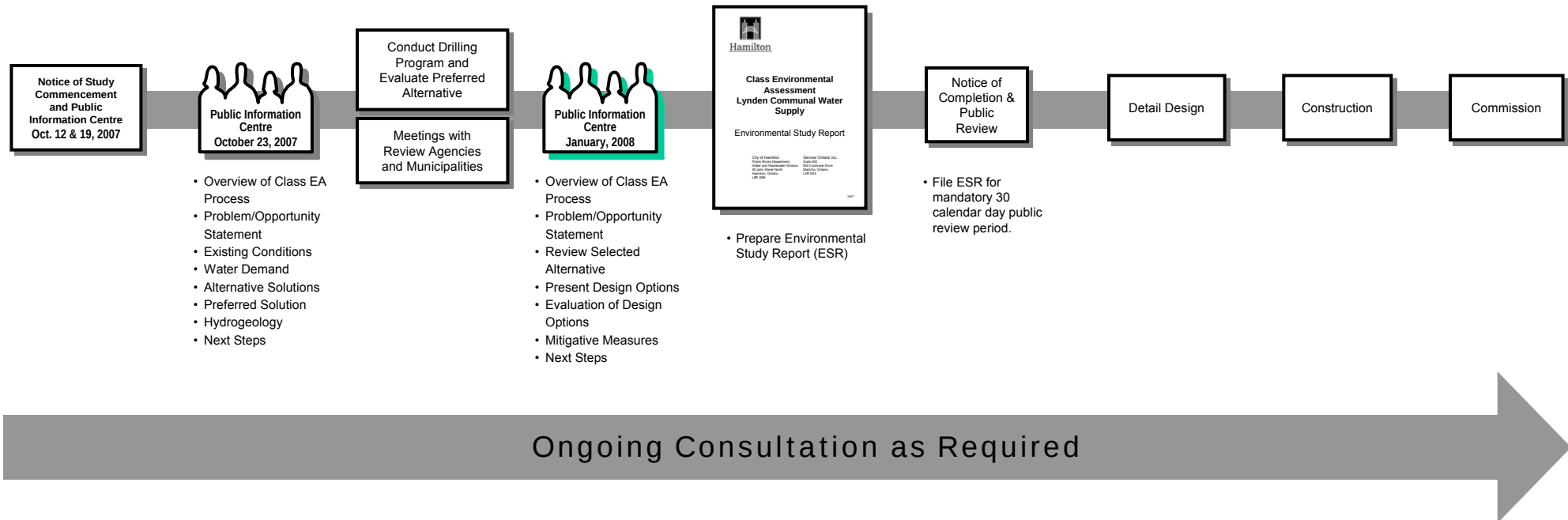
Prior to the Next Public Information Centre



Next Steps

October 2007

Summer 2008



A second Public Consultation Centre will be held to solicit input on the selection process and the recommended solution in January, 2008.

How to Get Involved?

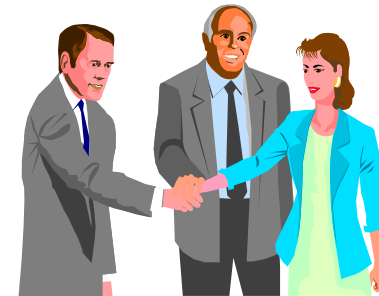
Mr. Chris Shrive, Project Manager

Water & Wastewater Division
City of Hamilton
55 John Street North
Hamilton, ON L8R 3M8
Phone: 905-546-2424, Ext. 7209
Fax: 905-546-4491
Email: cshrive@hamilton.ca

Mr. Gary Scott, P.Eng., Consultant

GENIVAR Ontario Inc.
600 Cochrane Drive, Suite 500
Markham, Ontario L3R 5K3
Phone: 905.475.7270 Ext. 339
Fax: 905.475.5994
Email: gary.scott@genivar.com

We Would Like to Hear From You





Lynden Communal Water Supply Class EA

Public Consultation Centre #1
Tuesday, October 23, 2007 – Lynden
Copetown and District Community Centre,
1950 Governor's Road, Copetown, ON

Sign In Sheet

Please Print				
Name	Affiliation	Address	Telephone	Add to Mailing List? (Yes or No)
[REDACTED]	[REDACTED]	[REDACTED] GOVERNORS RD.	[REDACTED]	Yes.
[REDACTED]	resident	[REDACTED]	[REDACTED]	Yes
[REDACTED]	Retired	[REDACTED] Governor's Rd.	[REDACTED]	YES
[REDACTED]	Retired	[REDACTED] Damabus St.	[REDACTED]	Yes.
[REDACTED]	Retired	[REDACTED] Governor's Rd.	[REDACTED]	Yes
[REDACTED]	Retired	[REDACTED] Lynden Rd	[REDACTED]	Yes



Lynden Communal Water Supply Class EA

Public Consultation Centre #1
Tuesday, October 23, 2007 – Lynden
Copetown and District Community Centre,
1950 Governor's Road, Copetown, ON

Please Print				
Name	Affiliation	Address	Telephone	Add to Mailing List? (Yes or No)
Robert Pasuta	City Councillor ward 14	City Hall		
				Yes.
	Resident	Union St Lynden		Yes
	RESIDENT	LYNDEN RD		YES
	RESIDENT	GOVERNORS RD RR 2 LYNDEN		YES
	RESIDENT	GOVERNORS ROAD		YES
		Woodhill Rd.		Yes
	RESIDENT	LIBERTY ST LYNDEN LOD-1 TO		YES



Lynden Communal Water Supply Class EA

Public Consultation Centre #1
Tuesday, October 23, 2007 – Lynden
Copetown and District Community Centre,
1950 Governor's Road, Copetown, ON

Please Print				
Name	Affiliation	Address	Telephone	Add to Mailing List? (Yes or No)
[REDACTED]	Resident	[REDACTED] Lynden Rd.	[REDACTED]	✓
[REDACTED]		[REDACTED] Hwy 99	[REDACTED]	
[REDACTED]		[REDACTED] Hwy 99	[REDACTED]	✓
[REDACTED]	COPE TOWN LIONS	[REDACTED] Jerseyville Rd.	[REDACTED]	
[REDACTED]	COPE TOWN LIONS	[REDACTED] Hwy 5 N Troy	[REDACTED]	
[REDACTED]		[REDACTED] GOVERNOR RD	[REDACTED]	
[REDACTED]	Resident	[REDACTED] Governors Rd	[REDACTED]	✓
[REDACTED]	RESIDENT REP L.Y.C. + LYNDEN LIONS			



Lynden Communal Water Supply Class EA

Public Consultation Centre #1

Tuesday, October 23, 2007 – Lynden
Copetown and District Community Centre,
1950 Governor's Road, Copetown, ON

Please Print			
Name	Affiliation	Address	Telephone
			Add to Mailing List? (Yes or No)



Hamilton

PUBLIC WORKS DEPARTMENT
 Water and Wastewater Division
 Source Water and Infrastructure Planning Section

Class Environmental Assessment for the Lynden Communal Water Supply

LYNDEN
 The City of Hamilton is interested in hearing the community's comments, questions, concerns and suggestions regarding the water capacity assessment for water supply in the community of Schomberg. Please take a few minutes to complete this brief comment sheet. All comments will be carefully considered in the Environmental Assessment Process.

1. Do you have any comments related to the **existing water supply** in this study area?

2. Do you have any comments, concerns, questions or suggestions regarding the **Environmental Assessment Process or the overall approach** to the project?

NOT IF I GET TO HOOKUP.

3. Do you have any comments, concerns, questions or suggestions regarding the **evaluation criteria for assessment of potential well locations**?

NONE AT THIS TIME

4. Do you have any comments, concerns, questions or suggestions regarding the **preferred drilling location**?

NO COMMENT.

5. What do you see as the **advantages/disadvantages of the proposed project** from the perspective of your organization or as a resident of the area?

TO HAVE FRESH WATER TO DRINK

6. Would you be interested in participating in the **Water Well Survey**? If so, please provide your contact details below.

YES

7. Additional comments related to the project.

NONE AT THIS TIME

8. How useful did you find the Public Consultation Centre? (please circle one)

Very Useful

Not Very Useful

1

2

3

4

5

9. How would you describe the nature of your interest in this study?

- ☒ Member of the General Public (including resident)
- ☐ Member of an Interest Group (Please specify: _____)
- ☐ Consultant
- ☐ Agency Representative (Please specify: _____)
- ☐ Other (Please specify: _____)

10. Please provide any other comments regarding the Public Information Centre (i.e., location, help received on understanding study and your concerns, opportunity provided to ask questions/comments/express concern).

Contact Details

Name: _____

Address: _____ GOVERNOR RD RR2 LYNDEN ONT

Phone Number: _____

Email: _____

NOTE: Personal information requested on this form is collected in accordance with the Freedom of Information and Privacy Act. All comments will become part of the public record. If you do not wish to have personal information (Name, Address, Telephone, Email) on this comment form in the final report, please check the box below:

☒ Please withhold personal information

Please return this completed Comment Sheet to the project team at the Registration Table or you can fax it or mail it by November 3rd, 2007 to:

Project Contacts:

Mr. Chris Shrive, M.Sc., P.Ag.

Project Manager
Water & Wastewater Div., City of Hamilton
55 John Street North
Hamilton, ON L8R 3M8
Phone: 905-546-2424, Ext. 7209
Fax: 905-546-4491
Email: cshrive@hamilton.ca

Mr. Gary Scott, P.Eng.

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600 Cochrane Drive, Suite 500
Markham, ON L3R 5K3
Phone: 905-475-7270 Ext. 339
Fax: 905-475-5994
Email: gary.scott@genivar.com



Hamilton

PUBLIC WORKS DEPARTMENT

Water and Wastewater Division

Source Water and Infrastructure Planning Section

Class Environmental Assessment for the Lynden Communal Water Supply

The City of Hamilton is interested in hearing the community's comments, questions, concerns and suggestions regarding the water capacity assessment for water supply in the community of Schomberg. Please take a few minutes to complete this brief comment sheet. All comments will be carefully considered in the Environmental Assessment Process.

1. Do you have any comments related to the **existing water supply** in this study area?

*Apparently this well has a great amount of sulphur
therefore very costly*

2. Do you have any comments, concerns, questions or suggestions regarding the **Environmental Assessment Process or the overall approach** to the project?

*Why can't the city of Hamilton who taxes us
very high supply water?*

3. Do you have any comments, concerns, questions or suggestions regarding the **evaluation criteria for assessment of potential well locations**?

*This location has already lowered wells in this
area why put in some more?*

4. Do you have any comments, concerns, questions or suggestions regarding the **preferred drilling location**?

*Yes I wish you would find another location
therefore not jeopardizing farm wells in this area*

5. What do you see as the **advantages/disadvantages of the proposed project** from the perspective of your organization or as a resident of the area?

*No advantages to me
Possibly a Big disadvantage if I have to Buy Water*

6. Would you be interested in participating in the **Water Well Survey**? If so, please provide your contact details below.

Yes
[Redacted contact information]

7. Additional comments related to the project.

[Empty lines for additional comments]

8. How useful did you find the Public Consultation Centre? (please circle one)

Very Useful

Not Very Useful

1

2

3

4

5

9. How would you describe the nature of your interest in this study?

- ☐ Member of the General Public (including resident)
- ☐ Member of an Interest Group (Please specify: _____)
- ☐ Consultant
- ☐ Agency Representative (Please specify: _____)
- ☐ Other (Please specify: _____)

10. Please provide any other comments regarding the Public Information Centre (i.e., location, help received on understanding study and your concerns, opportunity provided to ask questions/comments/express concern).

Contact Details

Name: _____

Address: _____

Phone Number: _____

Email: _____

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600 Cochrane Drive, Suite 500
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Email: gary.scott@genivar.com



Hamilton

PUBLIC WORKS DEPARTMENT

Water and Wastewater Division

Source Water and Infrastructure Planning Section

Class Environmental Assessment for the Lynden Communal Water Supply

The City of Hamilton is interested in hearing the community's comments, questions, concerns and suggestions regarding the water capacity assessment for water supply in the community of ~~Schomberg~~ *Lynden*. Please take a few minutes to complete this brief comment sheet. All comments will be carefully considered in the Environmental Assessment Process.

1. Do you have any comments related to the **existing water supply** in this study area?

Does not include enough properties for hook-up outside village. Too much water in Lynden need sewage service

2. Do you have any comments, concerns, questions or suggestions regarding the **Environmental Assessment Process or the overall approach** to the project?

Need city water - not another well

3. Do you have any comments, concerns, questions or suggestions regarding the **evaluation criteria for assessment of potential well locations?**

How will this affect the existing wells on private property

4. Do you have any comments, concerns, questions or suggestions regarding the **preferred drilling location?**

Too close to me - concerned about my well running dry.

5. What do you see as the **advantages/disadvantages of the proposed project** from the perspective of your organization or as a resident of the area?

Does not include enough houses

6. Would you be interested in participating in the **Water Well Survey**? If so, please provide your contact details below.

[Redacted contact information]

7. Additional comments related to the project.

Fear of my well going dry. Want to be put on communal water supply

72 hrs is not long enough to monitor affect on existing wells in area

8. How useful did you find the Public Consultation Centre? (please circle one)

Very Useful

Not Very Useful

1

2

3

(4)

5

9. How would you describe the nature of your interest in this study?

- ☒ Member of the General Public (including resident)
- ☒ Member of an Interest Group (Please specify: Lynden United Church)
- ☐ Consultant
- ☐ Agency Representative (Please specify: _____)
- ☐ Other (Please specify: _____)

10. Please provide any other comments regarding the Public Information Centre (i.e., location, help received on understanding study and your concerns, opportunity provided to ask questions/comments/express concern).

Very good reception re discussion.
Why was it held in Copetown? We have a Legion,
a large church hall and the Lion's Den in Lynden
which are more convenient for Lynden residents which
this whole thing is about!!

Contact Details

Name: _____

Address: _____ Governors Rd

Phone Number: _____ Lynden On Lok 1To

Email: _____

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Project Manager
 Water & Wastewater Div., City of Hamilton
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 Fax: 905-546-4491
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Mr. Gary Scott, P.Eng.

Consultant
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 Markham, ON L3R 5K3
 Phone: 905-475-7270 Ext. 339
 Fax: 905-475-5994
 Email: gary.scott@genivar.com

**PUBLIC WORKS DEPARTMENT**

Water and Wastewater Division

Hamilton

Source Water and Infrastructure Planning Section

Class Environmental Assessment for the Lynden Communal Water Supply

LYNDEN The City of Hamilton is interested in hearing the community's comments, questions, concerns and suggestions regarding the water capacity assessment for water supply in the community of Schomberg. Please take a few minutes to complete this brief comment sheet. All comments will be carefully considered in the Environmental Assessment Process.

1. Do you have any comments related to the **existing water supply** in this study area?

THE MUNICIPALITY SHOULD EXTEND SERVICES TO ALL
LYNDEN RESIDENTS

2. Do you have any comments, concerns, questions or suggestions regarding the **Environmental Assessment Process or the overall approach** to the project?

YOU SHOULD FIND A WAY TO GO BACK TO PUNDAS FOR
A NEW LINE. FIRST CANADA WAS BUILT ON CUTTING DOWN TREES!

3. Do you have any comments, concerns, questions or suggestions regarding the **evaluation criteria for assessment of potential well locations**?

OR WORST SIDE
SEEMS ALL LOCATIONS ARE BAD. GO TO NORTH SIDE OF
TOWN AND EXTEND THE SERVICE.

4. Do you have any comments, concerns, questions or suggestions regarding the **preferred drilling location**?

WHY NOT DRILLING ANYWHERE WITHIN 2 KMS,
OF THE ORIGINAL WELL.

5. What do you see as the **advantages/disadvantages of the proposed project** from the perspective of your organization or as a resident of the area?

OVERALL ANYTHING DONE IS BETTER THAN NOTHING.

6. Would you be interested in participating in the **Water Well Survey**? If so, please provide your contact details below.

SURE.

7. Additional comments related to the project.

GO BACK TO THE 1980'S WHEN THEY HAD A
CAP ON THIS WELL PUMPING LIMIT. SO WHY ARE
YOU DOING THIS NEW WELL SO CLOSE TO THE
EXISTING ONE?

8. How useful did you find the Public Consultation Centre? (please circle one)

Very Useful

Not Very Useful

1

2

3

4

5

9. How would you describe the nature of your interest in this study?

- ☒ Member of the General Public (including resident)
☐ Member of an Interest Group (Please specify: _____)
☐ Consultant
☐ Agency Representative (Please specify: _____)
☐ Other (Please specify: _____)

10. Please provide any other comments regarding the Public Information Centre (i.e., location, help received on understanding study and your concerns, opportunity provided to ask questions/comments/express concern).

THE MEMBERS OF THE TEAM SEEM KNOWLEDGEABLE.

Contact Details

Name: _____

Address: _____ LIBERTY ST.

Phone Number: _____

Email: _____

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 Fax: 905-475-5994
 Email: gary.scott@genivar.com



City of Hamilton
City Centre, 77 James Street North
Hamilton, Ontario,
Canada L8R 2K3
www.hamilton.ca

Water & Wastewater Division, Public Works Department
Physical Address: 55 John Street North, 6th Floor, Hamilton, Ontario, L8R 3M8
Phone: 905-546-2424 ext. 7209 Fax: 905-546-4491
Email: cshrive@hamilton.ca

June 30, 2008



RR #2
Lynden ON L0R 1T0

Re: Class Environmental Assessment for the Lynden Communal Water Supply

Dear [REDACTED]

Thank you for your attendance at the first Public Information Centre (PIC) regarding the Lynden Communal Water Supply Class Environmental Assessment and for taking the time to complete the comment sheet provided.

We are pleased at this time to offer an itemized response to the feedback provided on your comment sheet.

“Do you have any comments related to the existing water supply in this study area?”

Not enough water in wells in this area now. If you draw more volume a lot of wells will go dry.”

The intent of this project is to provide a new well and treatment facility to establish redundancy within the system and thereby increase the security of the water supply. The new well and the existing well will not be pumped simultaneously but will be alternated to meet the demands of the community and allow for the shut down of each facility for maintenance. Withdrawals will remain effectively the same as present under these conditions.

As additional connections are made and the demand on the communal water system increases to supply build-out of the Lynden RSA, the permitted pumping capacity will have to be increased from 327 m³/day to 411 m³/day, an increase of 84 m³/day or 15 gallon/min. The increase in the permitted capacity would also apply to the existing well but would only be required when the number of connections to the system warrants additional water supply. This is not anticipated to be for a number of years, but prudent planning practices dictate that this future demand be considered now in the current design of the new facility and the selection of the new well. Studies have shown that the aquifer has sufficient capacity to meet this additional need and this will be further verified during the pump tests to be performed prior to the permitting of the well.

The Water Resources Act, 1990 requires that, with the operation of groundwater-sourced municipal communal water systems, the municipality must address any interference with private wells. A Permit to Take Water for a new well will not be

granted if potential interference with pre-existing well users is not addressed by the City. To address interference, the City may employ certain mitigation measures at its own expense, such as connecting the affected party to the communal water system or lowering their well pump intakes.

If an interference is reported after the permit is issued and the municipal well is operational, the City is still required, as a condition of their PTTW, to take corrective action and either provide connection to the communal water system or lower the private pump intake at the City's cost.

In addition, the City of Hamilton's By-Law No. 86-142 (former Ancaster By-law) and 86-132a (former Flamborough By-law) provides private well owners a means of petitioning the City if interference occurs, Clause 5 states:

"The Region agrees to investigate all interferences complaints at Regional expense in conjunction with the Ministry of the Environment staff and to take corrective measures where necessary. In cases where as disruption of water supply has occurred, the Region will arrange for a temporary water supply until a permanent resolution of the problem has been implemented."

We understand that no claims have been made of any interference to a private well by the existing municipal well between 1986, when the By-laws were passed, and today.

"Do you have any comments, concerns, questions or suggestions regarding the Environmental Assessment Process or the overall approach to the project?"

The Consultants, etc. doing the study don't want to look elsewhere for a water supply (North of Lynden where there is more water). They draw more from same area."

The selection of the proposed well site was based on a culmination of over 30 years worth of studies on the hydrogeology of the Lynden area; this includes information already presented in the 2002 Master Plan Class EA. All previous studies have indicated that the sand and gravel aquifer is thickest to the south and east of the Lynden Rural Settlement Area (RSA)., This source has been proven to meet the current requirements of the water service area. Based on mapping of the aquifer thickness and extent, drilling to the north or west would be unsuccessful in securing the required water supply.

After the PIC on October 23, 2007, further investigation was undertaken to identify any additional studies that were commissioned by the former Councils. Attempts were also made to contact the previous Mayor of Flamborough and inquiries were made again to the Clerk's Office and archives. No additional information or studies were identified beyond those upon which the current work is based, or that indicated a preferred source in another area.

On the recommendation of a PIC attendee Johnson and Baetz, a well firm with local experience was contacted and confirmed the presence of a section of sand at the orchard north of the railway tracks. They said that this sand was found at shallow depths, however, extending down only about 3.5 to 4.5 metres. While this sand did produce good volumes of water, they indicated that it would likely not be sufficient for a municipal supply well.

Attached for your reference is a table summarising the reports and studies previously undertaken and reviewed in support of the current study. These documents represent all the relevant investigations undertaken in the area over the past 30 years.

Copies of the supporting documentation can be made available for public review, either by appointment or at the next PIC. A summary of the hydrogeological studies will be placed as a link from the Communal Water Studies page on the City's website:

<http://www.myhamilton.ca/myhamilton/CityandGovernment/CityDepartments/PublicWorks/WaterAndWasteWaterDev/Reports+and+Studies/ReportsandStudies.htm>

“Do you have any comments, concerns, questions or suggestions regarding the evaluation criteria for assessment of potential well locations?

A desktop evaluation of wells when they were drilled or bored does not give a true picture of what the wells are like now.”

The purpose of a desktop evaluation prior to the selection of a new well site is twofold:

- 1. To assess the production capacity of the local wells**
- 2. To assess the material encountered when other local wells were installed.**

The examination of production capacity of the local wells identifies characteristics of the aquifer. While the original production levels of private wells may have declined over time, the properties of the aquifer that the wells are screened in remain generally constant.

The second and more important reason for the desktop evaluation is to examine the materials that were sampled during drilling so as to identify areas where potential aquifers (i.e. sand and gravel) are extensive.

The desktop study does not solely examine the properties of the wells, but also materials the driller identified during construction. Private wells can become less efficient over time, but aquifers do not. Examining the initial productivity of a well provides useful clues for selecting the location of a new well and source of groundwater.

“Do you have any comments, concerns, questions or suggestions regarding the preferred drilling location?

They draw more from the same area and lower the water table further. Wells will be greatly affected.”

As stated above, the Water Resources Act 1990 requires that the municipality must address any interference with private wells. A Permit to Take Water for the new well will not be granted if the City does not address potential interference with pre-existing well users. To avoid potential interference, the City may have to employ

certain mitigation measures, such as connection to the communal water system or lowering of pump intakes of private wells at the City's expense.

In addition, the City of Hamilton's By-Law No. 86-142 (former Ancaster By-law) and 86-132a (former Flamborough By-law) provide private well owners a means of petitioning the City if interference occurs, Clause 5 states:

"The Region agrees to investigate all interferences complaints at Regional expense in conjunction with the Ministry of the Environment staff and to take corrective measures where necessary. In cases where as disruption of water supply has occurred, the Region will arrange for a temporary water supply until a permanent resolution of the problem has been implemented."

We understand that no claims of interference have been made to a private well by the existing municipal well between 1986, when the By-laws were passed, and today.

"What do you see as the advantages/disadvantages of the proposed project from the perspective of your organization or as a resident of the area?"

The proposed locations for a backup well don't make sense. They draw more from the same area when the present well is already limited with the supply of water available."

The proposed locations for a backup well are based on over 30 years of studies that show that the aquifer is thicker and more extensive to the south and east of Lynden. The studies also show that the aquifer can sustainably provide the required supply of water. Adding a backup well will not create any further drawdowns in the aquifer, since it will not be pumped at the same time as the existing well.

As stated above, as additional connections are made and the demand on the communal water system increases, the permitted pumping capacity will have to be increased but studies have shown that the aquifer has sufficient capacity to meet this additional need, this will be further verified during the pump tests preformed prior to the permitting of the proposed new well.

"Additional comments related to the project.

Please investigate north of Lynden and avoid another mistake of not enough water supply as well as affecting all of us in the immediate area."

This statement raises three separate issues:

1) Potential Site to the North of Lynden

All the previous studies indicated that the sand and gravel aquifer is thickest to the south and east of the Lynden Rural Settlement Area (RSA), and has been proven to meet the current requirements of the water service area. Based on mapping of the aquifer thickness and extent, drilling to the north or west would be unsuccessful in procuring the required water supply. Analysis of driller's logs indicated that the aquifer to the north contained greater proportions of silt and was not as extensive as to the east, where the aquifer is mostly gravel and is of greater extent.

Please refer to the attached PIC attendee general response letter for further information on the results of our further investigation into a potential groundwater source north of the RSA.

2) Insufficient Water Supply

The existing well has ample supply to meet the current and future needs of the community. Currently, the well is permitted to pump at 327 m³/day; however, the original well testing indicated that the aquifer is capable of providing a safe perennial yield of 560 m³/day.

3) Effect of Existing and Proposed Well on Immediate Area

As stated above, the Water Resources Act 1990, the City of Hamilton's By-Laws No. 86-142 and 86-132a provide private well owners a means of petitioning the City if interference occurs. We understand that no claims of interference to a private well by the existing municipal well were made against these bylaws between 1986, when the By-laws were passed, and today.

