



**Schedule "B" Project File Report**  
**Construction of New Water Supply Well**  
**Arran-Elderslie Water Works**  
**Municipality of Arran-Elderslie**

**23-012**

**June 2025**

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**GLOSSARY OF TERMS**

ANSI	Areas of Natural Scientific Interest
DFO	Department of Fisheries and Oceans
EA	Environmental Assessment
ECA	Environmental Compliance Approval
ESA	Environmentally Sensitive Areas
ESR	Environmental Study Report
MNRF	Ministry of Natural Resources and Forestry
MOECC	Ministry of the Environment and Climate Change
MPAC	Municipal Properties Assessment Corporation
PSW	Provincial Significant Wetlands
PWQO	Provincial Water Quality Objectives
SVCA	Saugeen Valley Conversation Authority
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant

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## **1 INTRODUCTION**

### **1.1 Background**

Arran-Elderslie Water Works, which includes three (3) water supply wells and Arran-Elderslie Water Treatment Plant building, all located in Community Park in Chesley, is owned and operated by the Municipality of Arran-Elderslie. The facilities are used for the raw water supply, its treatment and supply of treated water to distribution systems in Chesley and Paisley.

Water supply wells include CPW #1 that was originally constructed in 1960's. CPW #2 & #3 were constructed approximately in 2002-03. Following completion of a Sch C EA, a new Water Treatment Plant building was constructed in 2004-05. A gravity trunk watermain, approximately 18 km in length, was also constructed to supply treated water from Chesley to Paisley.

### **1.2 Problem Statement**

Well CPW #1, since the upgrading of the well in approximately 2002-03, started showing signs of iron bacteria contamination, even though before 2002-03 there was no evidence of iron bacteria fouling. Iron bacteria started forming a clogging film over the well screen, which restricted the free flow of water from aquifer into well. The film started reducing the amount of water that could be withdrawn from the well, even though aquifer was capable of supplying much larger water quality. Remedial measures such as acidification, super chlorination, sonic treatments were expensive and recurring cost and not enough to fully restore well yield.

A reduction of well yield is a serious matter and if remains unattended, could reduce treatment capacity of the water works, which is undesirable. The plant can lose its available redundancy in raw water supply, which could become problematic for plant operation in future.

Accordingly, Arran-Elderslie must take all steps necessary to reinstate raw water supply lost from well CPW #1.

### **1.3 Plant Rated Capacity and Capacity Utilization**

Chesley Water Treatment Plant has a rated capacity of 5,564 m<sup>3</sup>/day (850 igpm). The raw water supply is obtained from three (3) water wells. Ministry has issued Permit To Take Water for three wells as follows:

CPW 1	:	1,800 m <sup>3</sup> /day (275 igpm)
CPW 2	:	2,127 m <sup>3</sup> /day (325 igpm)
CPW 3	:	2,946 m <sup>3</sup> /day (450 igpm)

The capacity utilization has been summarized in **Table 1.3** overleaf, for a period from 2012 – 2024.

**Table 1.3**  
**Rated Capacity Utilization**  
**Arran-Elderslie Water Works**  
**Municipality of Arran-Elderslie**

<b>Year</b>	<b>Max Day (m<sup>3</sup>/day)</b>	<b>% Rated Capacity</b>
2024	1,876	33.7%
2023	1,490	26.8%
2022	1,687	30.3%
2021	1,512	27.2%
2020	1,820	32.7%
2019	1,765	31.7%
2018	1,778	32.0%
2017	1,436	25.8%
2016	1,905	34.2%
2015	1,851	33.3%
2014	1,862	33.5%
2013	1,720	30.9%
2012	1,939	34.8%
<b>Rated Capacity of Water Works</b>		<b>5,564 m<sup>3</sup>/day</b>

## **1.4 Environment Assessment Process**

### **1.4.1 Overview**

The Ontario Environmental Assessment Act, in applying its requirements for undertakings, identifies two (2) types of environmental assessment (EA) planning and approval processes”

- Comprehensive Environmental Assessments – A comprehensive EA includes a terms of reference (approved by the Minister) and an EA (Minister with (Lieutenant Governor in Council (Cabinet) approval). Individual EAs are generally required for large-scale, complex projects with a potential for significant environmental effects. The projects that must follow the comprehensive EA process set out in Part II.3 of the EAA are identified in the regulation(s) made under the EAA.
- Streamlined EAs – Streamlined EA’s include Class EAs, and various regulatory process, including processes applicable to waste, transit and electricity projects. Class EAs establish a process that proponents may follow for an established class of projects, which if followed allows the proponents to proceed with the undertaking without requiring further approval.