“Please provide any other comments regarding the Public Information Centre (i.e., location, help received on understanding study and your concerns, opportunity provided to ask questions/comments/express concern).

Should be held in Lynden. Should have further information when making decision as to location of new backup well (not just desktop information).”

Arrangements will be made to hold the next PIC in Lynden in 2008. Although no date has been set at this time you will be notified of the next meeting well in advance.

Please refer to the response above regarding the desktop review.

Thank you for volunteering to participate in the Water Well Survey. A sample questionnaire is attached for your review. Once the field program is underway a representative of the City will visit you and will review these questions with you.

In addition to our response to your specific concerns, please find attached a letter of response that is being provided to all of the PIC attendees. This letter addresses concerns that were raised by a number of attendees. This letter provides additional background information and is intended to convey a better understanding of the project being undertaken.

Thank you again for your interest in this project and providing us with your feedback. If you have any further concerns please contact me directly at (905) 546-2424 ext.7209 or by email at cshrive@hamilton.ca.

Yours truly,
City of Hamilton

Chris Shrive, M.Sc., P.Ag.
Project Manager

/af/db



City of Hamilton
City Centre, 77 James Street North
Hamilton, Ontario,
Canada L8R 2K3
www.hamilton.ca

Water & Wastewater Division, Public Works Department
Physical Address: 55 John Street North, 6th Floor, Hamilton, Ontario, L8R 3M8
Phone: 905-546-2424 ext. 7209 Fax: 905-546-4491
Email: cshrive@hamilton.ca

June 30, 2008



RR2
Lynden ON L0R 1T0

Re: Class Environmental Assessment for the Lynden Communal Water Supply

Dear [REDACTED]:

Thank you for your attendance at the first Public Information Centre (PIC) regarding the Lynden Communal Water Supply Class Environmental Assessment and for taking the time to complete the comment sheet provided.

We are pleased at this time to offer an itemized response to the feedback you provided on your comment sheet.

“Do you have any comments related to the existing water supply in this study area?”

Does not include enough properties for hook-up outside village. Too much water in Lynden needs sewage service.”

City By-Law and the Rural Settlement Area (RSA) designations within the Rural Official Plan govern connections to communal water systems. The Lynden RSA boundary was delineated as part of the Flamborough Official Plan and then reviewed in 2006 by the City of Hamilton through its new Rural Official Plan. The bylaw permits lots within the RSA or abutting the RSA to petition to connect; in addition the City of Hamilton By-Law No. 01-039 stipulates that a property abutting a watermain greater than 20mm can also connect. This would apply to all lots fronting the watermain along Governor’s Road.

This study focuses on meeting the Ministry of the Environment guidelines for drinking water and ensures a safe reliable drinking water supply is provided to the Lynden water service area. We understand that the septic systems and groundwater table in Lynden is an existing issue; however it is not directly related to the project currently being proposed. Although this issue is not included in the scope of this study, additional information on this topic is presented in the general response letter attached.

“Do you have any comments, concerns, questions or suggestions regarding the Environmental Assessment Process or the overall approach to the project?”

Need City water – not another well.”

In 2005, the Greenbelt Act was passed by the Province. This Act, and the associated Greenbelt Plan, identified an area around the Golden Horseshoe and designated it the Greenbelt. The Greenbelt Act ensures the permanent protection of the agricultural land base and the ecological features and functions occurring on this Greenbelt. The Lynden RSA is located within the Greenbelt, therefore is subject to the policies included with the Act.

In order to limit development in the Greenbelt and protect the Greenbelt from urban sprawl, the policy outlined in Section 4.2.2 of the Greenbelt Plan prohibits the connection of settlements within the Greenbelt to a Great Lake based water system.

“Where settlements do not currently have Great Lake or Lake Simcoe based water and sewage services, extensions to or expansions of existing Great Lake or Lake Simcoe based services to such settlements is not permitted, unless such servicing is required to address failed individual on-site sewage or water services or to ensure the protection of public health where it has been determined by a medical officer of health (or health authority) that there is a public health concern associated with existing services within the settlement. The capacity of the services provided in these circumstances will be restricted to that required to service the affected existing settlement plus the capacity for potential *development* within the approved settlement boundary as it existed on the date this Plan came into effect.”

Reference: <http://www.mah.gov.on.ca/Page189.aspx#3.4>

The urban area of City of Hamilton (including Dundas) currently sources its water from the Great Lakes, therefore the extension of the City system to service areas outside of the urban boundary is not permitted accordant with the Greenbelt Plan.

An aquifer source can be considered as reliable as a lake based source, although both require prudent management to realize that reliability. Many larger centres in proximity to Lynden rely entirely upon groundwater for water supply.

“Do you have any comments, concerns, questions or suggestions regarding the evaluation criteria for assessment of potential well locations?”

How will this affect the existing wells on private property.”

“Do you have any comments, concerns, questions or suggestions regarding the preferred drilling location?”

Too close to me – concerned about my well running dry.”

The intent of this project is to provide a new well and treatment facility to establish redundancy within the system and thereby increase the security of the water supply. The new well and the existing well will not be pumped simultaneously but will be alternated to meet the demands of the community and allow for the shut down of each facility for maintenance. Withdrawals will remain effectively the same as present under these conditions.

As additional connections are made and the demand on the communal water system increases to supply build-out of the Lynden RSA, the permitted pumping capacity will have to be increased from 327 m³/day to 411 m³/day, an increase of 84 m³/day or 15 gallon/min. The increase in the permitted capacity would also apply to the

existing well but would only be required when the number of connections to the system warrants additional water supply. This is not anticipated to occur for a number of years, but prudent planning practices dictate that this future demand be considered now in the current design of the new facility and the selection of the new well. Studies have shown that the aquifer has sufficient capacity to meet this additional need and this will be further verified during the pump tests to be performed prior to the permitting of the well.

The Water Resources Act, 1990 requires that, with the operation of groundwater-sourced municipal communal water systems, the municipality must address any interference with private wells. A Permit to Take Water for a new well will not be granted if potential interference with pre-existing well users is not addressed by the City. To address interference, the City may employ certain mitigation measures at its own expense, such as connecting the affected party to the communal water system or lowering their well pump intakes.

If an interference is reported after the permit is issued and the municipal well is operational, the City is still required, as a condition of their PTTW, to take corrective action and either provide connection to the communal water system or lower the private pump intake at the City's cost.

In addition, the City of Hamilton's By-Law No. 86-142 (former Ancaster By-law) and 86-132a (former Flamborough By-law) provides private well owners a means of petitioning the City if interference occurs, Clause 5 states:

"The Region agrees to investigate all interferences complaints at Regional expense in conjunction with the Ministry of the Environment staff and to take corrective measures where necessary. In cases where as disruption of water supply has occurred, the Region will arrange for a temporary water supply until a permanent resolution of the problem has been implemented."

We understand that no claims have been made of any interference to a private well by the existing municipal well between 1986, when the By-laws were passed, and today.

"What do you see as the advantages/disadvantages of the proposed project from the perspective of your organization or as a resident of the area?"

Does not include enough houses."

The City By-Law and the Rural Settlement Area (RSA) plan govern the connections to the communal water system and the priority for connections. The RSA boundary was delineated as part of the Flamborough Official Plan and then reviewed in 2006 by the City of Hamilton. The Greenbelt Act, 2005 does not permit a major expansion to the RSA and only allows minor adjustments to the existing boundaries.

"Additional comments related to the project.

Fear of my well going dry. Want to be put on communal water supply.

As addressed in a previous comment, if the new well has been proven to cause unacceptable drawdown in a private well, the City will be immediately required to

provide an alternative water supply or lower the affected well's pump intake at the City's expense.

As stated above there are limitations on the connections that can be made to the communal water system, only lots within or abutting the RSA, fronting a watermain or with wells seriously impacted by a municipal well can petition for connection.

72 hours is not long enough to monitor affect on existing wells in area."

A 72-hour pumping test is an industry standard implemented informally by the Ministry of the Environment (MOE). A test of this length is sufficient to allow long-term drawdown predictions on existing private wells. Longer tests are not recommended, since precipitation events, which are more likely during longer tests, can obscure potential influence on shallow aquifers.

"Please provide any other comments regarding the Public Information Centre (i.e., location, help received on understanding study and your concerns, opportunity provided to ask questions/comments/express concern).

Very good reception re discussion. Why was it held in Copetown? We have a Legion, a large church hall and the Lion's Den in Lynden which are more convenient for Lynden residents which this whole thing is about!!"

All future meeting will be held in Lynden. The next PIC will be held in 2008.

Thank you for volunteering to participate in the Water Well Survey. A sample questionnaire is attached for your review. Once the field program is underway a representative of the City will come to visit you and will review these questions with you.

In addition to our response to your specific concerns, please find attached a letter of general response that is being provided to all of the PIC attendees. This letter addresses concerns that were raised by a number of attendees. This letter provides additional background information and is intended to convey a better understanding of the project being undertaken.

Thank you again for your interest in this project and providing us with your feedback. If you have any further concerns please contract me directly at (905) 546-2424 ext.7209 or by email at cshrive@hamilton.ca.

Yours truly,
City of Hamilton

Chris Shrive, M.Sc., P.Ag.
Project Manager

/af/db



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Hamilton, Ontario,
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June 30, 2008



RR #2
Lynden ON L0R 1T0

Re: Class Environmental Assessment for the Lynden Communal Water Supply

Dear [REDACTED]:

Thank you for your attendance at the first Public Information Centre (PIC) regarding the Lynden Communal Water Supply Class Environmental Assessment and for taking the time to complete the comment sheet provided.

We are pleased at this time to offer an itemized response to the feedback provided on your comment sheet.

“Do you have any comments related to the existing water supply in this study area?”

Not enough water in wells in this area now. If you draw more volume a lot of wells will go dry.”

The intent of this project is to provide a new well and treatment facility to establish redundancy within the system and thereby increase the security of the water supply. The new well and the existing well will not be pumped simultaneously but will be alternated to meet the demands of the community and allow for the shut down of each facility for maintenance. Withdrawals will remain effectively the same as present under these conditions.

As additional connections are made and the demand on the communal water system increases to supply build-out of the Lynden RSA, the permitted pumping capacity will have to be increased from 327 m³/day to 411 m³/day, an increase of 84 m³/day or 15 gallon/min. The increase in the permitted capacity would also apply to the existing well but would only be required when the number of connections to the system warrants additional water supply. This is not anticipated to be for a number of years, but prudent planning practices dictate that this future demand be considered now in the current design of the new facility and the selection of the new well. Studies have shown that the aquifer has sufficient capacity to meet this additional need and this will be further verified during the pump tests to be performed prior to the permitting of the well.

The Water Resources Act, 1990 requires that, with the operation of groundwater-sourced municipal communal water systems, the municipality must address any interference with private wells. A Permit to Take Water for a new well will not be

granted if potential interference with pre-existing well users is not addressed by the City. To address interference, the City may employ certain mitigation measures at its own expense, such as connecting the affected party to the communal water system or lowering their well pump intakes.

If an interference is reported after the permit is issued and the municipal well is operational, the City is still required, as a condition of their PTTW, to take corrective action and either provide connection to the communal water system or lower the private pump intake at the City's cost.

In addition, the City of Hamilton's By-Law No. 86-142 (former Ancaster By-law) and 86-132a (former Flamborough By-law) provides private well owners a means of petitioning the City if interference occurs, Clause 5 states:

"The Region agrees to investigate all interferences complaints at Regional expense in conjunction with the Ministry of the Environment staff and to take corrective measures where necessary. In cases where as disruption of water supply has occurred, the Region will arrange for a temporary water supply until a permanent resolution of the problem has been implemented."

We understand that no claims have been made of any interference to a private well by the existing municipal well between 1986, when the By-laws were passed, and today.

"Do you have any comments, concerns, questions or suggestions regarding the Environmental Assessment Process or the overall approach to the project?"

The Consultants, etc. doing the study don't want to look elsewhere for a water supply (North of Lynden where there is more water). They draw more from same area."

The selection of the proposed well site was based on a culmination of over 30 years worth of studies on the hydrogeology of the Lynden area; this includes information already presented in the 2002 Master Plan Class EA. All previous studies have indicated that the sand and gravel aquifer is thickest to the south and east of the Lynden Rural Settlement Area (RSA). This source has been proven to meet the current requirements of the water service area. Based on mapping of the aquifer thickness and extent, drilling to the north or west would be unsuccessful in securing the required water supply.

After the PIC on October 23, 2007, further investigation was undertaken to identify any additional studies that were commissioned by the former Councils. Attempts were also made to contact the previous Mayor of Flamborough and inquiries were made again to the Clerk's Office and archives. No additional information or studies were identified beyond those upon which the current work is based, or that indicated a preferred source in another area.

On the recommendation of a PIC attendee Johnson and Baetz, a well firm with local experience was contacted and confirmed the presence of a section of sand at the orchard north of the railway tracks. They said that this sand was found at shallow depths, however, extending down only about 3.5 to 4.5 metres. While this sand did produce good volumes of water, they indicated that it would likely not be sufficient for a municipal supply well.

Attached for your reference is a table summarising the reports and studies previously undertaken and reviewed in support of the current study. These documents represent all the relevant investigations undertaken in the area over the past 30 years.

Copies of the supporting documentation can be made available for public review, either by appointment or at the next PIC. A summary of the hydrogeological studies will be placed as a link from the Communal Water Studies page on the City's website:

<http://www.myhamilton.ca/myhamilton/CityandGovernment/CityDepartments/PublicWorks/WaterAndWasteWaterDev/Reports+and+Studies/ReportsandStudies.htm>

“Do you have any comments, concerns, questions or suggestions regarding the evaluation criteria for assessment of potential well locations?

A desktop evaluation of wells when they were drilled or bored does not give a true picture of what the wells are like now.”

The purpose of a desktop evaluation prior to the selection of a new well site is twofold:

- 1. To assess the production capacity of the local wells**
- 2. To assess the material encountered when other local wells were installed.**

The examination of production capacity of the local wells identifies characteristics of the aquifer. While the original production levels of private wells may have declined over time, the properties of the aquifer that the wells are screened in remain generally constant.

The second and more important reason for the desktop evaluation is to examine the materials that were sampled during drilling so as to identify areas where potential aquifers (i.e. sand and gravel) are extensive.

The desktop study does not solely examine the properties of the wells, but also materials the driller identified during construction. Private wells can become less efficient over time, but aquifers do not. Examining the initial productivity of a well provides useful clues for selecting the location of a new well and source of groundwater.

“Do you have any comments, concerns, questions or suggestions regarding the preferred drilling location?

They draw more from the same area and lower the water table further. Wells will be greatly affected.”

As stated above, the Water Resources Act 1990 requires that the municipality must address any interference with private wells. A Permit to Take Water for the new well will not be granted if the City does not address potential interference with pre-existing well users. To avoid potential interference, the City may have to employ

certain mitigation measures, such as connection to the communal water system or lowering of pump intakes of private wells at the City's expense.

In addition, the City of Hamilton's By-Law No. 86-142 (former Ancaster By-law) and 86-132a (former Flamborough By-law) provide private well owners a means of petitioning the City if interference occurs, Clause 5 states:

"The Region agrees to investigate all interferences complaints at Regional expense in conjunction with the Ministry of the Environment staff and to take corrective measures where necessary. In cases where as disruption of water supply has occurred, the Region will arrange for a temporary water supply until a permanent resolution of the problem has been implemented."

We understand that no claims of interference have been made to a private well by the existing municipal well between 1986, when the By-laws were passed, and today.

"What do you see as the advantages/disadvantages of the proposed project from the perspective of your organization or as a resident of the area?"

The proposed locations for a backup well don't make sense. They draw more from the same area when the present well is already limited with the supply of water available."

The proposed locations for a backup well are based on over 30 years of studies that show that the aquifer is thicker and more extensive to the south and east of Lynden. The studies also show that the aquifer can sustainably provide the required supply of water. Adding a backup well will not create any further drawdowns in the aquifer, since it will not be pumped at the same time as the existing well.

As stated above, as additional connections are made and the demand on the communal water system increases, the permitted pumping capacity will have to be increased but studies have shown that the aquifer has sufficient capacity to meet this additional need, this will be further verified during the pump tests preformed prior to the permitting of the proposed new well.

"Additional comments related to the project.

Please investigate north of Lynden and avoid another mistake of not enough water supply as well as affecting all of us in the immediate area."

This statement raises three separate issues:

1) Potential Site to the North of Lynden

All the previous studies indicated that the sand and gravel aquifer is thickest to the south and east of the Lynden Rural Settlement Area (RSA), and has been proven to meet the current requirements of the water service area. Based on mapping of the aquifer thickness and extent, drilling to the north or west would be unsuccessful in procuring the required water supply. Analysis of driller's logs indicated that the aquifer to the north contained greater proportions of silt and was not as extensive as to the east, where the aquifer is mostly gravel and is of greater extent.

Please refer to the attached PIC attendee general response letter for further information on the results of our further investigation into a potential groundwater source north of the RSA.

2) Insufficient Water Supply

The existing well has ample supply to meet the current and future needs of the community. Currently, the well is permitted to pump at 327 m³/day; however, the original well testing indicated that the aquifer is capable of providing a safe perennial yield of 560 m³/day.

3) Effect of Existing and Proposed Well on Immediate Area

As stated above, the Water Resources Act 1990, the City of Hamilton's By-Laws No. 86-142 and 86-132a provide private well owners a means of petitioning the City if interference occurs. We understand that no claims of interference to a private well by the existing municipal well were made against these bylaws between 1986, when the By-laws were passed, and today.

“Please provide any other comments regarding the Public Information Centre (i.e., location, help received on understanding study and your concerns, opportunity provided to ask questions/comments/express concern).

Should be held in Lynden. Should have further information when making decision as to location of new backup well (not just desktop information).”

Arrangements will be made to hold the next PIC in Lynden in 2008. Although no date has been set at this time you will be notified of the next meeting well in advance.

Please refer to the response above regarding the desktop review.

Thank you for volunteering to participate in the Water Well Survey. A sample questionnaire is attached for your review. Once the field program is underway a representative of the City will visit you and will review these questions with you.

In addition to our response to your specific concerns, please find attached a letter of response that is being provided to all of the PIC attendees. This letter addresses concerns that were raised by a number of attendees. This letter provides additional background information and is intended to convey a better understanding of the project being undertaken.

Thank you again for your interest in this project and providing us with your feedback. If you have any further concerns please contact me directly at (905) 546-2424 ext.7209 or by email at cshrive@hamilton.ca.

Yours truly,
City of Hamilton

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June 30, 2008



Lynden ON L0R 1T0

Re: Class Environmental Assessment for the Lynden Communal Water Supply

Dear [REDACTED]:

Thank you for your attendance at the first Public Information Centre (PIC) regarding the Lynden Communal Water Supply Class Environmental Assessment and for taking the time to complete the comment sheet provided.

We are pleased at this time to offer an itemized response to the feedback provided on your comment sheet.

“Do you have any comments related to the existing water supply in this study area?”

It was originally located there because it was the only affordable site at the time. Studies revealed the best water supply was north of the R/R tracks but pricing of land at the time was prohibitive.”

The selection of the proposed well site was based on a culmination of over 30 years worth of studies on the hydrogeology of the Lynden area; this includes information already presented in the 2002 Master Plan Class EA. All previous studies have indicated that the sand and gravel aquifer is thickest to the south and east of the Lynden Rural Settlement Area (RSA). This source has been proven to meet the current requirements of the water service area. Based on mapping of the aquifer thickness and extent, drilling to the north or west would be unsuccessful in securing the required water supply.

After the PIC on October 23, 2007, further investigation was undertaken to identify any additional studies that were commissioned by the former Councils. Attempts were also made to contact the previous Mayor of Flamborough and inquiries were made again to the Clerk's Office and archives. No additional information or studies were identified beyond those upon which the current work is based, or that indicated a preferred source in another area.

Attached for your reference is a table summarising the reports and studies previously undertaken and reviewed in support of the current study. These documents represent all the relevant investigations undertaken in the area over the past 30 years.

Copies of the supporting documentation can be made available for public review either by appointment or at the next PIC. A summary of the hydrogeological studies will be placed as a link from the Communal Water Studies page on the City's website:

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The cost of land is a valid consideration in the process of locating a suitable site for a municipal well, as is the risk and expense associated with conducting a drilling program in an unproven area. In this case the preferred site is within a proven aquifer that has shown to have sufficient capacity to meet the present and future needs of the permitted water servicing area, therefore additional investigation in this area is warranted. Furthermore, the existing well has been in operation for over 20 years and we understand the City has not received any official claims of interference.

“Do you have any comments, concerns, questions or suggestions regarding the Environmental Assessment Process or the overall approach to the project?”

It seems to be done in a “Distant Vacuum”. The well drillers, local (senior) farmers already know where the water is but were not consulted. Former Flamborough Council studies seem to be misplaced.”

Please refer to the response above.

“Do you have any comments, concerns, questions or suggestions regarding the evaluation criteria for assessment of potential well locations?”

It appears a case has been built to justify the “dewatering” of the existing area instead of consideration of use of the best Lynden water site.”

As discussed above, the best site for a new well was not located to the north or west of the community, as the sand and gravel aquifer was not as thick or extensive in those areas. These results are based on drilling records dating back more than 50 years.

The preferred site is within a proven aquifer that has shown to have sufficient capacity to meet the present and future needs of the permitted water servicing area, therefore additional investigation is not warranted. Furthermore, the existing well has been in operation for over 20 years and the City has not received any official claims of interference.

“Do you have any comments, concerns, questions or suggestions regarding the preferred drilling location?”

When the original well was drilled within one year all 3 wells on my farm (prolific for decades) went dry and still are over 20 years later. What guarantees will the City give to those drained this time?”

The intent of this project is to provide a new well and treatment facility to establish redundancy within the system and thereby increase the security of the water supply.

The new well and the existing well will not be pumped simultaneously but will be alternated to meet the demands of the community and allow for the shut down of each facility for maintenance. Withdrawals will remain effectively the same as present under these conditions.

As additional connections are made and the demand on the communal water system increases to supply build-out of the Lynden RSA, the permitted pumping capacity will have to be increased from 327 m³/day to 411 m³/day, an increase of 84 m³/day or 15 gallon/min. The increase in the permitted capacity would also apply to the existing well but would only be required when the number of connections to the system warrants additional water supply. This is not anticipated to be for a number of years, but prudent planning practices dictate that this future demand be considered now in the current design of the new facility and the selection of the new well. Studies have shown that the aquifer has sufficient capacity to meet this additional need and this will be further verified during the pump tests to be performed prior to the permitting of the well.

The Water Resources Act, 1990 requires that, with the operation of groundwater-sourced municipal communal water systems, the municipality must address any interference with private wells. A Permit to Take Water for a new well will not be granted if potential interference with pre-existing well users is not addressed by the City. To address interference, the City may employ certain mitigation measures at its own expense, such as connecting the affected party to the communal water system or lowering their well pump intakes.

If an interference is reported after the permit is issued and the municipal well is operational, the City is still required, as a condition of their PTTW, to take corrective action and either provide connection to the communal water system or lower the private pump intake at the City's cost.

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We understand that no claims have been made of any interference to a private well by the existing municipal well between 1986, when the By-laws were passed, and today.

"What do you see as the advantages/disadvantages of the proposed project from the perspective of your organization or as a resident of the area?"

In its urgency to manage risk, we likely will deplete already dry farms to flood Lynden village even more. We already have a severe ground water problem. That significantly worsened over approx. 2 years after the well for Lynden."

Please refer to the response above with respect to the potential for well interference and remedial actions.

This study focuses on meeting the Ministry of the Environment guidelines for drinking water and ensures a safe reliable drinking water supply is provided to the Lynden water service area. We understand that the septic systems and groundwater table in Lynden is an existing issue; however it is not directly related to the project currently being proposed. Although this issue is not included in the scope of this study, additional information on this topic is presented in the general response letter attached.

“Additional comments related to the project.

From March to July and Nov. to freeze up, the sump pumps in the older houses in Lynden cycle every 3-15 minutes. The water table is half way up our basement walls. When power goes off, I scramble with generators to a dozen people with their extension cords already stretched out to their driveways for me to run their sump pumps in rotation. We need a plan to drain water out of Lynden before bringing more in.”

Please refer to the response above and to the attached general PIC attendee letter.

“Please provide any other comments regarding the Public Information Centre (i.e., location, help received on understanding study and your concerns, opportunity provided to ask questions/comments/express concern).

A meeting concerning Lynden should be held in Lynden, not in the next village.

All future meetings will be held in Lynden. The next PIC will be held in 2008.

You may gain some historical geological and water table info from Johnson & Baetz, Princeton. They have drilled this area for decades and have mapping its water consistencies.”

Johnson and Baetz were contacted and they indicated that they have experience only with shallow bored wells in the Lynden area. They also stated that the shallow overburden geology in the area changes quite rapidly from fine sand to silt to clay, which is in agreement with existing information.

Finally, Johnson and Baetz confirmed the presence of a section of sand at the orchard north of the railway tracks. However, they said that this sand was found at shallow depths, extending down only about 3.5 to 4.5 metres. While this sand did produce good volumes of water, they indicated that it would likely not be sufficient for a municipal supply well.

In addition to our response to your specific concerns, please find attached a letter of general response that is being provided to all of the PIC attendees. This letter addresses concerns that were raised by a number of attendees. This letter provides additional background information and is intended to convey a better understanding of the project being undertaken.

Thank you again for your interest in this project and providing us with feedback on the information presented at the PIC. If you have any further concerns please contact me directly at (905) 546-2424 ext.7209 or by email at cshrive@hamilton.ca.

Yours truly,
City of Hamilton

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Project Manager

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June 30, 2008



Lynden ON L0R 1T0

Re: Class Environmental Assessment for the Lynden Communal Water Supply

Dear [REDACTED]:

Thank you for your attendance at the first Public Information Centre (PIC) regarding the Lynden Communal Water Supply Class Environmental Assessment and for taking the time to complete the comment sheet provided.

We are pleased at this time to offer an itemized response to the feedback you provided on your comment sheet.

“Do you have any comments related to the existing water supply in this study area?”

Apparently this well has a great amount of sulphur therefore very costly.”

Hydrogen sulphide gas can readily be removed by aeration; this process is not very costly. Once a preferred well site has been selected and a test well is installed, a sample of the water will be analysed and any water treatment requirements will be assessed at that time.

During the design of the new facility, the hydrogen sulphide removal will be optimized to remove the gas and eliminate odours.

“Do you have any comments, concerns, questions or suggestions regarding the Environmental Assessment Process or the overall approach to the project?”

Why can't the City of Hamilton who taxes us very high supply water?”

City By-Law and the Rural Settlement Area (RSA) designations within the Rural Official Plan govern connections to communal water systems. The Lynden RSA boundary was delineated as part of the Flamborough Official Plan and then reviewed in 2006 by the City of Hamilton through its new Rural Official Plan. The bylaw permits lots within the RSA or abutting the RSA to petition to connect; in addition the City of Hamilton By-Law No. 01-039 stipulates that a property abutting a watermain greater than 20mm can also connect. This would apply to all lots fronting the watermain along Governor's Road.

The Ontario Water Resources Act, Clause 34.1, requires the City to provide water to those whose water source is seriously affected by water taking, or to compensate for the costs of doing so.

The above outlines the City's policy on connection to the existing communal system, but the connection of the Lynden RSA to the City of Hamilton water distribution system is regulated by the Greenbelt Act, 2005.

In 2005 the Greenbelt Act was passed by the Province. This Act, and the associated Greenbelt Plan, identified an area around the Golden Horseshoe and designated it the Greenbelt. The Greenbelt Act ensures the permanent protection of the agricultural land base and the ecological features and functions occurring in this Greenbelt. The Lynden RSA is located within the Greenbelt, and therefore is subject to the policies included with the Act.

In order to limit development in the Greenbelt and protect the Greenbelt from urban sprawl, the policy outlined in Section 4.2.2 of the Greenbelt Plan prohibits the connection of settlements within the Greenbelt to a Great Lake based water system.

"Where settlements do not currently have Great Lake or Lake Simcoe based water and sewage services, extensions to or expansions of existing Great Lake or Lake Simcoe based services to such settlements is not permitted, unless such servicing is required to address failed individual on-site sewage or water services or to ensure the protection of public health where it has been determined by a medical officer of health (or health authority) that there is a public health concern associated with existing services within the settlement. The capacity of the services provided in these circumstances will be restricted to that required to service the affected existing settlement plus the capacity for potential development within the approved settlement boundary as it existed on the date this Plan came into effect."

Reference: <http://www.mah.gov.on.ca/Page189.aspx#3.4>

The urban area of City of Hamilton (including Dundas) currently sources its water from the Great Lakes, therefore the extension of the City system to service areas outside of the urban boundary is not permitted accordant with the Greenbelt Plan.

An aquifer source can be considered as reliable as a lake based source, although both require prudent management to realize that reliability. Many larger centres in proximity to Lynden rely entirely upon groundwater for water supply.

"Do you have any comments, concerns, questions or suggestions regarding the evaluation criteria for assessment of potential well locations?"

This location has already lowered wells in this area, why put in one more?"

The Water Resources Act, 1990 requires that, with the operation of groundwater-sourced municipal communal water systems, the municipality must address any interference with private wells. A Permit to Take Water for a new well will not be granted if potential interference with pre-existing well users is not addressed by the City. To address interference, the City may employ certain mitigation measures at its own expense, such as connecting the affected party to the communal water system or lowering the affected party's well pump intakes.

If interference is reported and confirmed after the permit is issued and the municipal well is operational, the City is still required, as a condition of their PTTW, to take corrective action and either provide connection to the communal water system or lower the private pump intake at the City's cost.

In addition, the City of Hamilton's By-Law No. 86-142 (former Ancaster By-law) and 86-132a (former Flamborough By-law) provides private well owners a means of petitioning the City if interference occurs, Clause 5 states:

"The Region agrees to investigate all interferences complaints at Regional expense in conjunction with the Ministry of the Environment staff and to take corrective measures where necessary. In cases where as disruption of water supply has occurred, the Region will arrange for a temporary water supply until a permanent resolution of the problem has been implemented."

We understand that no claims have been made of any interference to a private well by the existing municipal well between 1986, when the By-laws were passed, and today.

"Do you have any comments, concerns, questions or suggestions regarding the preferred drilling location?

Yes, I wish you would find another location; therefore, not jeopardizing farm wells in this area."

The selection of the proposed well site was based on a culmination of over 30 years worth of studies on the hydrogeology of the Lynden area; this includes information already presented in the 2002 Master Plan Class EA. All previous studies have indicated that the sand and gravel aquifer is thickest to the south and east of the Lynden Rural Settlement Area (RSA)., This source has been proven to meet the current requirements of the water service area. Based on mapping of the aquifer thickness and extent, drilling to the north or west would be unsuccessful in securing the required water supply.

After the PIC on October 23, 2007, further investigation was undertaken to identify any additional studies that were commissioned by the former Councils. Attempts were also made to contact the previous Mayor of Flamborough and inquiries were made again to the Clerk's Office and archives. No additional information or studies were identified beyond those upon which the current work is based, or that indicated a preferred source in another area.

Attached for your reference is a table summarising the reports and studies previously undertaken and reviewed in support of the current study. These documents represent all the relevant investigations undertaken in the area over the past 30 years.

Copies of the supporting documentation can be made available for public review, either by appointment or at the next PIC. A summary of the hydrogeological studies will be placed as a link from the Communal Water Studies page on the City's website:

<http://www.myhamilton.ca/myhamilton/CityandGovernment/CityDepartments/PublicWorks/WaterAndWasteWaterDev/Reports+and+Studies/ReportsandStudies.htm>

"What do you see as the advantages/disadvantages of the proposed project from the perspective of your organization or as a resident of the area?

No advantages to me. Possible a big disadvantage if I have to buy water."

Please refer to the response above, if the new well has been proven to cause unacceptable drawdown in a private well, the City will be immediately required to provide an alternative water supply or lower the pump intake at the City's expense.

Thank you for volunteering to participate in the Water Well Survey. A sample questionnaire is attached for your review. Once the field program is underway a representative of the City will come to visit you and will review these questions with you.

In addition to our response to your specific concerns, please find attached a general letter of response that is being provided to all of the PIC attendees. This letter addresses concerns that were raised by a number of attendees. This letter provides additional background information and is intended to convey a better understanding of the project being undertaken.

Thank you again for your interest in this project and providing us with your feedback. If you have any further concerns please contact me directly at (905) 546-2424 ext.7209 or by email at cshrive@hamilton.ca.

Yours truly,
City of Hamilton

Chris Shrive, M.Sc., P.Ag.
Project Manager

/af/db



City of Hamilton
City Centre, 77 James Street North
Hamilton, Ontario,
Canada L8R 2K3
www.hamilton.ca

Water & Wastewater Division, Public Works Department
Physical Address: 55 John Street North, 6th Floor, Hamilton, Ontario, L8R 3M8
Phone: 905-546-2424 ext. 7209 Fax: 905-546-4491
Email: cshrive@hamilton.ca

June 30, 2008



RR2
Lynden ON L0R 1T0

Re: Class Environmental Assessment for the Lynden Communal Water Supply

Dear Sir/Madam:

Thank you for your attendance at the first Public Information Centre (PIC) regarding the Lynden Communal Water Supply Municipal Class Environmental Assessment.

At our October 23, 2007 PIC, we presented details of the project, as well as the preferred drilling location for a new back-up well. At the PIC, a number of issues were raised with respect to the proposed project, as well as some unrelated issues. Issues included:

1. Was a test well already established at the preferred location?
2. The 1987 Ontario Municipal Board (OMB) hearing and its relationship to the current well's permitted pumping capacity limit of 50 gallons/min (327 m³/day).
3. An alternative water source north of Lynden.
4. The existing well's effect on surrounding private wells and the potential for a second well to worsen this.
5. Increased well capacity will result in higher consumer water use and overloaded septic systems. Lynden requires a communal sewage system.

As these issues were raised by a number of PIC attendees, we are providing further information to all attendees to ensure concerns are adequately addressed.

The City of Hamilton is undertaking this project to establish a back-up well and system redundancy in order to meet the requirements of the Ministry of the Environment (MOE) guidelines as well as to ensure that those who are connected to the system and those that can petition to connect continue to be assured of a safe and reliable drinking water supply. The new well and the existing well will not be pumped at the same time but will be alternated to meet the demands of the community and allow for the periodic shut down of each facility for maintenance and improvements as required. Total withdrawals will remain essentially the same as present. As additional connections are made and the demand on the communal water system increases, the permitted pumping capacity for the system may have to be increased, but previous studies have already demonstrated that the aquifer has sufficient capacity to meet this small additional need.

These findings will be further verified with additional pump tests performed prior to any permitting of the new well.

1. *Was a test well already established at the preferred location?*

There was a question as to whether a test well has already been drilled or installed at the preferred location. Based on the documentation review, field investigation and further discussions with the hydrogeologist involved in the drilling of the existing municipal well, it does not appear that there is an existing well on the property or that previous pump testing was performed specifically at the site.

2. *The 1987 OMB hearing and its relation to the current well's permitted pumping capacity limit of 50 gallons/min (327 m³/day).*

At the PIC, reference was made to the 1987 OMB hearing and the relationship to the existing well's permitted pumping capacity limit. In 1987, some area residents petitioned against the Town of Ancaster's request to re-zone the wellsite to allow for drilling and construction of the well and treatment facility, and the matter was heard by the OMB. The petition made by residents to the OMB was dismissed, but in the decision by the Board reference was made to two pre-existing bylaws, By-Law No. 86-142 (former Ancaster By-law) and 86-132a (former Flamborough By-law), that were created prior to the OMB hearing. These bylaws set the basis of the application for the Permit To Take Water (PTTW) that provides the interpreted upset limit to watertaking of 327 m³/day. The by-laws further facilitate a due process by which any declared interference to area private wells caused by the operation of the municipal well will be addressed through remedial/restorative measures and/or supply replacement at the (then) Region's cost. In rendering the OMB decision denying the petition, the Board makes reference to the by-laws' implementation as 'over and above the protection that is afforded to well owners under the Ontario Water Resources Act' and as evidence that the municipalities have 'acted responsibly'.

The City's Legal Department and the Clerk's Office were contacted with respect to the by-laws. We understand that no claims have been made of any interference to a private well by the existing municipal well between 1986 when the By-laws were passed, and today.

The Permit to Take Water (PTTW) issued by the Ministry of the Environment (MOE) for the existing well caps the water taking at 327 m³/day (50 imperial gallons per minute), which has been the case since the well was drilled. At no time over the operation of the well, has watertaking exceeded this cap. In fact, annual average day demand for the well over the past 10 years have ranged between 118 m³/day and 210 m³/day (annual maximum day between 196 m³/day and 235 m³/day), with more recent average day demand falling to below 100 m³/day. The recent trend may be attributed, in part, to the informal conservation efforts of system users.

With future RSA growth from the current 128 connections to a water service area build-out maximum potential of 224 connections, projected average day demands may rise to 181 m³/day. The permitted pumping capacity may rise from 327 m³/day to 411 m³/day in order to accommodate projected maximum day demands. This represents an increase of 84 m³/day or 15 gallon/min for maximum day demand. The MOE will have to approve and issue a new PTTW for this change. This growth is not anticipated to occur for some time into the future but good planning practices dictate that the demand potential be considered now in the design of the new facility and the assessment of the new well. Studies have shown that the aquifer has sufficient

capacity to meet this additional need; this will be further verified during the pump tests performed on the new well prior to its permitting.

3. *An alternative source north of Lynden?*

The selection of the proposed well site was based on a culmination of 30 years worth of studies on the hydrogeology of the Lynden area. All the previous studies indicated that the sand and gravel aquifer is thickest to the south and east of the Lynden Rural Settlement Area (RSA), and the aquifer has been proven to meet the current requirements of the water service area. Based on mapping of the aquifer thickness and extent, drilling to the north or west would be unsuccessful in procuring the required water supply.

Copies of the supporting documentation can be made available for public review, either by appointment or at the next PIC. A summary of the hydrogeological studies will be placed as a link from the Communal Water Studies page on the City's website:

<http://www.myhamilton.ca/myhamilton/CityandGovernment/CityDepartments/PublicWorks/WaterAndWasteWaterDev/Reports+and+Studies/ReportsandStudies.htm>

On the suggestion of one of the PIC attendees, a local drilling company referenced as being familiar with the area was also contacted. The company indicated that they have experience with shallow bored wells in the Lynden area and stated that the shallow overburden geology in the area changes quite rapidly from fine sand to silt to clay, an observation consistent with existing information. The driller confirmed the presence of a section of sand at the orchard north of the railway tracks. The driller further noted, however, that this sand was found at shallow depths extending down only about 3.5 to 4.5 metres from the surface. While this sand may produce good volumes of water, the driller indicated that it would likely not be of a volume sufficient for a municipal supply well.

4. *What effect would a new well have on surrounding private wells?*

Long-term monitoring, testing and operation of the existing well has shown to have had no effect on shallow private wells; this primarily due to the thick clay layer (between 35 m [105 ft] and 50 m [150 ft]) separating the deep aquifer from surficial (shallow) aquifers.

With the intent being system back-up and security, the new well and the existing well will not be pumped simultaneously but will be alternated to meet the demands of the community and allow for the shut down of each facility for maintenance. Withdrawals will remain effectively the same as present under these conditions. If the proposed backup causes drawdown in wells screened in the same aquifer or should these private wells lose the ability to produce water, the City, as required by Water Resources Act, 1990, would be responsible at its own expense for rectification of the interference. Options may include the provision of an alternative source of water or lowering the private well intake. In order to have a better understanding of the effect the new well will have on specific wells, the project team will collect details of these wells as part of the Well Survey, and with owner approval undertake to monitor any well before, during and following the pump tests.

As stated above, The Water Resources Act, 1990 requires that the municipality must address any interference with private wells. A Permit to Take Water (PTTW) for the new well will not be granted if the City does not address all potential interference with pre-existing well users. To

avoid potential interference, the City may have to employ certain mitigation measures, such as the connection of the affected party to the communal water system or lowering of pump intakes at the City's cost.

If interference is reported and confirmed after the permit is issued and the well is operational, the City remains responsible as a condition of the PTTW to take corrective action and either provide connection to the communal water system or lower the private pump intake at the City's cost.

5. *Increased system capacity and security will result in higher consumer water use and overloaded septic systems. Lynden requires a communal sewage system.*

Some RSA residents suggested that the RSA area is subject to a rising water table as a result of an outside water supply and subsequent overuse by RSA residents. As noted in the response to Item 2 above, annual average day demand for the well over the past 10 years has ranged between 118 m³/day and 210 m³/day, significantly below the PTTW cap of 327 m³/day, with more recent average day demand falling to below 100 m³/day. The recent trend may be attributed, in part, to the informal conservation efforts of system users.

The purpose of the current project is to meet the requirements of the Ministry of the Environment guidelines and to ensure back-up and redundancy in the water system for those who are connected to the system and those that can petition to connect are supplied with safe and reliable drinking water. It is recognized that the septic systems and groundwater table in Lynden is an existing issue; however, it is not related to the project currently being proposed.

The issue of the need for a communal sewage system was also raised during the public consultation for the 2002 Master Plan. As part of the Environment Assessment for the Master Plan, the City undertook and provided an examination of the potential costs associated with a communal sewer system. The 2002 Master Plan estimated the total lifecycle costs for providing sewage collection and treatment assuming the cost is shared equitably over the (then-current) 121 water connections as being \$2,100,000, or \$17,000 per connection. As is the case with the communal drinking water system, the Sustainable Water and Sewage Systems Act and the Municipal Act require the City to seek full cost recovery for communal sewage service. All persons who petition for connection to the system are required to pay a portion of the cost of the system.

The City of Hamilton has developed a Wise Water Use Program. Details of the program can be obtained by contacting the City's Community Outreach at 905-546-2489, or on the City of Hamilton website at:

<http://www.myhamilton.ca/myhamilton/CityandGovernment/CityDepartments/PublicWorks/WaterAndWasteWaterDev/Education/ConservationEducation.htm>

The program provides details on low flow showerheads, water efficient toilets and other tips to help reduce water use, and therefore alleviate the pressure on over stressed septic system. As indicated above, it should be noted that water use in Lynden has been decreasing over the last three years.

The City's Source Water Section, in conjunction with Halton and Hamilton Conservation Authorities, has been conducting information sessions on the management of private wells and septic systems. An information session was held in Lynden this past December. Further sessions

are planned; please refer to the City's website or contact Community Outreach at 905-546-2489 for more information.

Appropriate septic system management is the legal responsibility of the individual owner. The City's Building Department is responsible for identifying and addressing septic system issues in the public's interest through their enforcement of the Ontario Building Code. If a septic system in the area is under capacity or is subject to over-utilization and has the potential to pose a danger to water supply or to human health outside of the property upon which it is located, a report should be made to the City's Building Department (905-546-2720) with specifics on the incident, including the address of the suspected source, its nature and frequency.

In closing, the City would like to thank you again for your interest in the Lynden Water Supply Class EA Study and for your attendance at the first Public Information Centre. We trust that with the information provided in this letter your comments have been addressed. A second PIC is scheduled for 2008 to provide the test results from the proposed new well location and to consider further design and treatment requirements. We will notify you of its date and location in the coming weeks.

Yours truly,
City of Hamilton

Chris Shrive, M.Sc., P.Ag.
Project Manager

/af/db



City of Hamilton
City Centre, 77 James Street North
Hamilton, Ontario,
Canada L8R 2K3
www.hamilton.ca

Water & Wastewater Division, Public Works Department
Physical Address: 55 John Street North, 6th Floor, Hamilton, Ontario, L8R 3M8
Phone: 905-546-2424 ext. 7209 Fax: 905-546-4491
Email: cshrive@hamilton.ca

June 16, 2008



RR2
Lynden ON L0R 1T0

Re: Class Environmental Assessment for the Lynden Communal Water Supply

Dear 

Thank you for your attendance at the first Public Information Centre (PIC) regarding the Lynden Communal Water Supply Class Environmental Assessment and for taking the time to complete the comment sheet provided.

We are pleased at this time to offer a response to the feedback you provided on the comments sheet.

“Additional comments related to the project.

If project is completed, what would be the cost (projected) for a household hook-up.”

Further details of the cost to connect will be provided at the second PIC to be held in Lynden in 2008.

“Please provide any other comments regarding the Public Information Centre (i.e., location, help received on understanding study and your concerns, opportunity provided to ask questions/comments/express concern).

It would be nice if location closer to Lynden were used”

The selection of the proposed well site was based on a culmination of over 30 years worth of studies on the hydrogeology of the Lynden area; this includes information already presented in the 2002 Master Plan Class EA. All previous studies have indicated that the sand and gravel aquifer is thickest to the south and east of the Lynden Rural Settlement Area (RSA). This source has been proven to meet the current requirements of the water service area. Based on mapping of the aquifer thickness and extent, exploring elsewhere would be unsuccessful in securing the required water supply.

Thank you for volunteering to participate in the Water Well Survey. A sample questionnaire is attached for your review. Once the field program is underway a representative of the City will come to visit you and will review these questions with you.

In addition to our response to your specific concerns, please find attached a general letter of response that is being provided to all of the PIC attendees. This letter addresses concerns that

were raised by a number of attendees. This letter provides additional background information and is intended to convey a better understanding of the project being undertaken.

Thank you again for your interest in this project and providing us with your feedback. If you have any further concerns please contact me directly at (905) 546-2424 ext.7209 or by email at cshrive@hamilton.ca.

Yours truly,

City of Hamilton

Chris Shrive, M.Sc., P.Ag.
Project Manager

/af/db



City of Hamilton
City Centre, 77 James Street N
Hamilton, Ontario,
Canada L8R 2K3
www.hamilton.ca

Water & Wastewater Division, Public Works Department
Physical Address: 55 John Street North, 6th Floor, Hamilton, Ontario, L8R 3M8
Phone: 905-546-2424 ext. 7209 Fax: 905-546-4491
Email: cshrive@hamilton.ca

June 30, 2008



P. O. Box
Lynden ON L0R 1T0

Re: Class Environmental Assessment for the Lynden Communal Water Supply

Dear [REDACTED]:

Thank you for your attendance at the first Public Information Centre (PIC) regarding the Lynden Communal Water Supply Class Environmental Assessment and for taking the time to complete the comment sheet provided.

We are pleased at this time to offer an itemized response to the feedback you provided on your comment sheet.

“Do you have any comments related to the existing water supply in this study area?

Taste is not good at times smells too strongly of chlorine and sometimes of sulphur.”

After the Walkerton Inquiry, the Safe Drinking Water Act was passed. To meet the disinfection requirements of the Act, chlorine levels at both the source and in the distribution system were increased for the protection of the consumer. Chlorination of the water supply is required to ensure that bacteriological contamination does not occur.

The existing well is partially screened in the bedrock below the gravel aquifer, which is the suspected source of the sulphur in the existing well. This issue has been noted and measures will be taken to ensure the proposed well will not be screened in the bedrock in an effort to reduce hydrogen sulphide levels in the water.

“Do you have any comments, concerns, questions or suggestions regarding the Environmental Assessment Process or the overall approach to the project?

I attended the meeting in Copetown and I was discouraged by the lack of background and work done prior to making the proposal.”

The preferred location presented in the meeting was the result of a culmination of several years of work including information presented in the 2002 Master Plan. Attached for your reference is a table summarising the reports and studies previously undertaken and reviewed in support of the current study. These documents represent all the relevant investigations undertaken in the area over the past 30 years.

Copies of the supporting documentation can be made available for public review, either by appointment or at the next PIC. A summary of the hydrogeological studies will be placed as a link from the Communal Water Studies page on the City's website:

<http://www.myhamilton.ca/myhamilton/CityandGovernment/CityDepartments/PublicWorks/WaterAndWasteWaterDev/Reports+and+Studies/ReportsandStudies.htm>

After the PIC on October 23, 2007, further investigation was undertaken to identify any additional studies that were commissioned by the former Councils. Attempts were also made to contact the previous Mayor of Flamborough and inquiries were made again to the Clerk's Office and archives. No additional information or studies were identified beyond those upon which the current work is based, or that indicated a preferred source in another area.

"Do you have any comments, concerns, questions or suggestions regarding the evaluation criteria for assessment of potential well locations?"

The well should be placed to remove water from another area not the same area."

There are two reasons for drilling within the same area:

- **There are unnecessary risks and expense in undertaking a drilling program in another area with unproven potential. Based on previous studies dating back more than 30 years, finding a new source outside of the proven area would involve much higher risk, and there are no guarantees that an adequate supply would be found. The primary objective of the present project is to secure back-up to the existing well, and this can be achieved within the existing proven area.**
- **The expense of extending the distribution system to another area that might be more distant from Lynden than the preferred option.**

The proposed locations for a backup well are based on years of studies that show that the aquifer is thicker and more extensive to the south and east of Lynden. The studies also show that this aquifer can sustainably provide the required supply of water.

The intent of this project is to provide a new well and treatment facility to establish redundancy within the system and thereby increase the security of the water supply. The new well and the existing well will not be pumped simultaneously but will be alternated to meet the demands of the community and allow for the shut down of each facility for maintenance. Withdrawals will remain effectively the same as present under these conditions.

As additional connections are made and the demand on the communal water system increases to supply build-out of the Lynden RSA, the permitted pumping capacity will have to be increased from 327 m³/day to 411 m³/day, an increase of 84 m³/day or 15 gallon/min. The increase in the permitted capacity would also apply to the existing well but would only be required when the number of connections to the system warrants additional water supply. This is not anticipated to be for a number of years, but prudent planning practices dictate that this future demand be

considered now in the current design of the new facility and in the selection of the new well. Studies have shown that the aquifer has sufficient capacity to meet this additional need and this will be further verified during the pump tests to be performed prior to the permitting of the well.

“Do you have any comments, concerns, questions or suggestions regarding the preferred drilling location?”

The farmers and residents close to the existing and suggested locations are without water in their wells and not being consulted nor compensated.”

The City of Hamilton’s By-Law No. 86-142 (former Ancaster By-law) and 86-132a (former Flamborough By-law) provide private well owners a means of petitioning the City if interference occurs, Clause 5 states:

“The Region agrees to investigate all interferences complaints at Regional expense in conjunction with the Ministry of the Environment staff and to take corrective measures where necessary. In cases where as disruption of water supply has occurred, the Region will arrange for a temporary water supply until a permanent resolution of the problem has been implemented.”

We understand that no claims have been made of any interference to a private well by the existing municipal well between 1986, when the By-laws were passed, and today.

The Water Resources Act, 1990 requires that, with the operation of groundwater-sourced municipal communal water systems, the municipality must address any interference with private wells. A Permit to Take Water for a new well will not be granted if potential interference with pre-existing well users is not addressed by the City. To address interference, the City may employ certain mitigation measures at its own expense, such as connecting the affected party to the communal water system or lowering their well pump intakes.

If an interference is reported after the permit is issued and the municipal well is operational, the City is still required, as a condition of their PTTW, to take corrective action and either provide connection to the communal water system or lower the private pump intake at the City’s cost.

“What do you see as the advantages/disadvantages of the proposed project from the perspective of your organization or as a resident of the area?”

Resident. Doesn’t seem to plan for future for expansion enough you neglected to look at previous proposals/plans (from 20 years ago)”

The proposed well and associated facilities are being designed to meet the long-term requirements for the community. The proposed well will be tested to ensure it can meet the potential long-term demand assuming that all permitted connection are made to the communal water system.

Reports dating back over 30 years were used in choosing the location for the proposed well. All the reports reviewed indicated that the best source was to the

south and east of Lynden. Please refer to the responses above with respect to previous studies and planning for additional connections to build-out of the RSA.

“Additional comments related to the project.

It appears that details regarding this project got lost in the amalgamation of Hamilton and Flamborough. The plan from 20 years ago was to have a better facility on the north side of the railroad tracks on Lynden Road. You need to find that study and details. The research has already been done.”

After the PIC on October 23, 2007, further investigation was undertaken to identify any additional studies that were commissioned by the former Councils. Attempts were also made to contact the previous Mayor of Flamborough and inquiries were made again to the Clerk’s Office and archives. No additional information or studies were identified beyond those upon which the current work is based, or that indicated a preferred source in another area.

Johnson and Baetz, a well firm with local experience, confirmed the presence of a section of sand at the orchard north of the railway tracks. However, they said that this sand was found at shallow depths, extending down only about 3.5 to 4.5 metres. While this sand did produce good volumes of water, they indicated that it would likely not be sufficient for a municipal supply well. They also stated that the shallow overburden geology in the area changes quite rapidly from fine sand to silt to clay, which is in agreement with existing information.

Please refer to the response above and the attached table with respect to other previous studies.

“Please provide any other comments regarding the Public Information Centre (i.e., location, help received on understanding study and your concerns, opportunity provided to ask questions/comments/express concern).

I though it was a good first step. It seemed to get a little bit hostile when concerns were not addressed properly. People don’t want to get walked all over.

One month of study obviously isn’t enough.”

Please refer to the response above and the attached table with respect to previous studies. The selection of the proposed well site was based on a culmination of 30 years of studies on the hydrogeology of the Lynden area, dating back to before the construction of the existing supply well. The studies formed the basis for the selection of preferred site.

“Need to address the issue of storm sewers.”

This study focuses on meeting the Ministry of the Environment guidelines for drinking water and ensures a safe reliable drinking water supply system is provided to the Lynden water service area. We understand that the septic system and groundwater table in Lynden is an existing issue; however it is not directly related to the project currently being proposed. Although this issue is not included in the scope of this study, additional information on this topic is presented in the general response letter attached.

Thank you for volunteering to participate in the Water Well Survey. A sample questionnaire is attached for your review. Once the field program is underway a representative of the City will come to visit you and will review these questions with you.

In addition to our response to your specific concerns, please find attached a letter of general response that is being provided to all of the PIC attendees. This letter addresses concerns that were raised by a number of attendees. This letter we can provides additional background information and is intended to convey a better understanding of the project being undertaken.

Thank you again for your interest in this project and providing us with feedback on the information presented at the PIC. If you have any further concerns please contract me directly at (905) 546-2424 ext.7209 or by email at cshrive@hamilton.ca.

Yours truly,
City of Hamilton

Chris Shrive, M.Sc., P.Ag.
Project Manager

/af/db



City of Hamilton
City Centre, 77 James Street N
Hamilton, Ontario,
Canada L8R 2K3
www.hamilton.ca

Water & Wastewater Division, Public Works Department
Physical Address: 55 John Street North, 6th Floor, Hamilton, Ontario, L8R 3M8
Phone: 905-546-2424 ext. 7209 Fax: 905-546-4491
Email: cshrive@hamilton.ca

June 30, 2008



Lynden ON L0R 1T0

Re: Class Environmental Assessment for the Lynden Communal Water Supply

Dear Mr. Post:

Thank you for your attendance at the first Public Information Centre (PIC) regarding the Lynden Communal Water Supply Class Environmental Assessment and for taking the time to complete the comment sheet provided.

We are pleased at this time to offer an itemized response to the feedback provided on your comment sheet.

“Do you have any comments related to the existing water supply in this study area?”

The municipality should extend services to all Lynden residents.”

City By-Law and the Rural Settlement Area (RSA) designations within the Rural Official Plan govern connections to communal water systems. The Lynden RSA boundary was delineated as part of the Flamborough Official Plan and then reviewed in 2006 by the City of Hamilton through its new Rural Official Plan. The bylaw permits lots within the RSA or abutting the RSA to petition to connect; in addition, the City of Hamilton By-Law No. 01-039 stipulates that a property abutting a watermain greater than 20mm can also connect. This would apply to all lots fronting the watermain along Governor’s Road.

Based on the address you provided on the comment sheet, you currently reside within the RSA boundary and are connected to the communal water system. The Sustainable Water and Sewage Systems Act, 2002 requires the City to ensure full cost recovery of communal water services; all persons who petition to connect to the system must pay a portion of the cost of the system at the time of connection. Further details of the cost to connect will be provided at the second PIC that will be held in 2008.

“Do you have any comments, concerns, questions or suggestions regarding the Environmental Assessment Process or the overall approach to the project?”

You should find a way to go back to Dundas for a new line. Heck, Canada was built on cutting down trees!”

In 2005 the Greenbelt Act was passed by the Province. This Act, and the associated Greenbelt Plan, identified an area around the Golden Horseshoe and designated it the Greenbelt. The Greenbelt Act ensures the permanent protection of the agricultural land base and the ecological features and functions occurring on this Greenbelt. The Lynden RSA is located within the Greenbelt and subject to the policies included with the Act.

In order to limit development in the Greenbelt and protect the Greenbelt from urban sprawl, the policy outlined in Section 4.2.2 of the Greenbelt Plan prohibits the connection of settlements within the Greenbelt to a Great Lake based water system.

“Where settlements do not currently have Great Lake or Lake Simcoe based water and sewage services, extensions to or expansions of existing Great Lake or Lake Simcoe based services to such settlements is not permitted, unless such servicing is required to address failed individual on-site sewage or water services or to ensure the protection of public health where it has been determined by a medical officer of health (or health authority) that there is a public health concern associated with existing services within the settlement. The capacity of the services provided in these circumstances will be restricted to that required to service the affected existing settlement plus the capacity for potential *development* within the approved settlement boundary as it existed on the date this Plan came into effect.”

Reference: <http://www.mah.gov.on.ca/Page189.aspx#3.4>

The urban area of City of Hamilton (including Dundas) currently sources its water from the Great Lakes, therefore the extension of the City system to service areas outside of the urban boundary is not permitted accordant with the Greenbelt Plan.

An aquifer source can be considered as reliable as a lake based source, although both require prudent management to realize that reliability. Many larger centres in proximity to Lynden rely entirely upon groundwater for water supply.

“Do you have any comments, concerns, questions or suggestions regarding the evaluation criteria for assessment of potential well locations?”

Seems all locations are bad. Go to north side or west side of Town and extend the service.”

All the previous studies indicated that the sand and gravel aquifer is thickest to the south and east of the Lynden RSA, and has been proven to meet the current requirements of the water service area. Based on mapping of the aquifer thickness and extent, drilling to the north or west would be unsuccessful in procuring the required water supply.

Do you have any comments, concerns, questions or suggestions regarding the preferred drilling location?

Why bother drilling anywhere within 2 kms of the original well.

There are two reasons for drilling within 2km of the original well:

- **There are unnecessary risks and expense in undertaking a drilling program in another area with unproven potential. Based on previous studies dating back more than 30 years, finding a new source outside of the proven area would involve much higher risk, and there are no guarantees that an adequate supply would be found. The primary objective of the present**

project is to secure back-up to the existing well, and this can be achieved within the existing proven area.

- **The expense of extending the distribution system to another area that might be more distant from Lynden than the preferred option.**

“Additional comments related to the project.

Go back to the 1980's when they had a cap on this well pumping limit. So why are you doing this new well so close to the existing one?”

This statement raises two separate issues :.

1) Cap on the Pumping Limit from the 1980s

The Permit to Take Water (PTTW) issued by the Ministry of the Environment (MOE) for the existing well caps the water taking at 3.78 Litres per second (50 imperial gallons per minute), which has been the case since the well was drilled.

The intent of this project is to provide a new well and treatment facility to establish redundancy within the system and thereby increase the security of the water supply. The new well and the existing well will not be pumped simultaneously but will be alternated to meet the demands of the community and allow for the shut down of each facility for maintenance. Withdrawals will remain effectively the same as present under these conditions.

As additional connections are made and the demand on the communal water system increases to supply build-out of the Lynden RSA, the permitted pumping capacity will have to be increased from 327 m³/day to 411 m³/day, an increase of 84 m³/day or 15 gallon/min. The increase in the permitted capacity would also apply to the existing well but would only be required when the number of connections to the system warrants additional water supply. This is not anticipated to be for a number of years, but prudent planning practices dictate that this future demand be considered now in the current design of the new facility and the selection of the new well. Studies have shown that the aquifer has sufficient capacity to meet this additional need and this will be further verified during the pump tests to be performed prior to the permitting of the well.

2) The Proximity of the Proposed Well to the Existing Well

Please refer to the response above regarding the reasoning for selecting a site within a 2km radius of the existing well.

Thank you for volunteering to participate in the Water Well Survey. A sample questionnaire is attached for your review. Once the field program is underway a representative of the City will come to visit you and will review these questions with you.

In addition to our response to your specific concerns, please find attached a letter of general response that is being provided to all of the PIC attendees. This letter addresses concerns that were raised by a number of attendees. This letter provides additional background information and is intended to convey a better understanding of the project being undertaken.

Thank you again for your interest in this project and providing us with your feedback. If you have any further concerns please contact me directly at (905) 546-2424 ext.7209 or by email at cshrive@hamilton.ca.

Yours truly,

City of Hamilton

Chris Shrive, M.Sc., P.Ag.
Project Manager

/af/db



NOTICE OF PUBLIC INFORMATION CENTER NO 2

CLASS ENVIRONMENTAL ASSESSMENT STUDY

LYNDEN COMMUNAL WATER SUPPLY

PROJECT BACKGROUND

The City of Hamilton has undertaken this study to identify a water supply source to better secure the supply to the Lynden Rural Settlement Area (RSA). Currently, the majority of the Lynden RSA receives its drinking water from a single groundwater well and single storage/treatment facility. The need for the project was identified in 2002 in the Water Master Servicing Plan for the Lynden Rural Settlement Area, which identified the need for additional water supply for the Lynden RSA.

THE STUDY PROCESS

The study is being completed as a Schedule C Class Environmental Assessment (Class EA). It follows the planning and design process as defined in the *Municipal Engineers Association Municipal Class Environmental Assessment document* (as amended in 2015).

Consultation with and input from the public and review agencies and stakeholders is a vital component of any Class EA study. Members of the public and review agencies are invited to provide comment for incorporation into the overall planning and design of the preferred water supply solution for the Lynden RSA. Upon completion of the study, a Project Report will be available for public review and comment. A Notice of Completion will be published at that time, indicating where and how the public and other stakeholders can obtain access to the report.

PUBLIC INFORMATION CENTRE (PIC) NO. 2

A Public Information Centre is being held to present the findings of the study to the public and other stakeholders, and to provide an opportunity for interested parties to provide comments and feedback to the project team.

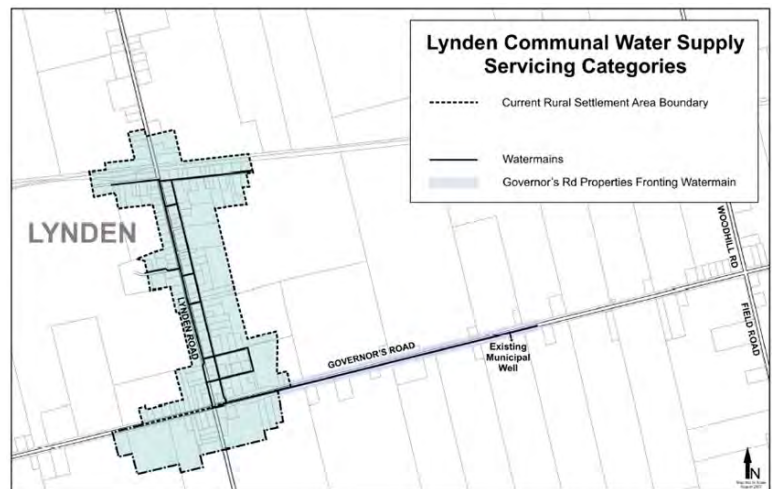
The Public Information Centre will be held:

Date: Tuesday, October 18, 2016
Time: 4:30 p.m. to 7:00 p.m.
Location: Royal Canadian Legion,
206 Lynden Rd, Lynden ON

The purpose of PIC 2 is to review the background and objectives of the study, to communicate the approach to the evaluation of alternatives, present alternative solutions, the preferred design alternative, and to request public input. Information will be presented on display boards and staff from both the City and their consultant will present the information and respond to questions from participants.

COMMENTS

We are interested in hearing any comments or concerns you may have with respect to this study. A comment sheet/questionnaire will be available for attendees to provide written feedback. Comments received through the course of the study will be considered in selecting the preferred solution. Information will be collected in accordance with the Freedom of the Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record. As part of the consultation process, a mailing list for notification purposes is now being compiled. If you wish to receive further information about this project, to submit a comment, or to be added to the mailing list, please contact:



Carmen Vega, Senior Project Manager
Source Protection Planning
Sustainable Initiatives, Public Works, City of Hamilton
77 James Street North, Suite 400
Hamilton, ON L8R 2K3
905-546-2424, Ext. 1301
Email: Carmen.Vega@hamilton.ca

Michelle Albert, Consultant
WSP Canada Inc
600 Cochrane Dr. Suite 500
Markham, Ontario L3R 5K3
(905)-475-7270, Ext. 18304
Fax: (905)-475-5994
Email: Michelle.Albert@wspgroup.com

**Please contact the above regarding requirements for disability accommodation.
This Notice published October 7th and October 14th, 2016.**

City of Hamilton

NOTICE OF PUBLIC INFORMATION CENTER NO 2

CLASS ENVIRONMENTAL ASSESSMENT STUDY LYNDEN COMMUNAL WATER SUPPLY

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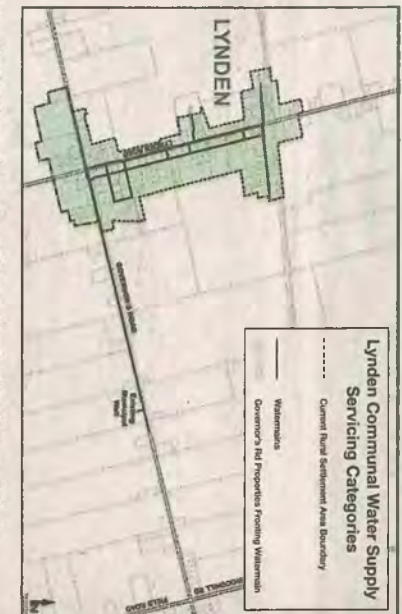
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Michelle Albert, Consultant
WSP Canada Inc
600 Cochrane Dr, Suite 500
Markham, Ontario L3R 5K3
(905)-475-7270, Ext. 18304
Fax: (905)-475-5994
Email: Michelle.Albert@wspgroup.com

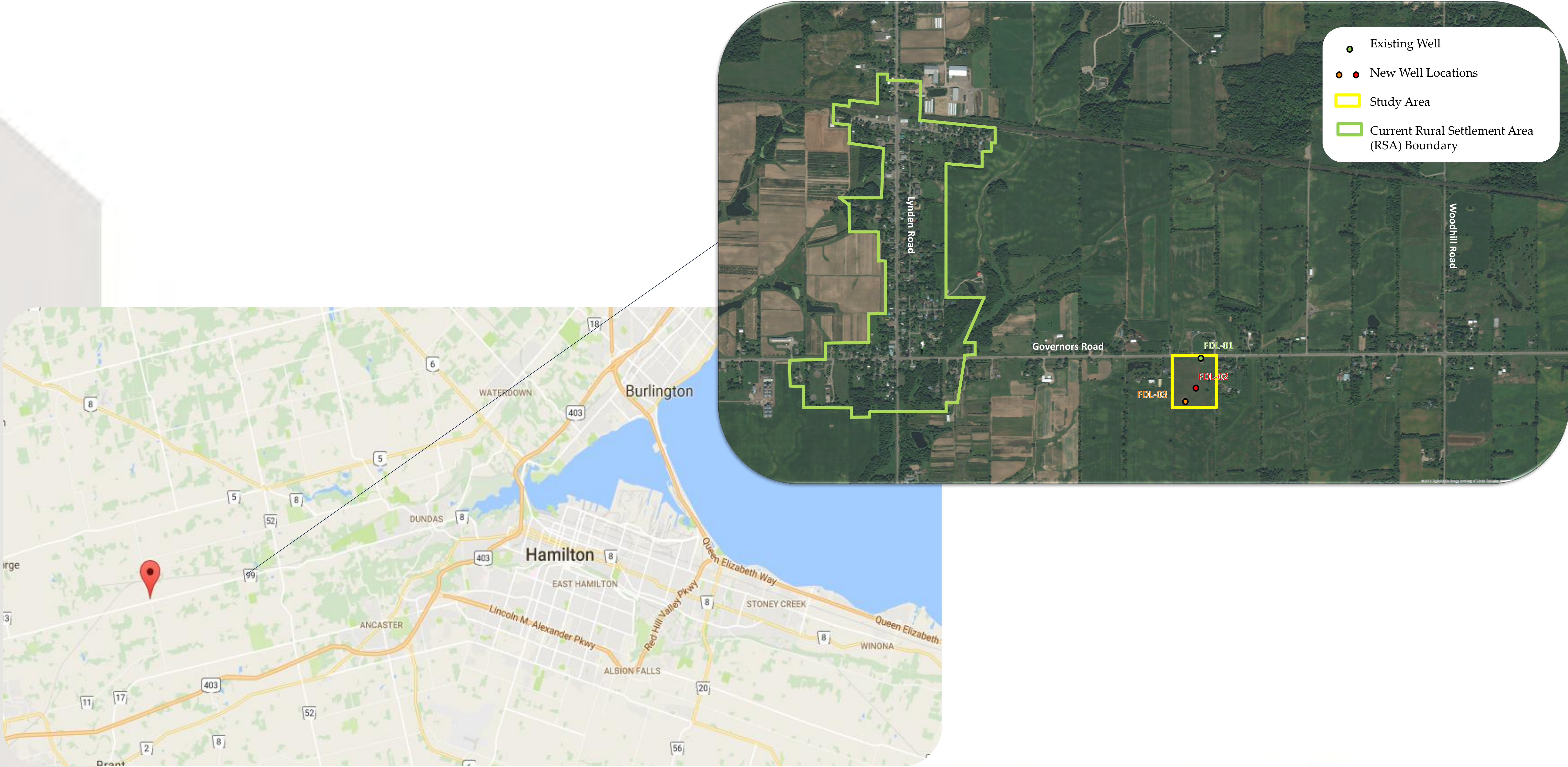
Please contact the above regarding requirements for disability accommodation.
This Notice published October 6th 2016.



MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT
FOR LYNDEN COMMUNAL WELL SYSTEM

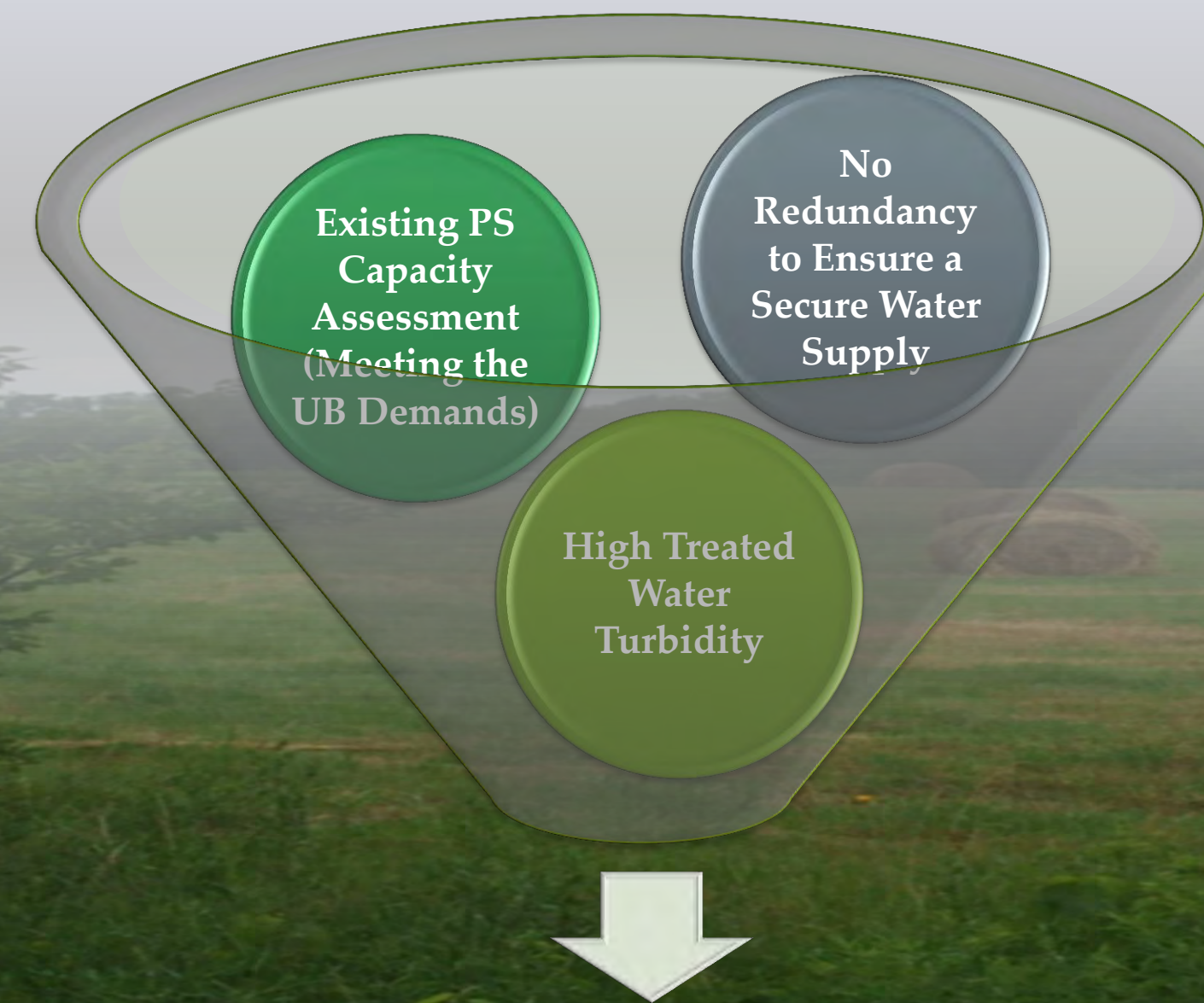
Your Input is Much Appreciated

LYNDEN COMMUNAL WATER SUPPLY SYSTEM
Schedule "C" - CLASS EA



INTRODUCTION – Study Area

2002 Master Plan evaluated the Lynden water supply system for the following reasons:



Preferred Alternative:

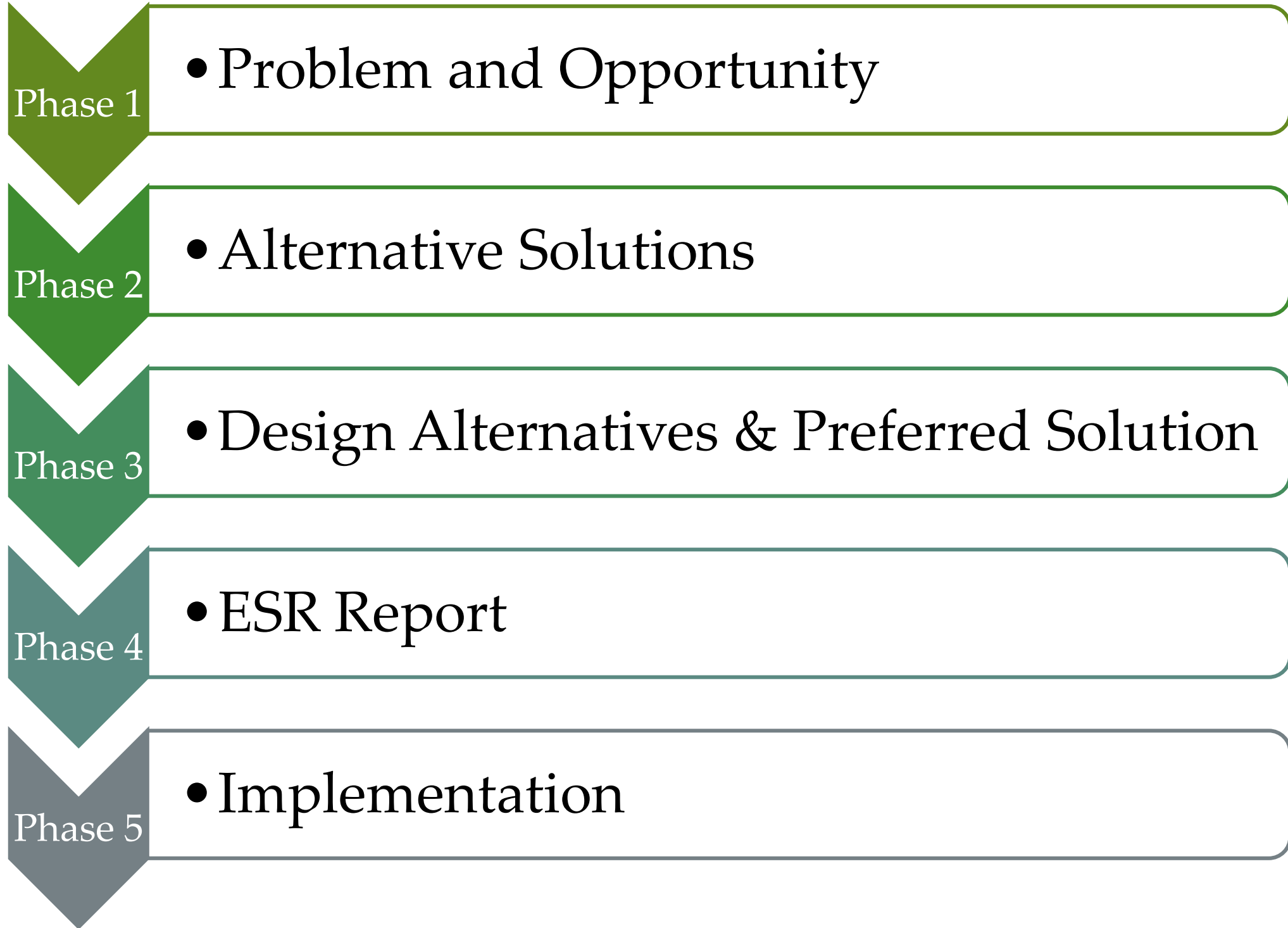
"Upgrade the Existing Pumping Station"

"Upgrade the Existing Well Pumping Station" Alternative includes:

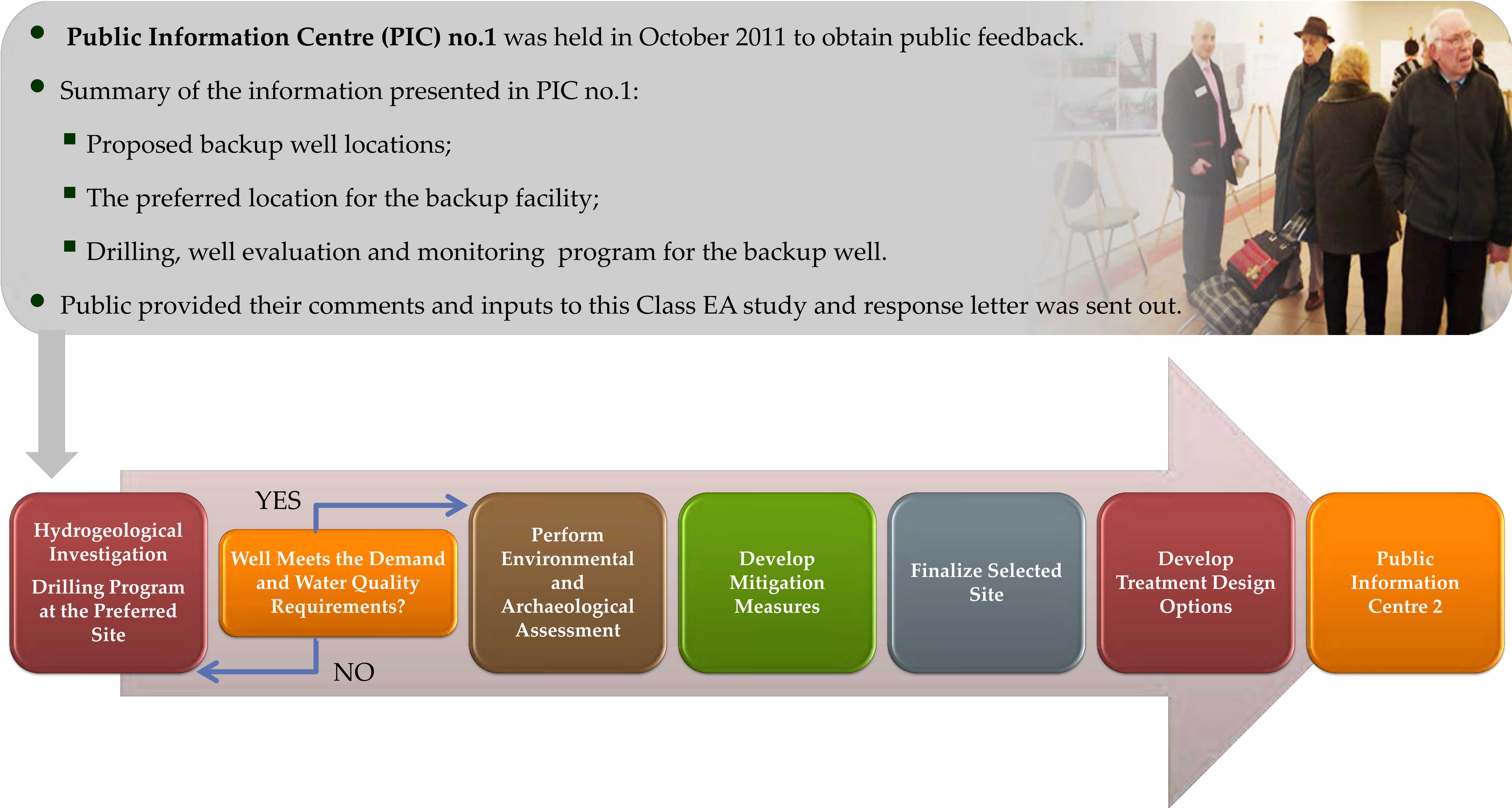
- **Treatment for Turbidity**
- **Increase capacity to meeting future demand**
- **Provide redundancy in water supply source by locating a new well**

LYNDEN COMMUNAL WATER SUPPLY SYSTEM
Schedule "C" - CLASS EA

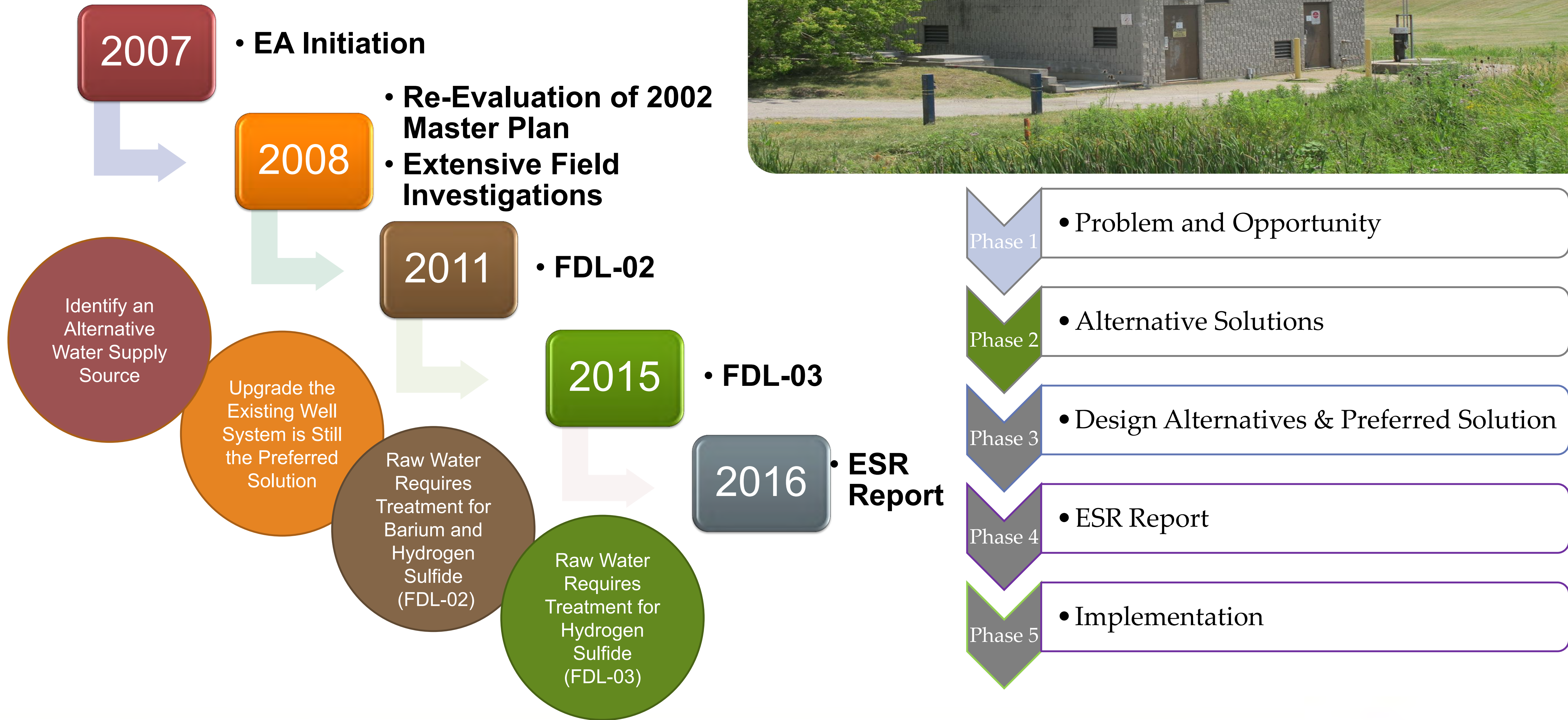
- The construction of a new well for Lynden Communal Well Supply System requires a Municipal Class EA Schedule 'C'.
- The objective of the study is:
 - Satisfy the requirement of a Municipal Class Environmental Assessment process to implement a second source of supply for Lynden Communal Well Supply System
- WSP was retained by the City to complete the Phase 3 and Phase 4 of the Municipal Schedule 'C' Class Environmental Assessment (EA) for Lynden municipal water supply system:
 - Re-Evaluate Preferred Solution from 2002 Master Plan
 - Conduct Hydrogeological Study
 - Conduct Natural and Archaeological Study
 - Provide Design Alternatives & Preferred Design Alternative



STUDY OBJECTIVE



LYNDEN COMMUNAL WATER SUPPLY SYSTEM
Schedule "C" - CLASS EA



OVERVIEW OF THE PROJECT

LYNDEN COMMUNAL WATER SUPPLY SYSTEM
Schedule "C" - CLASS EA

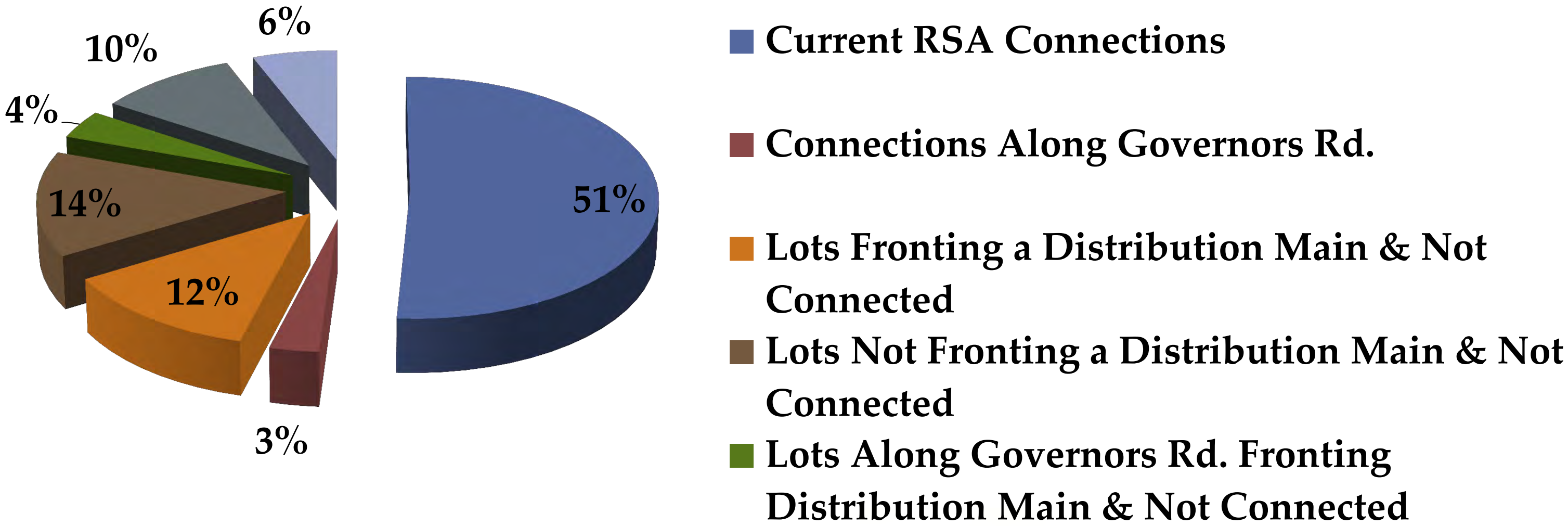
2016 Water Demands

PARAMETER	UNIT	VALUE
Water Source	Existing Well (FDL-01)	PTTW:
		3.8 L/s (327 m³/d)
Average Daily Demand	-	1.01 L/s (87 m³/d)
Max Daily Demand	-	1.90 L/s (164 m³/d)
Max Day Peak Factor	-	1.88
Service Connection	-	141
Population	Capita	451
ADD per Capita	L/Cap./day	193
MDD per Capita	L/ Cap./day	363
Number of People per Household	Cap./household	3.2
Fire Flow	-	Not Required



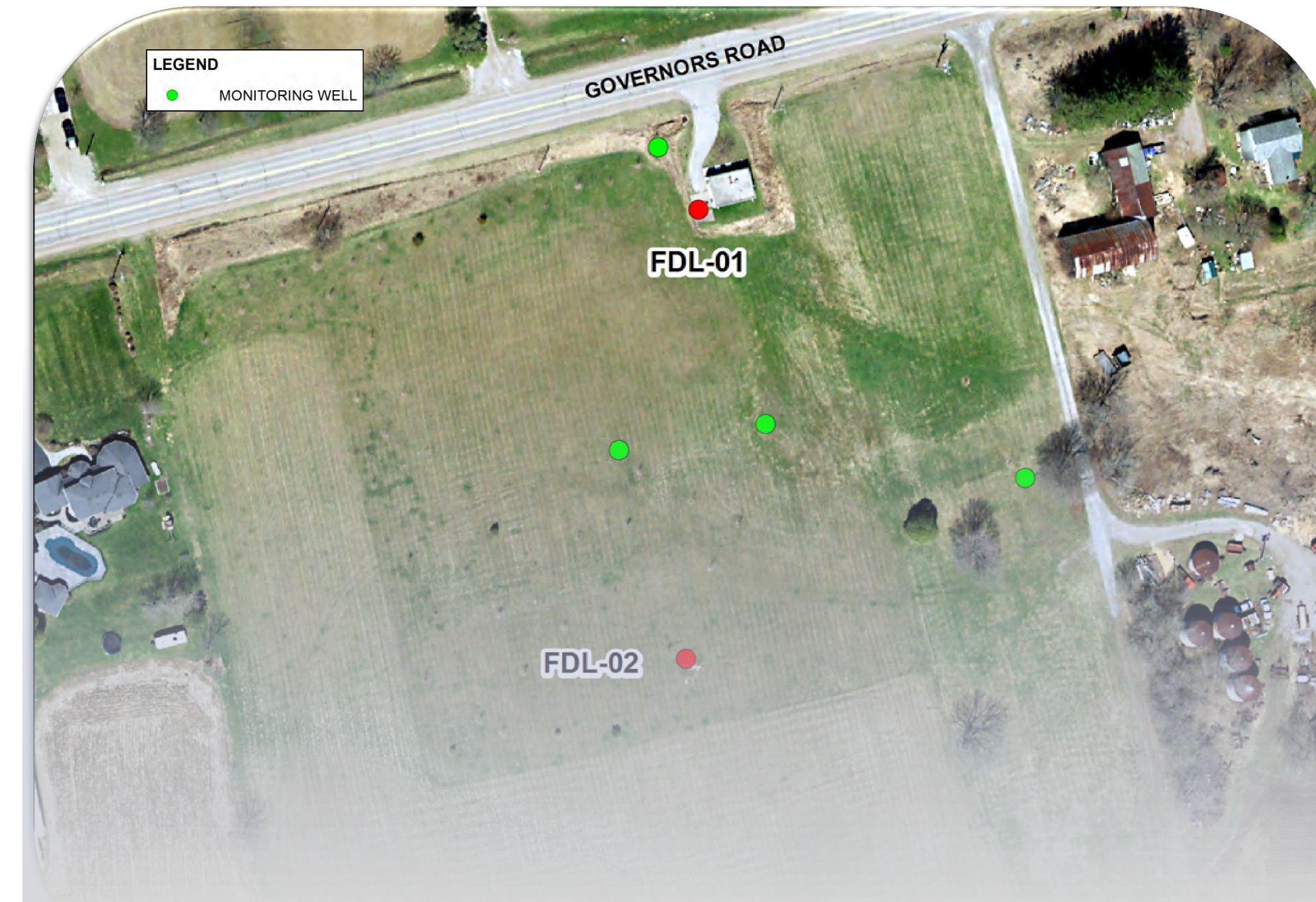
Ultimate Buildout Water Demands

PARAMETER	UNIT	VALUE
Average Daily Demand (ADD)	L/s	1.68 L/s (145 m³/d)
Max Daily Demand (MDD)	L/s	3.2 L/s (273 m³/d)
Peak Hourly Demand	L/s	6.9 L/s (599 m³/d)
Ultimate Serviced	Capita	752
Storage Requirement	m³	130 m³ (based on 1.4 mg/L of FCR)
Fire Flow		Not Required



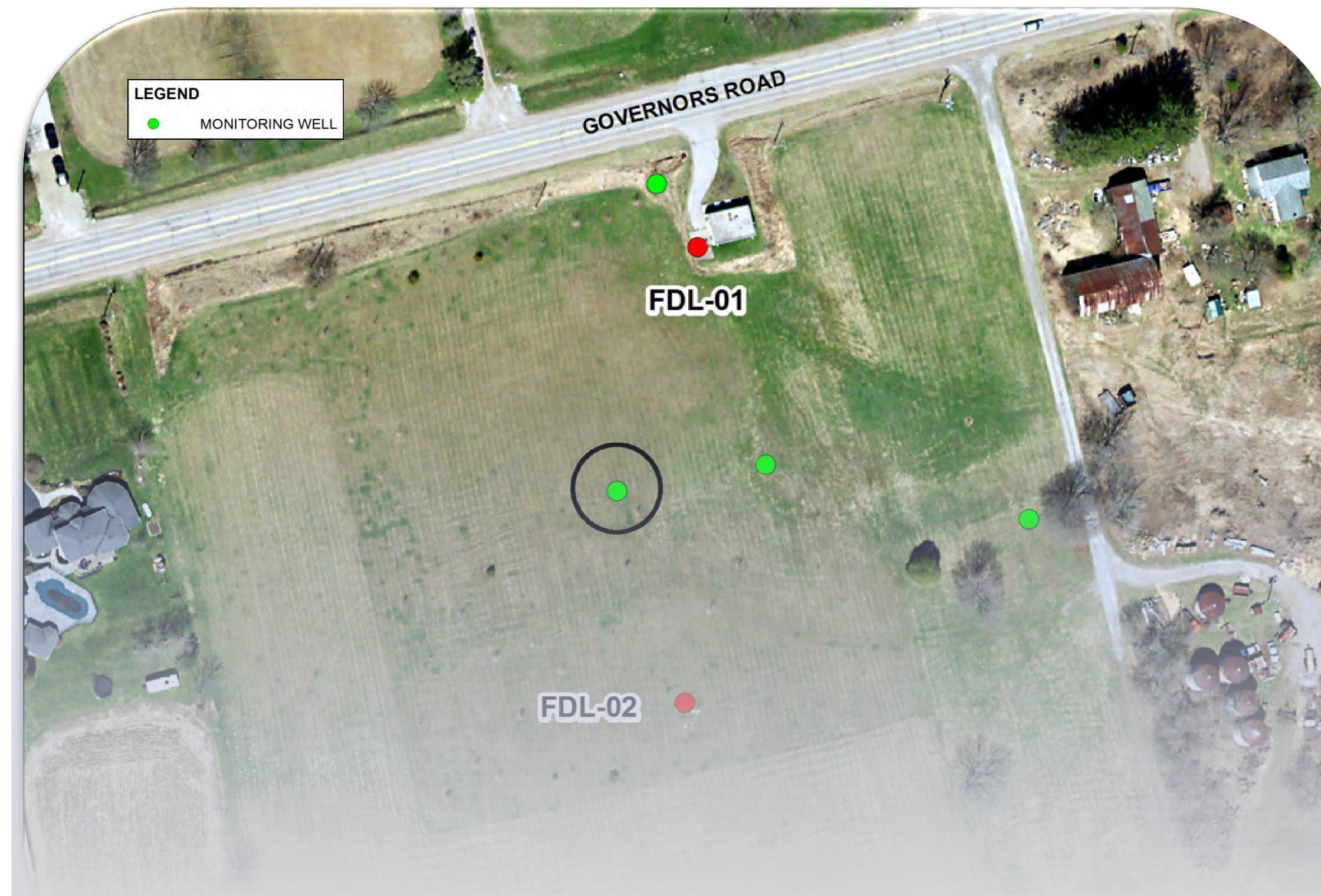
Exploration Timeline (2006 – 2012)

- Desktop hydrogeological assessment (XCG Consultants, 2006).
- EA initiated to locate new water supply well (2007).
- Selected location approximately 500 m to the east of FDL-01 for drilling on City owned property.
- Ontario Geological Survey (OGS) drilling program (2008) was unsuccessful (aquifer not thick enough).
- Independent City exploration program at various sites around the community (2008 – 2010) was unsuccessful in locating a new groundwater source.
- Purchase of land adjacent to FDL-01 for additional exploration.



- FDL-02 was drilled in 2011 approximately 100 m south of FDL-01.
- 72-hour constant rate pumping test
 - Successfully produced 4.7 L/s.
 - Water quality concerns: barium (2.7 mg/L), hydrogen sulfide, hardness
 - Drinking water limit for barium is 1.0 mg/L

Exploration Timeline (2014)



Additional onsite exploration at two locations (2014) to find a site with lower levels of barium.

- In between FDL-02 and FDL-01:
 - Step test showed sufficient quantity
 - Water quality concerns: barium (1.7 mg/L), hydrogen sulfide, hardness

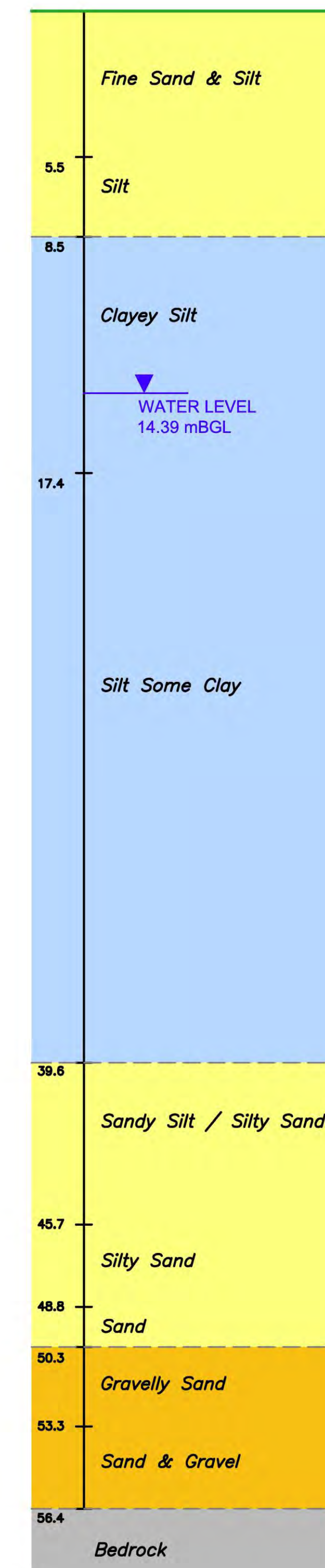
- Approximately 125 m south of FDL-02:
 - Step test showed sufficient quantity
 - Water quality concerns: hydrogen sulfide, hardness
 - Barium is not an issue at this location (0.1 mg/L)
- This location was selected as the preferred site for construction of production well FDL-03.



GROUNDWATER RESOURCES EXPLORATION

Hydraulic Testing of FDL-03 (2016)

- Variable Rate Step test (March 18, 2016)
 - Tested at pumping rates of 2.5, 5.0, 7.5 and 10.0 L/s to confirm target rate for constant rate test.
- Constant rate test (March 21-24, 2016):
 - Pumped at 6.0 L/s for 72 hours.
 - FDL-01 remained in operation.
 - Measured water levels in all on-site monitoring wells and four offsite private water wells (2 deep, 2 shallow).
 - Water quality testing at 12 hour intervals
 - Tested for Ontario Drinking Water Quality Sampling parameters (Tables 1-4) including radiological parameters and pesticides just before the end of the test



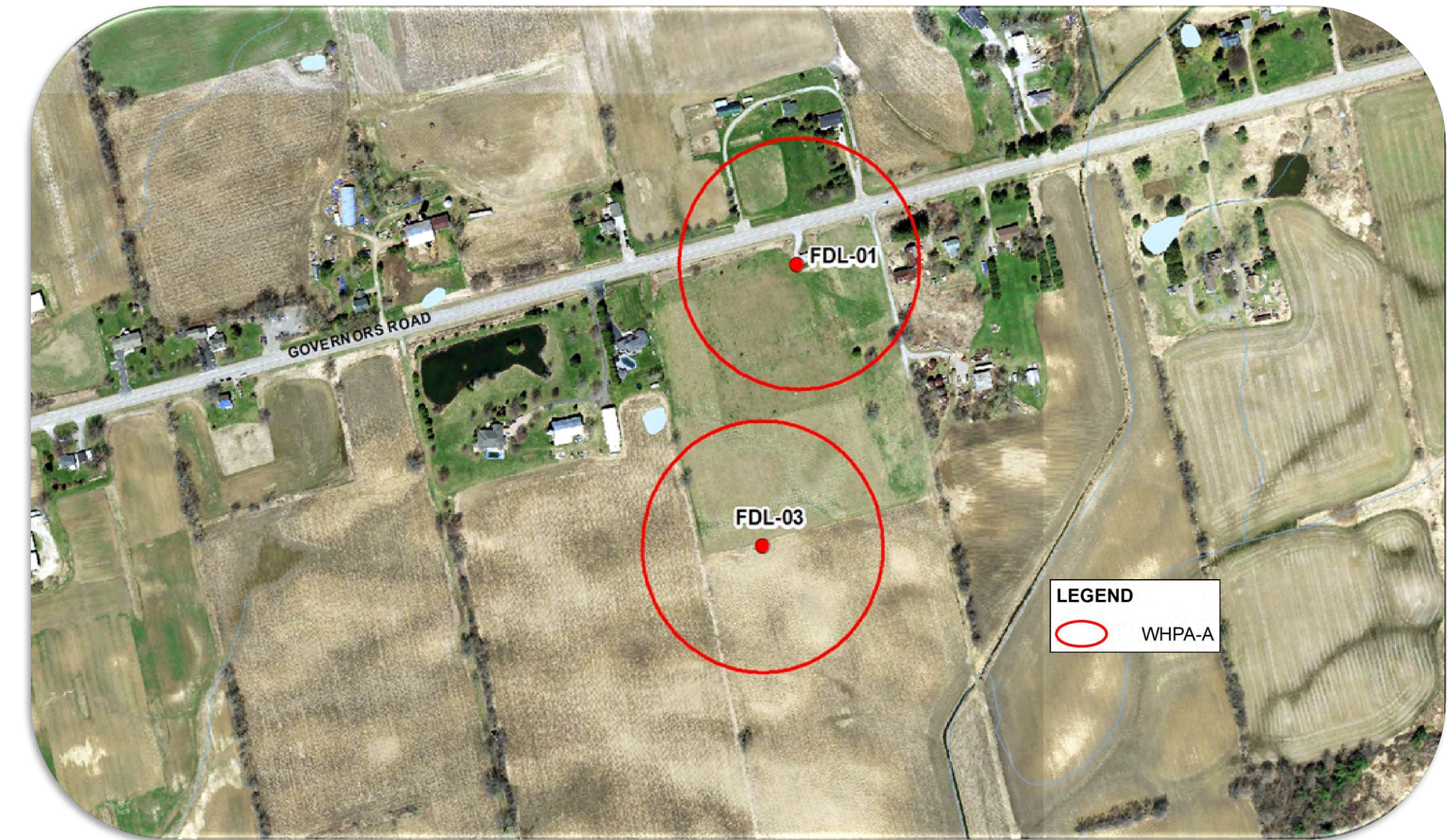
Hydraulic Testing of FDL-03 (2016)

- Maximum drawdown of 2.81 m measured in FDL-03 at the end of the test.
- Minor interference from pumping of FDL-01 (15-25 cm).
- No interference complaints from adjacent well owners.
- Zone of influence in deep wells extended 600 – 720 m from FDL-03 (1 m of drawdown).
- No changes in water levels in any shallow wells due to testing.
- Water quality results:
 - Elevated hydrogen sulfide (typical for the area)
 - Low hardness (soft water)
 - Low levels of barium (well below MOECC objectives)
 - Low levels of lead (well below MOECC objectives)
 - Sodium levels require notification of MOH for sodium restricted diets (typical for the area)
 - Field-measured pH levels were high (typical for the area)



Hydraulic Testing of FDL-03 (2016)

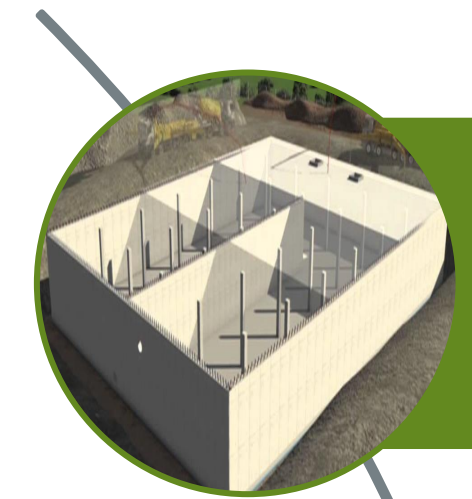
- Well not under influence of surface water (GUDI) based on current regulatory guidelines
- Source water protection implications:
 - Well head protection area A (WHPA-A) will be defined as 100 m radius around FDL-03.
 - Source Protection Plan policies will need to be implemented, especially in WHPA-A.
 - Protection of aquifer from other potential sources of contamination.



- In 2008, Lynden water supply system experienced a sudden but intermittent rise in lead concentrations that exceeded the ODWS Maximum Allowable Concentration (MAC) of 0.01 mg/L.
- City conducted further investigation to identify the lead source and mitigating measures



"Inspection & Clean-Up" Program (2009)



Comprehensive cleaning and inspection of the reservoirs;



Inspection of all fittings in the reservoir were undertaken to identify potential sources of lead;



Removal of the existing air piping inside the chlorination chamber;



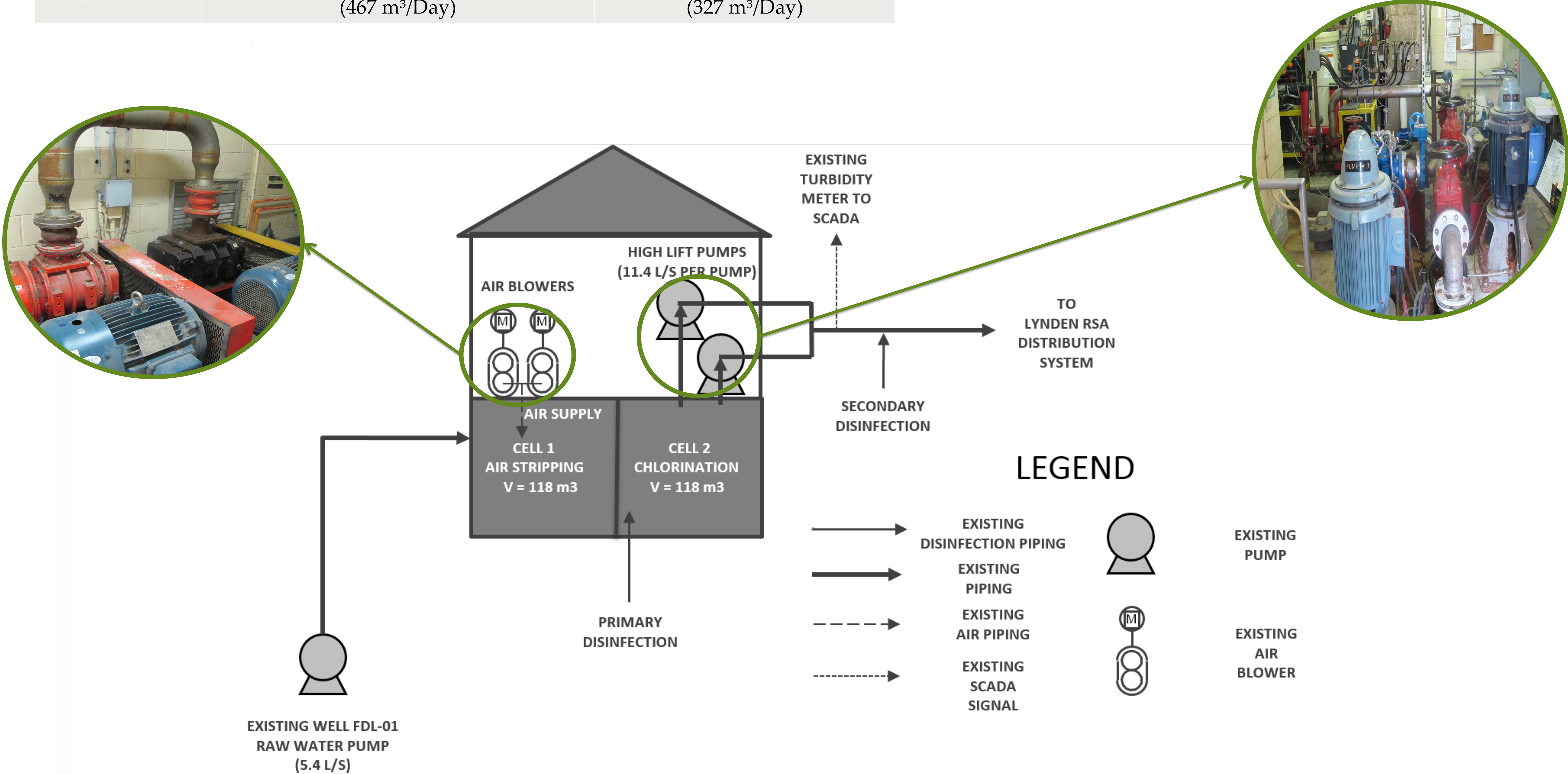
Replacement of the existing screen/curtains baffles from 1985 inside the reservoir with new baffles in 2009 (cloth material) - Existing baffles were made of a plastic material, traces of lead were found on their surface.



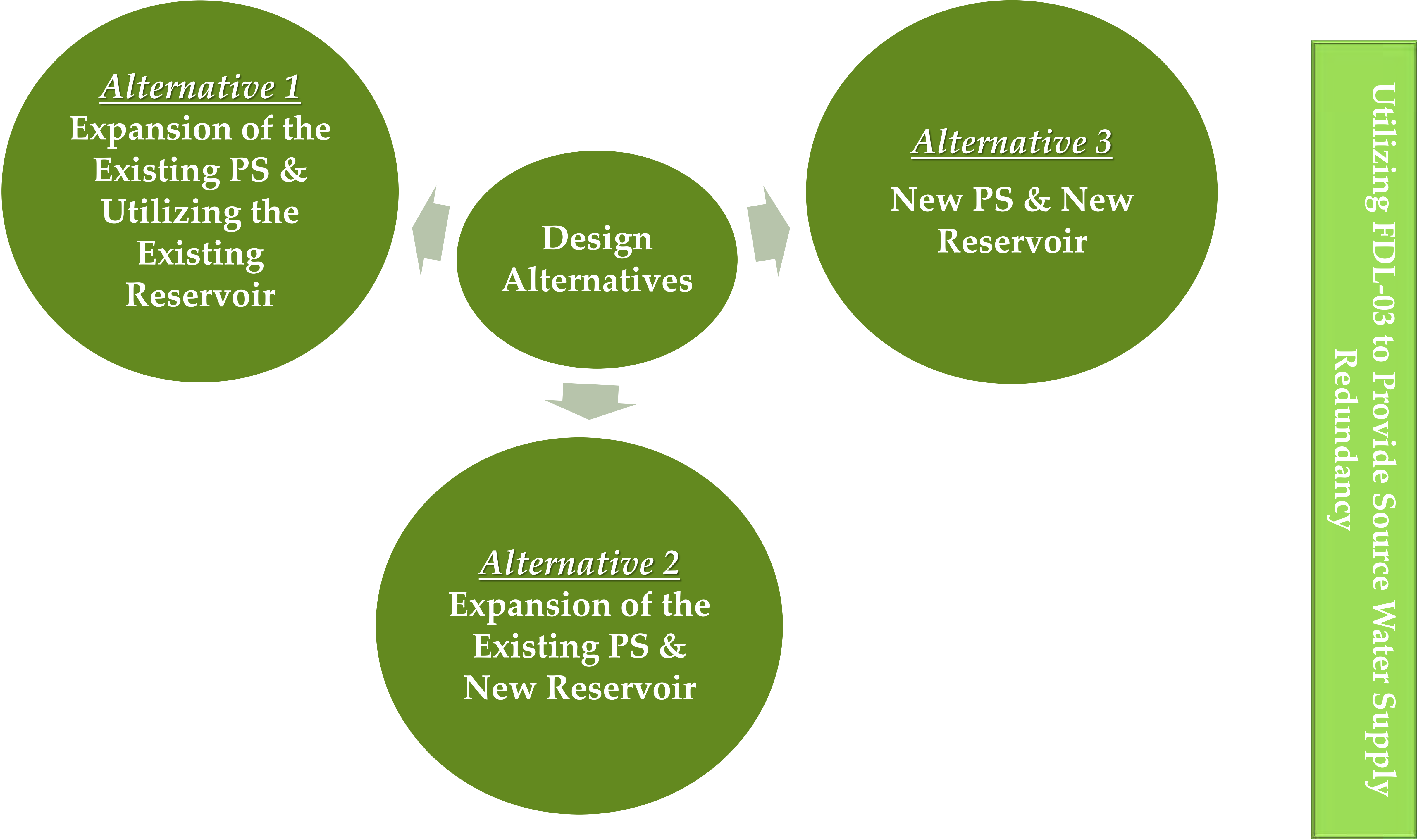
Replacement of the well pump (2008): new pump rated for 5.4 L/s capacity at 24m Total Dynamic Head (TDH).

LYNDEN COMMUNAL WATER SUPPLY SYSTEM
Schedule "C" - CLASS EA

SYSTEM	RATED PUMP CAPACITY	MAX DAILY VOLUME
Well FDL-01	5.4 L/s (467 m³/Day)	3.8 L/s (327 m³/Day)

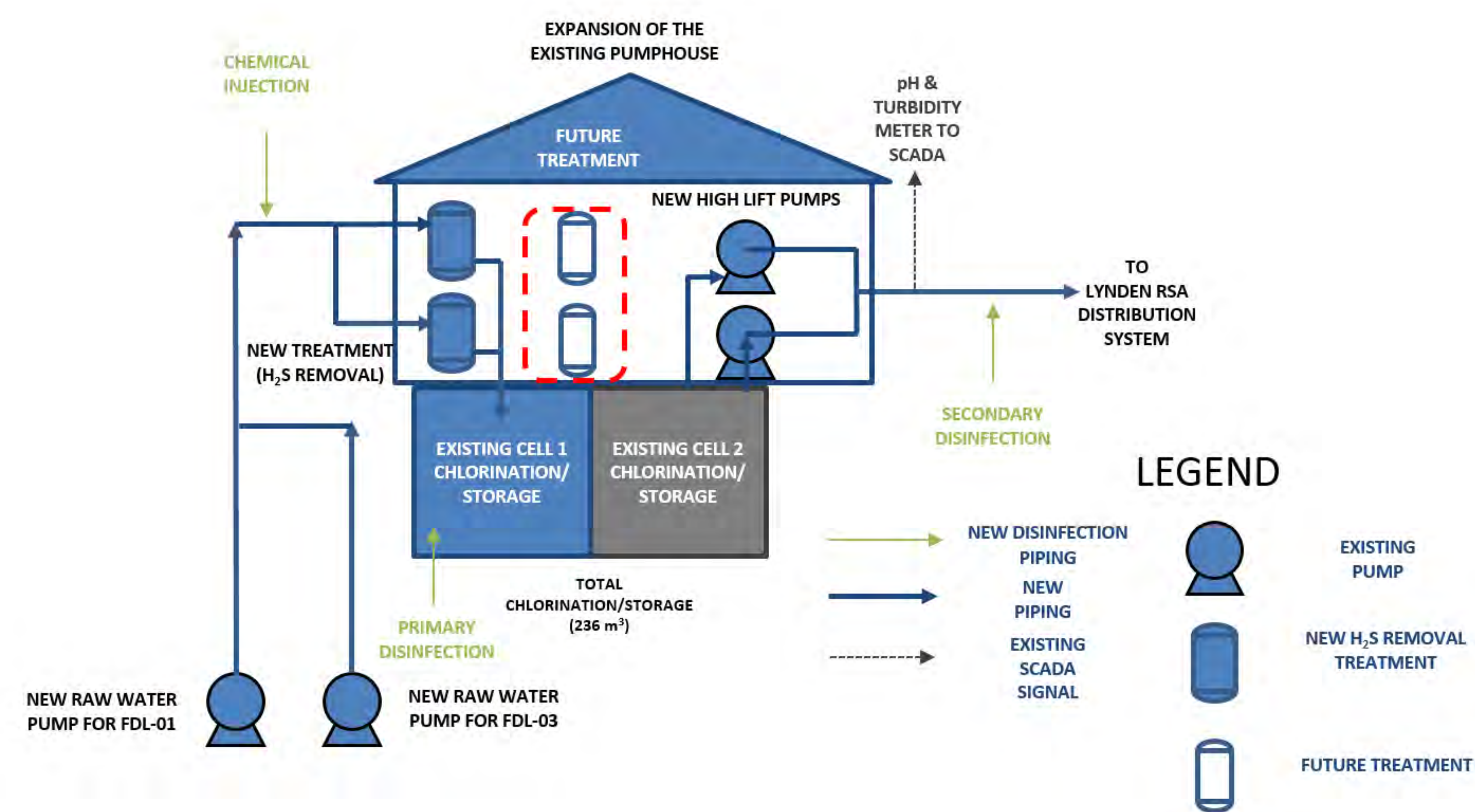


EXISTING LYNDEN WATER
SUPPLY SYSTEM



DESIGN ALTERNATIVE CONCEPTS

LYNDEN COMMUNAL WATER SUPPLY SYSTEM
Schedule "C" - CLASS EA

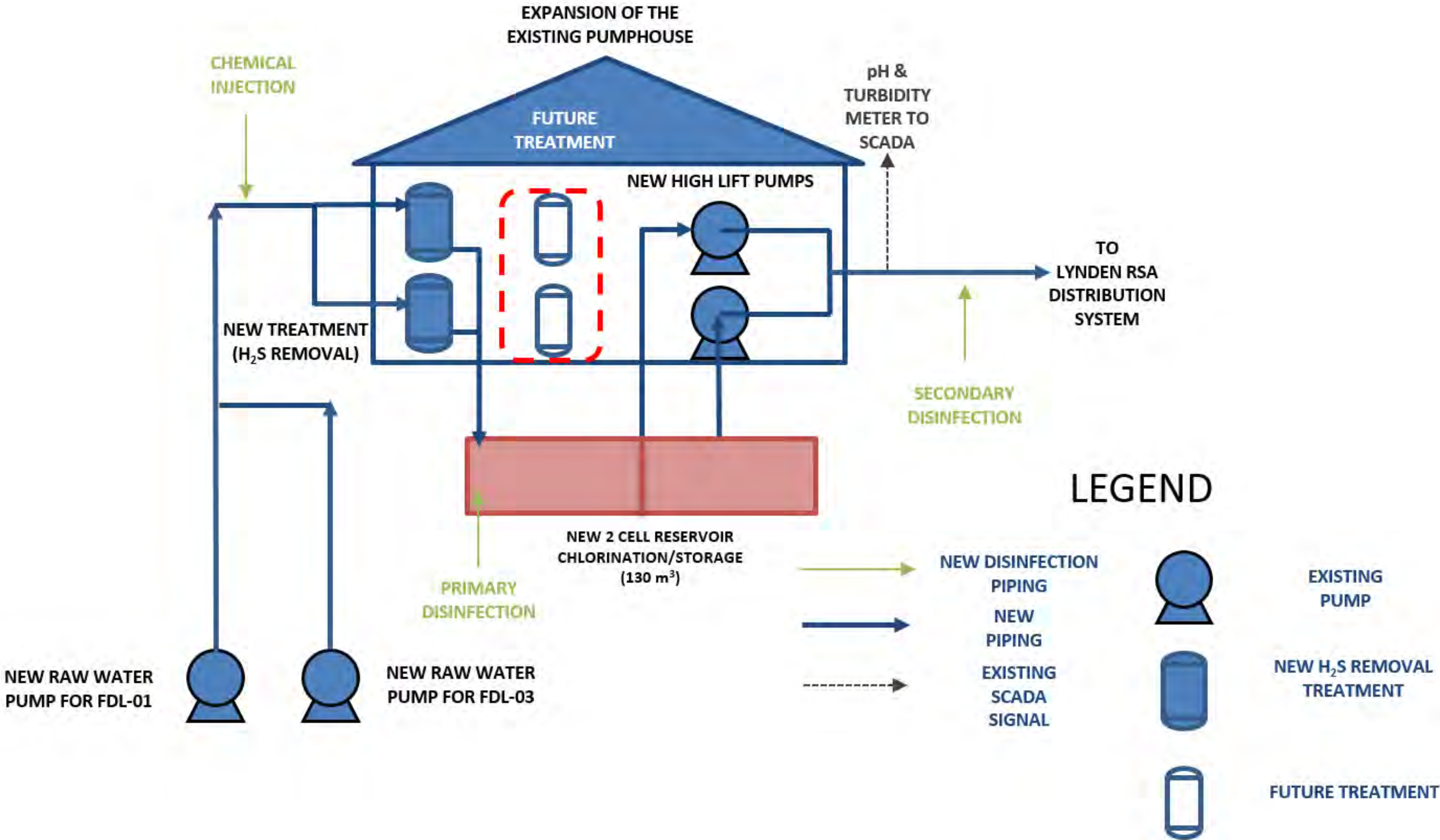


Alternative 1 EXPANSION OF THE EXISTING PUMPING STATION AND UTILIZING THE EXISTING RESERVOIR

- Refurbishing the Existing well FDL-01;
- Replacing all Process, Mechanical, Electrical and Instrumentation and Automation Equipment, including Chlorination System, Pumps and Generator;
- Expansion of the Existing Pumping Station Building to House the New Treatment Equipment;
- Refurbishing the Existing Reservoir (236 m³);
- New Treatment System (H₂S Removal);
- Connecting Well FDL-03 to the Existing Pumping Station;
- Decommissioning of the Existing Air Stripping System;
- Provide Waste Management.

DESIGN ALTERNATIVE - 1

LYNDEN COMMUNAL WATER SUPPLY SYSTEM
Schedule "C" - CLASS EA

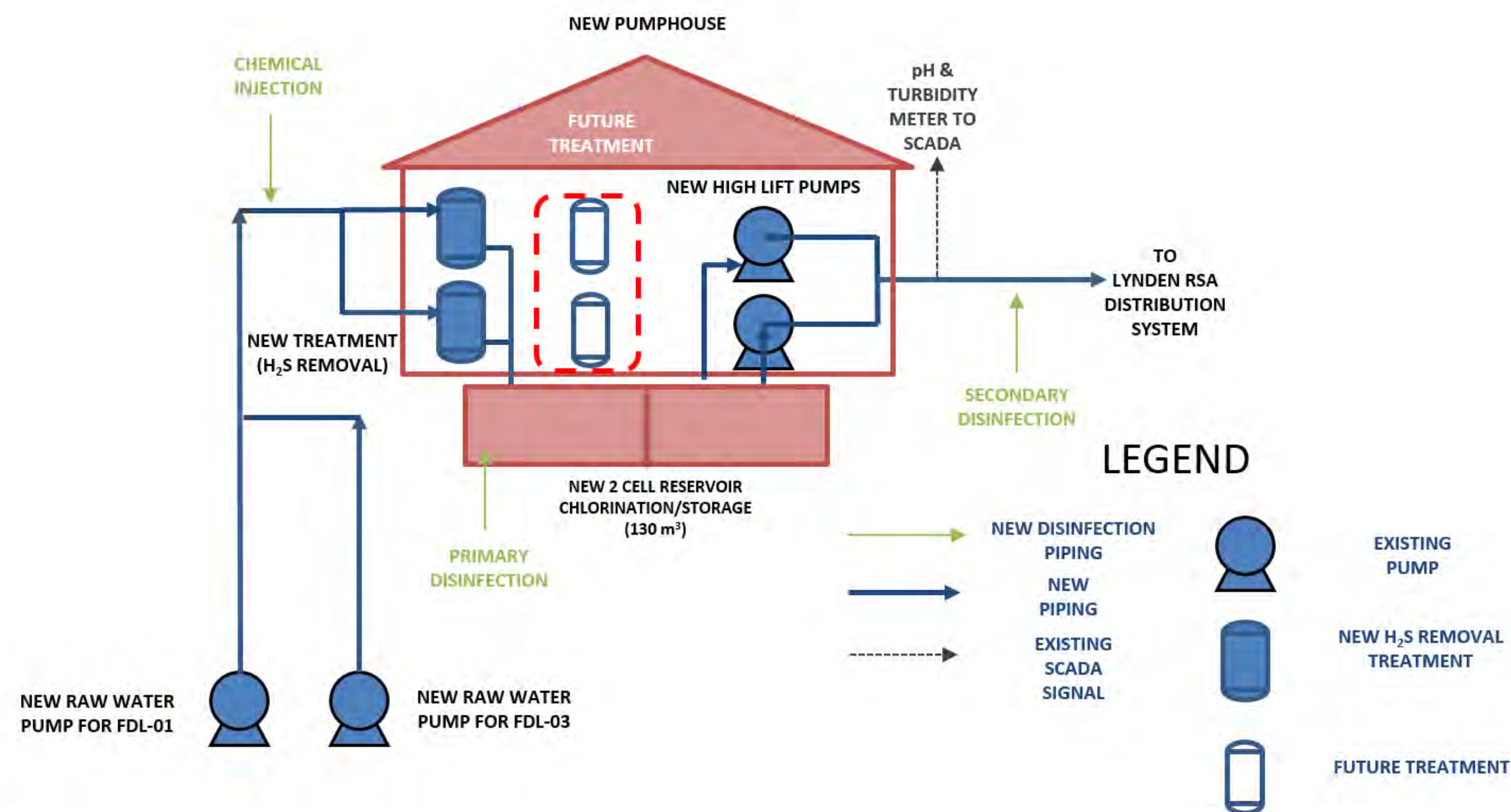


Alternative 2	EXPANSION OF THE EXISTING PUMPING STATION AND CONSTRUCTION OF A NEW RESERVOIR
	Refurbishing the Existing well FDL-01;
	Replacing all Process, Mechanical, Electrical and Instrumentation and Automation Equipment, including Chlorination System, Pumps and Generator;
	Expansion of the Existing Pumping Station Building to House the New Treatment Equipment (130 m ³);
	New Treatment System (H ₂ S Removal);
	Constructing a New Reservoir near the Existing PS and Connecting it to the Existing System;
	Decommissioning of the Existing Aeration Tank and Reservoir;
	Connecting Well FDL-03 to the Existing Pumping Station;
	Provide Waste Management.

DESIGN ALTERNATIVE - 2



LYNDEN COMMUNAL WATER SUPPLY SYSTEM
Schedule "C" - CLASS EA



Alternative 3	NEW PUMPING STATION AND NEW RESERVOIR
	Refurbishing the existing well FDL-01;
	Constructing a New Pumping Station on the Same Property; Provide Space for a Future Treatment System;
	New Chlorination System;
	New Treatment System (H ₂ S Removal);
	Constructing a New Reservoir (130 m ³);
	Decommissioning Pumping Station, Aeration Tank and Reservoir;
	Connecting Well FDL-03 and FDL-01 to New Pumping Station;
	Provide Waste Management.



LYNDEN COMMUNAL WATER SUPPLY SYSTEM
Schedule “C” - CLASS EA



Alternative	Alternative 1	Alternative 2	Alternative 3
Alternative Title	Expansion of the Existing Pumping Station and Utilizing the Existing Reservoir	Expansion of the Existing Pumping Station and New Reservoir	New Pumping Station and New Reservoir
Technical Impact	- Effectiveness – Removal of H₂S, lower treated water turbidity, potential reduction in lead concentration due to reservoir cleaning and removal of sediments. - Existing concerns regarding water quality in the reservoir may remain. - Sufficient building space to house the potential future treatment processes - Water Storage – Sufficient	- Effectiveness – Removal of H₂S, lower treated water turbidity, potential reduction in lead concentration due to using a new reservoir. - Sufficient building space to house the potential future treatment processes - Water Storage – Sufficient	- Effectiveness – Removal of H₂S, lower treated water turbidity, potential reduction in lead concentration due to reservoir cleaning and removal of sediments. - Sufficient building space to house the potential future treatment processes - Water Storage – Sufficient
	Ease of operation – Filter media backwash; however, easy to operate	Ease of operation – Filter media backwash; however, easy to operate	Ease of operation – Filter media backwash; however, easy to operate
	- No available data/report on the possibility of the expansion of the existing building in terms of its condition and DSS report. - Existing building is old.	- No available data/report on the possibility of the expansion of the existing building in terms of its condition and DSS report. - Existing building is old.	New Building
	- Constructability: Requires shutdown and possibly temporary water supply to the customers. - Potential impact on the security of water supply. - Potential impact on the water quality during construction period. - Risk: High - Timeline: Moderate	- Constructability: Requires shutdown during the operation of the active PS, might disturb water supply to the customers. - Potential impact on the security of water supply - Potential impact on the water quality during construction period. - Risk: Moderate - Timeline: Moderate	- Constructability: Requires minor shutdowns - No impact on the operation of the existing PS and reservoir – Secure water supply to the customers - Risk: Low - Timeline: Low-Moderate
	Redundancy – Provided through the Backup Well		
Rating	Least Preferred	Less Preferred	Most Preferred

EVALUATION



LYNDEN COMMUNAL WATER SUPPLY SYSTEM
Schedule “C” - CLASS EA

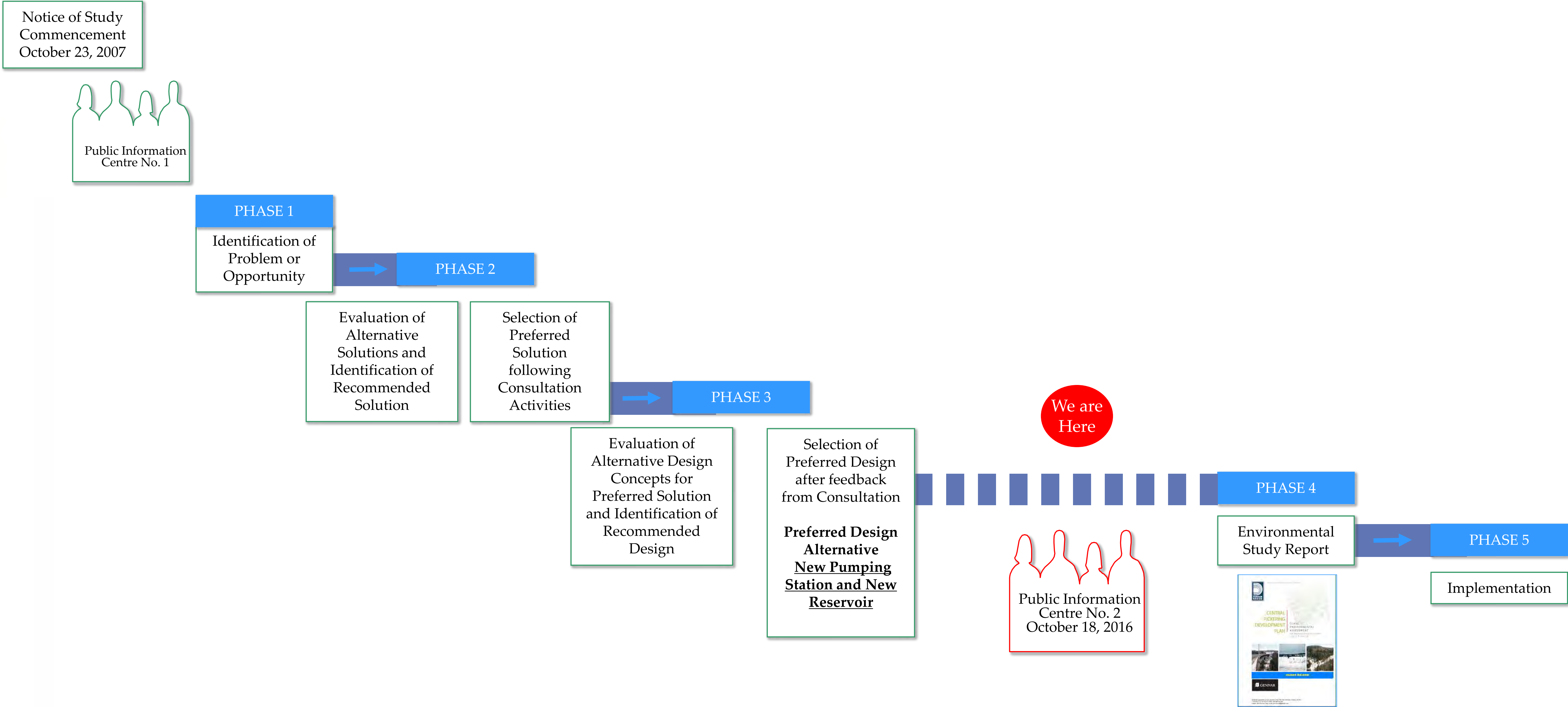


Alternative	Alternative 1	Alternative 2	Alternative 3
Alternative Title	Expansion of the Existing Pumping Station and Utilizing the Existing Reservoir	Expansion of the Existing Pumping Station and New Reservoir	New Pumping Station and New Reservoir
Economic Impact	· Estimated capital cost - \$3.0 million	· Estimated capital cost - \$3.3 million	· Estimated capital cost – \$3.8 million
	· O&M Costs – \$120,000	· O&M Costs – \$120,000	· O&M Costs - \$120,000
Rating	Less Preferred	Less Preferred	Least Preferred
Environmental Impact	· Potential negative impacts associated with chemical supplies	· Potential negative impacts associated with chemical supplies	· Potential negative impacts associated with chemical supplies
	· Process wastewater production	· Process wastewater production	· Process wastewater production
	· Minor impact on the environment during construction · No negative impact on the aquifer · Potential negative impact on storm water drains	· Minor impact on the environment during construction · No negative impact on the aquifer · Potential negative impact impact on storm water drains	· Minor impact on the environment during construction · No negative impact on the aquifer · Minor impact on storm water drains
Rating	Less Preferred	Less Preferred	Most Preferred
Social Impact	· OH&S exposure risks due to chemical usage · Maintain the same reservoir which has historically had issues · Growth is allowed · No impact on private wells	· OH&S exposure risks due to chemical usage · Growth is allowed · No impact on private wells	· OH&S exposure risks due to chemical usage · Growth is allowed · No impact on private wells
Rating	Least Preferred	Most Preferred	Most Preferred
Overall Alternative Rating	Less Preferred	Less Preferred	Most Preferred

EVALUATION



Water & Wastewater Schedule "C" Project



LYNDEN COMMUNAL WATER SUPPLY SYSTEM

Schedule "C" - CLASS EA

- QUESTIONS ?



THANK YOU

Municipal Class EA for Lynden Communal Water Supply Public Information Centre No 2 Questionnaire October 18th, 2016

After reading the newsletter and display panels at the Public Information Centre, please take a few minutes to complete this comment sheet. The City of Hamilton is interested in hearing from your comments or questions regarding the proposed communal water supply. Your input is important and will be considered in the assessment of the preferred site.

1. How did you hear about this public meeting?

☐ Newspaper ad ☐ Notice in mail ☒ Other

2. Please indicate your satisfaction with the following:

	Satisfied (Y/N)	If not Satisfied, please specify your preference here
Location of Meeting	✓	
Time of Meeting	✓	
Day of the Week	✓	

On a scale of 1 to 5, where "1" is "very" and "5" is "not at all", please rate the following by circling the appropriate number:

3. How informative were the display materials?

1 (very) 2 3 (somewhat) ☒ 4 5 (not at all)

4. How helpful were the staff and consultants in attendance?

1 (very) 2 3 (somewhat) ☒ 4 5 (not at all)

5. Were all your questions answered satisfactorily?

☒ Yes ☐ No

6. Do you have any comments or concerns regarding the proposed communal water supply?

☒ Yes ☒ No

If yes, please specify

PRIVATE WELL IMPLICATIONS - STATED NO IMPACT,
RECOURSE IF THERE IS IMPACT.

7. Do you have any other issues or additional information that you feel the City should be made aware of regarding this project? [] Yes ☒ No If yes, please specify

8. What is the nature of your interest in this project?

LANDOWNER RESIDENT w/ ~~150'~~ 150' DRILLED
WELL IN LOCAL AREA

9. Other comments:

Thank you for participating in this study.

Comments and information regarding this study are being collected to assist the City of Hamilton in meeting the requirements of the Environmental Assessment Act. This material will be maintained on file and may be included in project documentation. *Information will be collected in accordance with the Municipal Freedom of Information and Protection of Privacy Act. With the exception of personal information all comments will become part of the public record.*

Please provide your contact information below should you wish to be added to our Project Mailing List.

Name: 
(please print)
Address: P.O. Box  LYNDEN ON LORITO
Telephone: 

Please return this completed **Comment Sheet** to our staff at the Registration Table or place in the 'Comment Box'. You can also mail/fax/email your comments to the Project Manager by **November 1st, 2016**:

Carmen Vega, Senior Project Manager
Source Protection Planning
Sustainable Initiatives, Public Works, City of
Hamilton
77 James Street North, Suite 400
Hamilton, Ontario L8R 2K3
Phone: 905 546-2424 ext. 1301
Email: carmen.vega@hamilton.ca

Michelle Albert, Consultant
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Phone: 905 475-7270 ext. 18304
Fax: 905 475-5994
Email: michelle.albert@wspgroup.com



City of Hamilton
City Hall, 71 Main Street West
Hamilton, Ontario,
Canada L8P 4Y5
www.hamilton.ca

Hamilton Water Division, Public Works Department
Physical Address: 77 James Street North, 4th Floor, Hamilton, Ontario, L8R 3M8
Phone: 905-546-2424 ext. 1301 Fax: 905-546-4191
Email: carmen.vega@hamilton.ca

February 21, 2017

██████████

██████████ Lynden Rd.

P.O. Box ██████████

Hamilton ON L0R 1T0

Re: Class Environmental Assessment for the Lynden Communal Water Supply

Dear ██████████:

Thank you for your attendance at the second Public Information Centre (PIC) on October 18, 2016, regarding the Lynden Communal Water Supply Municipal Class Environmental Assessment and for taking the time to complete the comment sheet provided.

Your comments were included in the project documentation and are part of the final project report. Nonetheless we are pleased to offer a response to the feedback provided on your comment sheet.

Question: “Do you have any comments or concerns regarding the proposed communal water supply?”

Comment: Private well implications – stated no impact, recourse if there is impact.

The selection of the proposed well site was based on a culmination of over thirty years worth of studies on the hydrogeology of the Lynden area. This includes information presented in the 2002 Master Plan Class EA and intensive hydrogeological work between 2002 and 2016. The preferred well site taps into an aquifer that has shown to have sufficient capacity to meet the present and future needs of the Lynden Rural Settlement Area (RSA). All previous studies have indicated that the sand and gravel aquifer is thickest to the south and east of the RSA. This source has been proven to meet the current requirements of the water service area. Drawdowns in the new well are not expected to be more than 3 meters (10 feet). Drawdowns in nearby private wells are expected to be less than this. All deep wells in the area have large available drawdowns (amount of water in the well). Pumping will not affect levels in the shallow aquifer or shallow wells. Furthermore, the existing well has been in operation for over 30 years and the City has not received any official claims of interference.

The intent of this project is to provide a new well and treatment facility to establish redundancy within the system and thereby increase the security of the water supply. The new well and the existing well will not be pumped simultaneously but will be alternated to meet the demands of the community and allow for the shut down for maintenance. Withdrawals will remain effectively the same as present under these conditions.

Furthermore the Water Resources Act, 1990 requires that, with the operation of groundwater-sourced municipal communal water system, the municipality must address any interference with private wells. A Permit to Take Water (PTTW) for a new well will not be granted if potential interference with pre-existing well users is not addressed by the City.

If a potential interference is reported after the permit is issued the City is required as a condition of their PTTW to investigate and to remedy any interference with other water takings that is caused by the water taking under the permit.

In addition, the City of Hamilton's By-Law No. 86-142 (former Ancaster By-law) and 86-132a (former Flamborough By-law) Clause 4 states:

"The Region agrees to investigate all interferences complaints at Regional expense in conjunction with the Ministry of the Environment staff and to take corrective measures where necessary. In cases where as disruption of water supply has occurred, the Region will arrange for a temporary water supply until a permanent resolution of the problem has been implemented."

We understand that no claims have been made of any interference to a private well by the existing municipal well between 1986, when the By-laws were passed, and today.

Thank you again for your interest in this project and providing us with your feedback. If you have any further concerns please contact me directly at (905) 546-2424 ext.1301 or by email at carmen.vega@hamilton.ca.

Yours truly,

Carmen Vega, M. Sc.
Senior Project Manager
City of Hamilton

Municipal Class EA for Lynden Communal Water Supply Public Information Centre No 2 Questionnaire October 18th, 2016

After reading the newsletter and display panels at the Public Information Centre, please take a few minutes to complete this comment sheet. The City of Hamilton is interested in hearing from your comments or questions regarding the proposed communal water supply. Your input is important and will be considered in the assessment of the preferred site.

1. How did you hear about this public meeting?

☐ Newspaper ad ☒ Notice in mail ☐ Other

2. Please indicate your satisfaction with the following:

	Satisfied (Y/N)	If not Satisfied, please specify your preference here
Location of Meeting	Y	
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Day of the Week	Y	

On a scale of 1 to 5, where "1" is "very" and "5" is "not at all", please rate the following by circling the appropriate number:

3. How informative were the display materials?

1 (very) 2 3 (somewhat) 4 5 (not at all)

4. How helpful were the staff and consultants in attendance?

1 (very) 2 3 (somewhat) 4 5 (not at all)

5. Were all your questions answered satisfactorily?

☒ Yes ☐ No

6. Do you have any comments or concerns regarding the proposed communal water supply?

☐ Yes ☒ No If yes, please specify

7. Do you have any other issues or additional information that you feel the City should be made aware of regarding this project? ☐ Yes ☒ No If yes, please specify

8. What is the nature of your interest in this project?

HOME OWNER

9. Other comments:

Thank you for participating in this study.

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Please provide your contact information below should you wish to be added to our Project Mailing List.

Name:

(please print)

Address:

GOVERNOR'S RD RR 2 LYNDEN

Telephone:

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Carmen Vega, Senior Project Manager

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Hamilton
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Michelle Albert, Consultant

WSP Canada Inc.
600 Cochrane Drive, Suite 500
Markham, Ontario, L3R 5K3
Phone: 905 475-7270 ext. 18304
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Municipal Class EA for Lynden Communal Water Supply Public Information Centre No 2 Questionnaire October 18th, 2016

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5. Were all your questions answered satisfactorily?

1 ☐ Yes ☐ No

6. Do you have any comments or concerns regarding the proposed communal water supply?

☐ Yes ☐ No

If yes, please specify

Totally Disagree - We live in the rural areas of Lynden. You do not care about our water supplies because you have been sucking the life out of the rural wells - who do we sue for expenditures caused by this or should we just not have water.

7. Do you have any other issues or additional information that you feel the City should be made aware of regarding this project? ☐ Yes ☐ No If yes, please specify

8. What is the nature of your interest in this project?

9. Other comments: _____

Thank you for participating in this study.

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Municipal Class EA for Lynden Communal Water Supply Public Information Centre No 2 Questionnaire October 18th, 2016

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	Satisfied (Y/N)	If not Satisfied, please specify your preference here
Location of Meeting	Y	
Time of Meeting	Y	
Day of the Week	Y	

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1 (very) 2 (3) (somewhat) 4 5 (not at all)

4. How helpful were the staff and consultants in attendance?

1 (very) 2 (2) (somewhat) 4 5 (not at all)

5. Were all your questions answered satisfactorily?

☐ Yes ☐ No

6. Do you have any comments or concerns regarding the proposed communal water supply?

☐ Yes ☒ No

If yes, please specify

7. Do you have any other issues or additional information that you feel the City should be made aware of regarding this project? [] Yes [X] No If yes, please specify

8. What is the nature of your interest in this project?

We live in Lynden and we EXPECT safe drinking water; it's what we're paying for!

9. Other comments:

Thank you for participating in this study.

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Please provide your contact information below should you wish to be added to our Project Mailing List.

Name: [REDACTED]

(please print)

Address: P.O. Box [REDACTED] Lynden, ON L0R 1 T0

Telephone: _____

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Municipal Class EA for Lynden Communal Water Supply Public Information Centre No 2 Questionnaire October 18th, 2016

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Location of Meeting	fine	
Time of Meeting	fine	
Day of the Week	fine	

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5. Were all your questions answered satisfactorily?

☐ Yes ☒ No

6. Do you have any comments or concerns regarding the proposed communal water supply?

☒ Yes ☐ No

please specify

Governor's Rd.
When you put in pumping station all wells on right side of Governor's were affected. We had to put in a ~~new~~ new well. What will happen now? Would really like to know.

7. Do you have any other issues or additional information that you feel the City should be made aware of regarding this project? ☐ Yes ☐ No If yes, please specify

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9. Other comments:

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Phone: 905-546-2424 ext. 1301 Fax: 905-546-4191
Email: carmen.vega@hamilton.ca

February 21, 2017

[REDACTED]
[REDACTED] Governors Rd.
Lynden, Ontario L0R 1T0

Re: Class Environmental Assessment for the Lynden Communal Water Supply

Dear [REDACTED]:

Thank you for your attendance at the second Public Information Centre (PIC) on October 18, 2016, regarding the Lynden Communal Water Supply Municipal Class Environmental Assessment and for taking the time to complete the comment sheet provided.

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Question: "Do you have any comments or concerns regarding the proposed communal water supply?"

Comment: When you put in pumping station all wells on right side of Governor's were affected. We had to put in a new well. What will happen now? Would really like to know.

The selection of the proposed well site was based on a culmination of over thirty years worth of studies on the hydrogeology of the Lynden area. This includes information presented in the 2002 Master Plan Class EA and intensive hydrogeological works between 2002 and 2016. The preferred site is within an aquifer that has shown to have sufficient capacity to meet the present and future needs of the Lynden Rural Settlement Area (RSA). All previous studies have indicated that the sand and gravel aquifer is thickest to the south and east of the RSA. This source has been proven to meet the current requirements of the water service area. Drawdowns in the new well are not expected to be more than about 3 meters (10 feet). Drawdowns in nearby private wells are expected to be less than this. All deep wells in the area have large available drawdowns (amount of water in the well). Pumping will not affect levels in the shallow aquifer or shallow wells. Furthermore, the existing well has been in operation for over 30 years and the City has not received any official claims of interference.

The intent of this project is to provide a new well and treatment facility to establish redundancy within the system and thereby increase the security of the water supply. The new well and the existing well will not be pumped simultaneously but will be alternated to meet the demands of the community and allow for the shutdown of each facility for maintenance. Withdrawals will remain effectively the same as present under these conditions.

Furthermore the Water Resources Act, 1990 requires that, with the operation of groundwater-sourced municipal communal water system, the municipality must address any interference with private wells. A Permit to Take Water (PTTW) for a new well will not be granted if potential interference with pre-existing well users is not addressed by the City.

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Thank you again for your interest in this project and providing us with your feedback. If you have any further concerns please contact me directly at (905) 546-2424 ext.1301 or by email at carmen.vega@hamilton.ca.

Yours truly,

Carmen Vega, M. Sc.
Senior Project Manager
City of Hamilton

Municipal Class EA for Lynden Communal Water Supply Public Information Centre No 2 Questionnaire October 18th, 2016

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1. How did you hear about this public meeting?

☒ Newspaper ad ☒ Notice in mail ☐ Other

2. Please indicate your satisfaction with the following:

	Satisfied (Y/N)	If not Satisfied, please specify your preference here
Location of Meeting	✓	
Time of Meeting	✓	
Day of the Week	✓	

On a scale of 1 to 5, where "1" is "very" and "5" is "not at all", please rate the following by circling the appropriate number:

3. How informative were the display materials?

1 (very) 2 3 (somewhat) 4 5 (not at all)

4. How helpful were the staff and consultants in attendance?

1 (very) 2 3 (somewhat) 4 5 (not at all)

5. Were all your questions answered satisfactorily?

☒ Yes ☐ No

6. Do you have any comments or concerns regarding the proposed communal water supply?

☐ Yes ☐ No

If yes, please specify

7. Do you have any other issues or additional information that you feel the City should be made aware of regarding this project? ☐ Yes ☐ No If yes, please specify

8. What is the nature of your interest in this project?

9. Other comments:

Thank you for participating in this study.

Comments and information regarding this study are being collected to assist the City of Hamilton in meeting the requirements of the Environmental Assessment Act. This material will be maintained on file and may be included in project documentation. *Information will be collected in accordance with the Municipal Freedom of Information and Protection of Privacy Act. With the exception of personal information all comments will become part of the public record.*

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Name: _____
(please print)

Address: _____

Telephone: _____

Please return this completed **Comment Sheet** to our staff at the Registration Table or place in the 'Comment Box'. You can also mail/fax/email your comments to the Project Manager by **November 1st, 2016**:

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Hamilton

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City Hall, 71 Main Street West,
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Canada L8P 4Y5
www.hamilton.ca



HAMILTON WATER
WATER IS LIFE

Municipal Class EA for Lynden Communal Water Supply Public Information Centre No 2 Questionnaire October 18th, 2016

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1. How did you hear about this public meeting?

☐ Newspaper ad ☐ Notice in mail ☒ Other

2. Please indicate your satisfaction with the following:

	Satisfied (Y/N)	If not Satisfied, please specify your preference here
Location of Meeting	Yes.	
* Time of Meeting	4:30	NOT SATISFIED... MOST PEOPLE WORK LATER AND THEREFORE REQUIRED TO LEAVE EARLY IN ORDER TO ATTEND.
Day of the Week	YES GOOD	

On a scale of 1 to 5, where "1" is "very" and "5" is "not at all", please rate the following by circling the appropriate number:

3. How informative were the display materials?

1 (very) 2 3 (somewhat) 4 5 (not at all)

4. How helpful were the staff and consultants in attendance?

1 (very) 2 3 (somewhat) 4 5 (not at all)

5. Were all your questions answered satisfactorily?

☐ Yes ☐ No SOMEWHAT.

6. Do you have any comments or concerns regarding the proposed communal water supply?

☐ Yes ☐ No If yes, please specify

I AM VERY CONCERNED FOR OUR COMMUNITY... "HOW DOES
3 PART SOLUTIONS OR ALTERNATIVES ARTICULATE AROUND
ONE WELL OR PARCEL OF LAND?
LONGTERM SOLUTION... "BRING THE PIPE IN FROM
HAMILTON".

7. Do you have any other issues or additional information that you feel the City should be made aware of regarding this project? ☐ Yes ☐ No If yes, please specify

8. What is the nature of your interest in this project?

I LIVE CLOSE TO TOWN, I AM ON MY OWN WATER (WELL)
ALTHOUGH VERY CONCERNED FOR OUR COMMUNITY.

9. Other comments:

Thank you for participating in this study.

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Please provide your contact information below should you wish to be added to our Project Mailing List.

Name: [REDACTED]
(please print) HWY [REDACTED] RR [REDACTED] TROY.
Address: [REDACTED]
Telephone: [REDACTED]

Please return this completed **Comment Sheet** to our staff at the Registration Table or place in the 'Comment Box'. You can also mail/fax/email your comments to the Project Manager by **November 1st, 2016**:

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Email: carmen.vega@hamilton.ca

February 21, 2017

[REDACTED]
Hwy [REDACTED] RR [REDACTED] Troy
Hamilton, Ontario

Re: Class Environmental Assessment for the Lynden Communal Water Supply

Dear [REDACTED]:

Thank you for your attendance at the second Public Information Centre (PIC) on October 18, 2016, regarding the Lynden Communal Water Supply Municipal Class Environmental Assessment and for taking the time to complete the comment sheet provided.

Your comments were included in the project documentation and are part of the final project report. Nonetheless we are pleased to offer a response to the question provided on your comment sheet.

Question: "Do you have any comments or concerns regarding the proposed communal water supply?"

Comment: I am very concerned for our community... How does 3 part solutions or alternatives articulate around one well or parcel of land?

The selection of the proposed well site was based on a culmination of over thirty years worth of studies on the hydrogeology of the Lynden area. This includes information presented in the 2002 Master Plan Class EA and intensive hydrogeological work between 2002 and 2016. The preferred well site taps into an aquifer that has shown to have sufficient capacity to meet the present and future needs of the Lynden Rural Settlement Area (RSA). All previous studies have indicated that the sand and gravel aquifer is thickest to the south and east of the RSA. This source has been proven to meet the current requirements of the water service area. Drawdowns in the new well are not expected to be more than 3 meters (10 feet). Drawdowns in nearby private wells are expected to be less than this. All deep wells in the area have large available drawdowns (amount of water in the well). Pumping will not affect levels in the shallow aquifer or shallow wells. Furthermore, the existing well has been in operation for over 30 years and the City has not received any official claims of interference.

The intent of this project is to provide a new well and treatment facility to establish redundancy within the system and thereby increase the security of the water supply. The new well and the existing well will not be pumped simultaneously but will be alternated to meet the demands of the community and allow for the shutdown for maintenance. Withdrawals will remain effectively the same as present under these conditions.

Thank you again for your interest in this project and providing us with your feedback. If you have any further concerns please contact me directly at (905) 546-2424 ext.1301 or by email at carmen.vega@hamilton.ca.

Yours truly,

Carmen Vega, M. Sc.
Senior Project Manager
City of Hamilton

Municipal Class EA for Lynden Communal Water Supply Public Information Centre No 2 Questionnaire October 18th, 2016

After reading the newsletter and display panels at the Public Information Centre, please take a few minutes to complete this comment sheet. The City of Hamilton is interested in hearing from your comments or questions regarding the proposed communal water supply. Your input is important and will be considered in the assessment of the preferred site.

1. How did you hear about this public meeting?

☐ Newspaper ad

☐ Notice in mail

☒ Other

2. Please indicate your satisfaction with the following:

	Satisfied (Y/N)	If not Satisfied, please specify your preference here
Location of Meeting		
Time of Meeting		
Day of the Week		

On a scale of 1 to 5, where "1" is "very" and "5" is "not at all", please rate the following by circling the appropriate number:

3. How informative were the display materials?

1 (very) 2 3 (somewhat) 4 5 (not at all)

4. How helpful were the staff and consultants in attendance?

1 (very) 2 3 (somewhat) 4 5 (not at all)

5. Were all your questions answered satisfactorily?

☐ Yes ☐ No

6. Do you have any comments or concerns regarding the proposed communal water supply?

☐ Yes ☐ No

If yes, please specify

7. Do you have any other issues or additional information that you feel the City should be made aware of regarding this project? ☒ Yes ☐ No If yes, please specify

Lack of water, constant water shortage

8. What is the nature of your interest in this project?

To see if you are actually fixing problem

9. Other comments:

We pay Hamilton taxes yet do not get Hamilton services

Thank you for participating in this study.

Comments and information regarding this study are being collected to assist the City of Hamilton in meeting the requirements of the Environmental Assessment Act. This material will be maintained on file and may be included in project documentation. Information will be collected in accordance with the Municipal Freedom of Information and Protection of Privacy Act. With the exception of personal information all comments will become part of the public record.

Please provide your contact information below should you wish to be added to our Project Mailing List.

Name: _____
(please print)

Address: _____

Telephone: _____

Please return this completed **Comment Sheet** to our staff at the Registration Table or place in the 'Comment Box'. You can also mail/fax/email your comments to the Project Manager by **November 1st, 2016**:

Carmen Vega, Senior Project Manager
Source Protection Planning
Sustainable Initiatives, Public Works, City of Hamilton
77 James Street North, Suite 400
Hamilton, Ontario L8R 2K3
Phone: 905 546-2424 ext. 1301
Email: carmen.vega@hamilton.ca

Michelle Albert, Consultant
WSP Canada Inc.
600 Cochrane Drive, Suite 500
Markham, Ontario, L3R 5K3
Phone: 905 475-7270 ext. 18304
Fax: 905 475-5994
Email: michelle.albert@wspgroup.com

Municipal Class EA for Lynden Communal Water Supply Public Information Centre No 2 Questionnaire October 18th, 2016

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1. How did you hear about this public meeting?

☒ Newspaper ad ☒ Notice in mail ☐ Other

2. Please indicate your satisfaction with the following:

	Satisfied (Y/N)	If not Satisfied, please specify your preference here
Location of Meeting	Y	
Time of Meeting	Y	
Day of the Week	Y	

On a scale of 1 to 5, where "1" is "very" and "5" is "not at all", please rate the following by circling the appropriate number:

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1 (very) 2 3 (somewhat) 4 5 (not at all)

4. How helpful were the staff and consultants in attendance?

1 (very) 2 3 (somewhat) 4 5 (not at all)

5. Were all your questions answered satisfactorily?

☒ Yes ☐ No

6. Do you have any comments or concerns regarding the proposed communal water supply?

☒ Yes ☐ No

If yes, please specify

why is the pumping station placed so close to the road.

7. Do you have any other issues or additional information that you feel the City should be made aware of regarding this project? ☒ Yes ☐ No If yes, please specify

when will a formal answer on lead in water be announced?

8. What is the nature of your interest in this project?

I drink the water.

9. Other comments:

Thank you for participating in this study.

Comments and information regarding this study are being collected to assist the City of Hamilton in meeting the requirements of the Environmental Assessment Act. This material will be maintained on file and may be included in project documentation. *Information will be collected in accordance with the Municipal Freedom of Information and Protection of Privacy Act. With the exception of personal information all comments will become part of the public record.*

Please provide your contact information below should you wish to be added to our Project Mailing List.

Name: [REDACTED]
(please print)
Address: [REDACTED] LYNDEN RD.
Telephone: _____

Please return this completed **Comment Sheet** to our staff at the Registration Table or place in the 'Comment Box'. You can also mail/fax/email your comments to the Project Manager by **November 1st, 2016**:

Carmen Vega, Senior Project Manager
Source Protection Planning
Sustainable Initiatives, Public Works, City of Hamilton
77 James Street North, Suite 400
Hamilton, Ontario L8R 2K3
Phone: 905 546-2424 ext. 1301
Email: carmen.vega@hamilton.ca

Michelle Albert, Consultant
WSP Canada Inc.
600 Cochrane Drive, Suite 500
Markham, Ontario, L3R 5K3
Phone: 905 475-7270 ext. 18304
Fax: 905 475-5994
Email: michelle.albert@wspgroup.com



City of Hamilton
City Hall, 71 Main Street West
Hamilton, Ontario,
Canada L8P 4Y5
www.hamilton.ca

Hamilton Water Division, Public Works Department
Physical Address: 77 James Street North, 4th Floor, Hamilton, Ontario, L8R 3M8
Phone: 905-546-2424 ext. 1301 Fax: 905-546-4191
Email: carmen.vega@hamilton.ca

February 21, 2017

[REDACTED]

[REDACTED] Lynden Rd.
Hamilton ON L0R 1T0

Re: Class Environmental Assessment for the Lynden Communal Water Supply

Dear [REDACTED]

Thank you for your attendance at the second Public Information Centre (PIC) on October 18, 2016, regarding the Lynden Communal Water Supply Municipal Class Environmental Assessment and for taking the time to complete the comment sheet provided.

Your comments were included in the project documentation and are part of the final project report. Nonetheless we are pleased to offer a response to the questions on your comment sheet.

Question: "Do you have any comments or concerns regarding the proposed communal water supply?"

Comment: Why is the pumping station placed so close to the road?

The proposed new municipal well is located more than 200m away from the road.
The new pumping station location is yet to be confirmed during detailed design stage.

Question: "Do you have any other issues or additional information that you feel the City should be made aware of regarding this project?"

Comment: When will a formal answer on lead in water be announced?

Hamilton Water is currently undertaking a Water Treatment Pilot Project that looks further into the treatment options at the new Pumping Station to ensure that lead does not become an issue once the new well is operational. This data will support the Public Health Services in determining when the Drinking Water Advisory can be lifted.

We would expect that any change to the Drinking Water Advisory will occur after the new water supply facility is completed in early 2019.

Thank you again for your interest in this project and providing us with your feedback. If you have any further concerns please contact me directly at (905) 546-2424 ext.1301 or by email at carmen.vega@hamilton.ca.

Yours truly,

Carmen Vega, M. Sc.
Senior Project Manager
City of Hamilton

Municipal Class EA for Lynden Communal Water Supply Public Information Centre No 2 Questionnaire October 18th, 2016

After reading the newsletter and display panels at the Public Information Centre, please take a few minutes to complete this comment sheet. The City of Hamilton is interested in hearing from your comments or questions regarding the proposed communal water supply. Your input is important and will be considered in the assessment of the preferred site.

1. How did you hear about this public meeting?

☐ Newspaper ad ☐ Notice in mail ☐ Other

2. Please indicate your satisfaction with the following:

	Satisfied (Y/N)	If not Satisfied, please specify your preference here
<i>Location of Meeting</i>		
<i>Time of Meeting</i>		
<i>Day of the Week</i>		

On a scale of 1 to 5, where “1” is “very” and “5” is “not at all”, please rate the following by circling the appropriate number:

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4. How helpful were the staff and consultants in attendance?

1 (very) 2 3 (somewhat) 4 5 (not at all)

5. Were all your questions answered satisfactorily?

☐ Yes ☐ No

6. Do you have any comments or concerns regarding the proposed communal water supply?

☐ Yes ☐ No

If yes, please specify

7. Do you have any other issues or additional information that you feel the City should be made aware of regarding this project? ☐ Yes ☐ No If yes, please specify

8. What is the nature of your interest in this project?

9. Other comments:

Thank you for participating in this study.

Comments and information regarding this study are being collected to assist the City of Hamilton in meeting the requirements of the Environmental Assessment Act. This material will be maintained on file and may be included in project documentation. *Information will be collected in accordance with the Municipal Freedom of Information and Protection of Privacy Act. With the exception of personal information all comments will become part of the public record.*

Please provide your contact information below should you wish to be added to our Project Mailing List.

Name: _____
(please print)

Address: _____

Telephone: _____

Please return this completed **Comment Sheet** to our staff at the Registration Table or place in the 'Comment Box'. You can also mail/fax/email your comments to the Project Manager by **November 1st, 2016**:

Carmen Vega, Senior Project Manager
Source Protection Planning
Sustainable Initiatives, Public Works, City of
Hamilton
77 James Street North, Suite 400
Hamilton, Ontario L8R 2K3
Phone: 905 546-2424 ext. 1301
Email: carmen.vega@hamilton.ca

Michelle Albert, Consultant
WSP Canada Inc.
600 Cochrane Drive, Suite 500
Markham, Ontario, L3R 5K3
Phone: 905 475-7270 ext. 18304
Fax: 905 475-5994
Email: michelle.albert@wspgroup.com

From: Vega, Carmen <Carmen.Vega@hamilton.ca>
Sent: Tuesday, February 21, 2017 2:50 PM
To: [REDACTED]
Subject: RE: Lynden Water

Hi [REDACTED],

Thank you for your attendance at the second Public Information Centre on October 18, 2016, regarding the Lynden Communal Water Supply Municipal Class Environmental Assessment and for taking the time to provide feedback. Your comments were considered and are part of the final project report.

As you noted in the email below the Greenbelt is the main driver in terms of lake based water supply as the connection of the Lynden Rural Settlement Area to the City of Hamilton water distribution system is regulated by the Greenbelt Act, 2005.

The Greenbelt Act ensures the permanent protection of the agricultural land base and the ecological features and functions occurring on this Greenbelt. The Lynden RSA is located within the Greenbelt, therefore is subject to the policies included with the Act. In order to limit development in the Greenbelt and protect the Greenbelt from urban sprawl, the policy outlined in Section 4.2.2 of the Greenbelt Plan prohibits the connection of settlements within the Greenbelt to a Great Lake based water system.

"Where settlements do not currently have Great Lake or Lake Simcoe based water and sewage services, extensions to or expansions of existing Great Lake or Lake Simcoe based services to such settlements is not permitted, unless such servicing is required to address failed individual on-site sewage or water services or to ensure the protection of public health where it has been determined by a medical officer of health (or health authority) that there is a public health concern associated with existing services within the settlement. The capacity of the services provided in these circumstances will be restricted to that required to service the affected existing settlement plus the capacity for potential development within the approved settlement boundary as it existed on the date this Plan came into effect." (Reference:

Section 4.2.2 – Sewage and Water Infrastructure Policies

<http://www.mah.gov.on.ca/Page189.aspx#3.4>)

The Lynden RSA is currently serviced by the municipal groundwater based system and therefore the extension of the lake based system to service areas outside of the urban boundary was not the recommended solution in the initial Water Servicing Master Plan for the Lynden RSA (2002, revised 2007).

Furthermore in order to achieve a high quality water supply, Hamilton Water is currently undertaking a Water Treatment Pilot Project that looks further into the treatment options at the new Pumping Station to ensure that lead does not become an issue once the new well is operational. This data will support the Public Health Services in determining when the Drinking Water Advisory can be lifted.

An aquifer source can be considered as reliable as a lake based source, although both require prudent management to realize that reliability. Many larger centres in proximity to Lynden rely entirely upon groundwater for water supply.

Thank you again for your interest in this project and providing us with your feedback.

Sincerely,

Carmen



Carmen Vega, M.Sc.

Senior Project Manager

Source Protection Planning
Sustainable Initiatives | Public Works | City of Hamilton
77 James Street North, Suite 400
Hamilton, ON L8R 2K3
T: 905.546.2424 ext. 1301
Carmen.Vega@hamilton.ca

From: [REDACTED]

Sent: October-26-16 11:40 AM

To: Vega, Carmen

Cc: michelle.albert@wspgroup.com; tmcmeekin.mpp.co@liberal.ola.org; Pasuta, Robert

Subject: Lynden Water

Hi Carmen,

We recently attended the Lynden water information session. Thank you for taking the time to bring this info out to our town. I am glad that the city takes the supply of safe water so seriously even to a small village like Lynden. I moved to Lynden 24 years ago and this was certainly not the case back then! A ten year stint in Copetown on our own well and cistern provides perspective on the value of someone else providing the water!

Last year when a meeting was held here, the question was asked about a pipeline from the city main. We were told that provincial Greenbelt legislation prevents that regardless of how badly city staff would want it. When I asked a staff member about this last week he told me that we don't use enough water here to keep the water from going stagnant in the line. Seeing how in the long run a water line would save the city substantial cost and not involve any more shots in the dark with new wells and treatment systems, I would like to address both of these obstacles.

Greenbelt:

When a community's health is threatened by lead and other contaminants the province cannot hide behind preserving green space. Certainly local health trumps broad provincial policy. Our "greenspace" is full of gas and oil pipelines, and hydro corridors but somehow water is a problem!? If they are worried about new development due to the waterline that is simply ridiculous as they decide who can develop and where.

Not enough usage:

The obvious answer is to allow existing residents along Governors road from Binkley Rd to Lynden road use the water. I also don't quite buy the argument of stale water. If the water took 2 days to get from Copetown to Lynden would it really be bad? We all drink water from bottles that were sealed months ago. They have no chlorine in them and they are fine. Our family currently takes every old container we can find to Sulphur Springs rd every 2 or 3 weeks, fills it, no filter, no additives, and parks it in the garage until we need it. I'd much rather have some of Hamilton's renowned water even it was couple days old!

I hope you can find a way to burst through some silly obstacles and bring us some water from an over supplied, high quality water supply that will save us money. A few "off the record" conversations with water staff, as I have had, might convince you this really is the only long term solution.

Thank you for considering this,

[REDACTED]

[REDACTED] Park St
Lynden

LYNDEN WELLS CLASS EA
Questions and Responses Log

Date Question	Question	Question Source	Date Response	Response	Response by	Status	Comments
13-Oct-16	PIC materials (PPTs. Handouts etc.)	Email	13-Oct-16 23-Oct-16	Copies of the PIC material will be forwarded following the PIC meeting on Tuesday (Oct 18). The information presented at the Public Information Centre is available on-line at https://www.hamilton.ca/city-planning/master-plans-class-eas/lynden-communal-water-supply . If you have any questions or comments please do not hesitate to fill in and send us the questionnaire form available at the above mentioned link.	Michelle Albert	Completed	
	PIC materials available online	Email	19-Oct-16	The information presented at the Public Information Centre is now available on-line at https://www.hamilton.ca/city-planning/master-plans-class-eas/lynden-communal-water-supply	Carmen Vega	Completed	
	Will the water be brought further down Governors Rd?	Email	18-Oct-16	We will forward you a copy of the materials presented tonight regarding the Lynden Water System and provide you with information regarding watermain locations and potential extensions. The information presented at the Public Information Centre is now available on-line at https://www.hamilton.ca/city-planning/master-plans-class-eas/lynden-communal-water-supply	Michelle Albert Carmen Vega	Completed	A Family of five (3 kids, wife & husband). Currently, trucking water and store it in a cistern. The stored water cannot be drunk as it is not safe. They buy bottles of water for drinking. Drilling a well has a high cost. There are several neighbors that would also be interested in this.
18-Oct-16	Pay Hamilton taxes - no Hamilton water services. Why?	Comment Sheet	21-Feb-17	Please see response included within Appendix D.	Carmen Vega	Completed	
18-Oct-16	What would happen to existing wells when new PS is constructed?	Comment Sheet	21-Feb-17	Please see response included within Appendix D.	Carmen Vega	Completed	When previous PS was constructed, al wells on right side of Governors Rd were affected. This homeowners had to put in a new well.
18-Oct-16	How does 3 part solutions/alternatives articulate around one well or parcel of land? Long term solution - bring pipe from Hamilton	Comment Sheet	21-Feb-17	Please see response included within Appendix D.	Carmen Vega	Completed	Unsatisfied with the PIC time - too early Homeowner on private well water
18-Oct-16	Private well implication - stated no impact. Recourse if there is impact	Comment Sheet	21-Feb-17	Please see response included within Appendix D.	Carmen Vega	Completed	Landowner resident with 150 feet drilled well in Local Area
18-Oct-16	Why is PS located too close to the road? When will a formal announcement on Lead in water be announced?	Comment Sheet	21-Feb-17	Please see response included within Appendix D.	Carmen Vega	Completed	

LYNDEN WELLS CLASS EA
Questions and Responses Log

24-Oct-16	Property is within the RSA boundary, but currently not connected to the water main. Can the property get hooked up to the water main? Get back with information	Email	28-Oct-16	Thank you for your interest in the Lynden Communal Water Supply study. The information presented at the PIC can be seen by accessing https://www.hamilton.ca/city-planning/master-plans-class-eas/lynden-communal-water-supply Please find attached a brochure that details the process to be followed in order to extend the municipal water services. The section related to partial services is not a constrain in your case.	Carmen Vega	Completed	The residents were previously told that anyone north of the train tracks cannot be connected. Currently, they take water from 27ft dug well, which is not a problem from October to June. In the summer the well runs dry and they have to call a water truck to fill it every 7 to 10 days at \$95 a load. Too costly for residents. With this year (2016) being an especially dry summer, they are still using water truck.
26-Oct-16	Request to bring a pipeline from the City of Hamilton water main	Email	21-Feb-17	Please see response included within Appendix D.	Carmen Vega	Completed	At last year's (2015) meeting, when the question about a pipeline from the city main was asked, residents were told that provincial Greenbelt legislation prevents this. Last week, a City's staff member also said that residents don't use enough water in Lynden RSA to keep the water from going stagnant in the pipeline. The resident addressed both of these obstacles as follows: 1. <u>Greenbelt</u>: "When a community's health is threatened by lead and other contaminants the province cannot hide behind preserving green space. Certainly local health trumps broad provincial policy. Our "greenspace" is full of gas and oil pipelines, and hydro corridors but somehow water is a problem!? If they are worried about new development due to the waterline that is simply ridiculous as they decide who can develop and where" 2. <u>Not enough usage</u>: "The obvious answer is to allow existing residents along Governors road from Binkley Rd to Lynden road use the water. I also don't quite buy the argument of stale water. If the water took 2 days to get from Copetown to Lynden would it really be bad? We all drink water from bottles that were sealed months ago. They have no chlorine in them and they are fine. Our family currently takes every old container we can find to Sulphur Springs rd every 2 or 3 weeks, fills it, no filter, no additives, and parks it in the garage until we need it. I'd much rather have some of Hamilton's renowned water even it was couple days old!"

LYNDEN WELLS CLASS EA
Questions and Responses Log

28-Oct-16	Estimated timeline no addressed. Preferred option 3 is best as addresses most of issues. Not clear that water pressure concerned was fully addressed. Is minimum of 50 psi maintained in the distribution system during normal & heavy use periods? Other concerns: 1. pressure on well 2. source of lead not determined 3. cost of joining town system 4. how the estimated cost of \$4M is handled	Comment Sheet & Email	21-Feb-17	Comments received.	Carmen Vega	Completed	
28-Nov-16	Residents support the proposal, but they prefer water tower or watermain line from Hamilton. Residents would like to be connected to the new well.	Comment Sheet & Email	21-Feb-17	Comments received.	Carmen Vega	Completed	Residents were excluded from previous water service. Residents concerned that they will not be again connected to the new service.



City of Hamilton

NOTICE OF STUDY COMPLETION CLASS ENVIRONMENTAL ASSESSMENT STUDY LYNDEN COMMUNAL WATER SUPPLY

PROJECT BACKGROUND

The City of Hamilton has undertaken this study to identify a water supply source to better secure the supply to the Lynden Rural Settlement Area (RSA). Currently, the majority of the Lynden RSA receives its drinking water from a single groundwater well and single storage/treatment facility. The need for the project was identified in 2002 in the Water Master Servicing Plan for the Lynden Rural Settlement Area.

THE STUDY PROCESS

The study was completed as a Schedule C Class Environmental Assessment (Class EA). It followed the planning and design process as defined in the *Municipal Engineers Association Municipal Class Environmental Assessment document* (as amended in 2015).

Consultation with the public and government review agencies was carried out by issuing correspondence and holding two Public Information Centres. Members of the public and review agencies were invited to provide comments for incorporation into the overall planning and design of the Lynden Communal Water Supply.

The preferred alternative identified in this study includes using a new back-up well (located 200m south of the existing well) and constructing a new pumping station and a new reservoir for the Lynden RSA.



PUBLIC REVIEW PERIOD

An Environmental Study Report (ESR) was completed which documents the planning process for the study.

As required in the Municipal Class Environmental Assessment Process, the Environmental Study Report is being placed on public record for a review period starting March 23, 2017 and ending April 28, 2017. It will be available for review at:

Location Number 1 Office of the City Clerk 71 Main Street West City Hall, 1 st Floor Hamilton, ON L8R 4Y5 (905) 546-CITY	Location Number 2 Public Works Department 77 James Street North Suite 400 Hamilton, ON L8R 2K3 (905) 546-CITY	Location Number 3 Lynden Library 110 Lynden Rd Hamilton, ON L0R 1T0 (519) 647-2571	City Website https://www.hamilton.ca/city-planning/master-plans-class-eas/lynden-communal-water-supply

Please contact the City Project Manager regarding disability accommodation requirements as soon as possible.

PUBLIC COMMENT PROCESS

If concerns arise regarding this project that cannot be resolved directly through discussions with the City of Hamilton, a person/party may request that the Minister of the Environment make an order for the project to comply with Part II of the *Environmental Assessment Act* (referred to as a "Part II Order"). The request for a Part II Order must be received by the Minister by April 28, 2017 with a copy sent to the City's Project Manager at the addresses indicated below. If there are no requests received by this date, the City will proceed with the design and construction of the works identified in the Environmental Study Report.

Minister of the Environment and Climate Change
77 Wellesley Street West, 11th Floor, Ferguson Block
Toronto, ON M4V 2T5

Carmen Vega, M.Sc.
Senior Project Manager
77 James St. N, Suite 400
Hamilton, ON L8R 2K3
T: 905-546-2424 x1301
E: Carmen.Vega@hamilton.ca

Information will be collected in accordance with the Municipal Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record.

This notice was issued on March 23 & March 30, 2017.