### **1.4.2 Municipal Class Environmental Assessments**

The Municipal Engineers Association (MEA) developed Class EA documents for municipal road, water, and wastewater projects which, since 1997, are approved under the Ontario EA Act. A review and update of the Municipal Class EA took place in 1993 and their approval was extended. In 2000, the Class EAs for municipal road, water, and wastewater projects were consolidated and updated, and subsequently approved and included in the amended Municipal Class EA document – October 2000, as amended in 2007 and 2011. EA process was again reviewed and broad consultation process took place with various stakeholders, and resulted in Municipal Class EA document, February 2020 revision.

### **1.4.3 Planning and Design Process**

#### **1.4.3.1 Project Category**

A Class EA is a planning document which sets out the process that a proponent must follow in order to meet the requirements of the EA Act for a class or category. Projects are divided into schedules based on the type of projects and activities. Schedules are categorized as Exempt, B, and C with reference to the magnitude of their anticipated environmental impact.

#### Exempt:

Various maintenance, operation, rehabilitation, and other small projects that are limited in scale and have minimal adverse environmental effects are exempt from the EAA. Previously, many of these projects were classified as Schedule A or A+ and as a result were exempt from the Act through s. 15.3(3) of the Act and are now identified simply as exempt in the table. Exempt projects are identified in the first column of the table in Appendix 1 of the Municipal Class EA document.

While these projects are exempt from the EAA, municipalities should consider whether notice about the project should be given or consultation on the project should be carried out outside of the MECP process. Municipalities should address any concerns raised with respect to the project, as appropriate. Proponents are also responsible for obtaining any other applicable permits, approvals and authorizations for their project.

Other projects may be eligible for exemption if they meet the requirements of the conditional exemptions including the completion of the archaeological screening process.

### **Schedule B**

Schedule B projects have the potential for some adverse environmental effects. Proponents are required, at a minimum, to complete phases one and two of the planning process, including mandatory consultation with Indigenous Communities, directly affected public and relevant review agencies, to ensure that they are aware of the project and that their concerns are identified and considered, and documenting the assessment requirements in the Project File Report. Schedule B projects generally include improvements and minor expansions to existing facilities as well as new smaller scale projects.

### **Schedule C**

Schedule C projects have the potential for significant environmental effects and must proceed through the full planning and documentation procedures set out in Section A.2 Municipal Class EA document. This includes mandatory consultation with Indigenous Communities, directly affected public and relevant review agencies, to ensure that they are aware of the project and that their concerns are identified and considered. An Environmental Study Report must be prepared and filed for review by Indigenous Communities, the public and the review agencies.

#### **1.4.3.2 Planning Process**

There are five (5) key elements in the Class EA planning process. These include:

**Phase 1** – Identification of problem (deficiency) or opportunity;

**Phase 2** – Identification of alternative solutions to address the problem or opportunity. Public and review agency contact is mandatory during this phase and input received along with information on the existing environment is used to establish the preferred solution. It is at this point that the appropriate Schedule (B or C) is chosen for the undertaking. If Schedule B is chosen, the process and decisions are then documented in a Project File. Schedule C projects; however, proceed through the following Phases;

**Phase 3** – Examination of alternative methods of implementing the preferred solution established in Phase 2. This decision is based on the existing environment, public and review agency input, anticipated environmental effects and methods of minimizing negative effects and maximizing positive effects;

**Phase 4** – Preparation of an ESR summarizing the rationale, planning, design and consultation process of the project through Phases 1-3. The ESR is then to be made available to agencies and the public for review; and

**Phase 5** – Following completion of contract drawings and documents, construction and operation commences. Construction is to be monitored for adherence to environmental provisions and commitments. Monitoring during operation may be necessary if there are special conditions.

**Exhibit A.2** provided overleaf illustrates the Municipal Class EA Planning and Design Process.

#### **1.4.4 New Water Well for Arran-Elderslie Water Treatment Plant**

This project is being conducted as a Schedule B project under the Municipal Class Environmental Assessment process. The selection as a Schedule B project recognizes that the proposed works falls under the category of “Establish a well at a new municipal well site” as referenced in **Table A** of the Municipal Class Environmental Assessment (Municipal Engineers Association, 2024) document.

#### **1.4.5 Project File Report (PFR)**

For projects following Schedule B, a Project File Report (PFR) is to be completed as part of Phase 2 and placed on public record for a period of at least 30 calendar days. Prior to filing PFR, a Notice of Completion to Review Agencies and Public is required to be issued.

#### **1.4.6 Changing Project Status – Section 16 Orders**

The EAA provides the Minister (or delegate) with the authority to make two types of orders with respect to an undertaking proceeding in accordance with a Class EA.

The Minister (or delegate) may order a proponent, under section 16 and 16.1 of the EAA, and the prohibitions in s.15.1.1. before proceeding, to undertake a comprehensive EA or may impose conditions on the undertaking.

##### Section 16(1) and 16(3) Orders

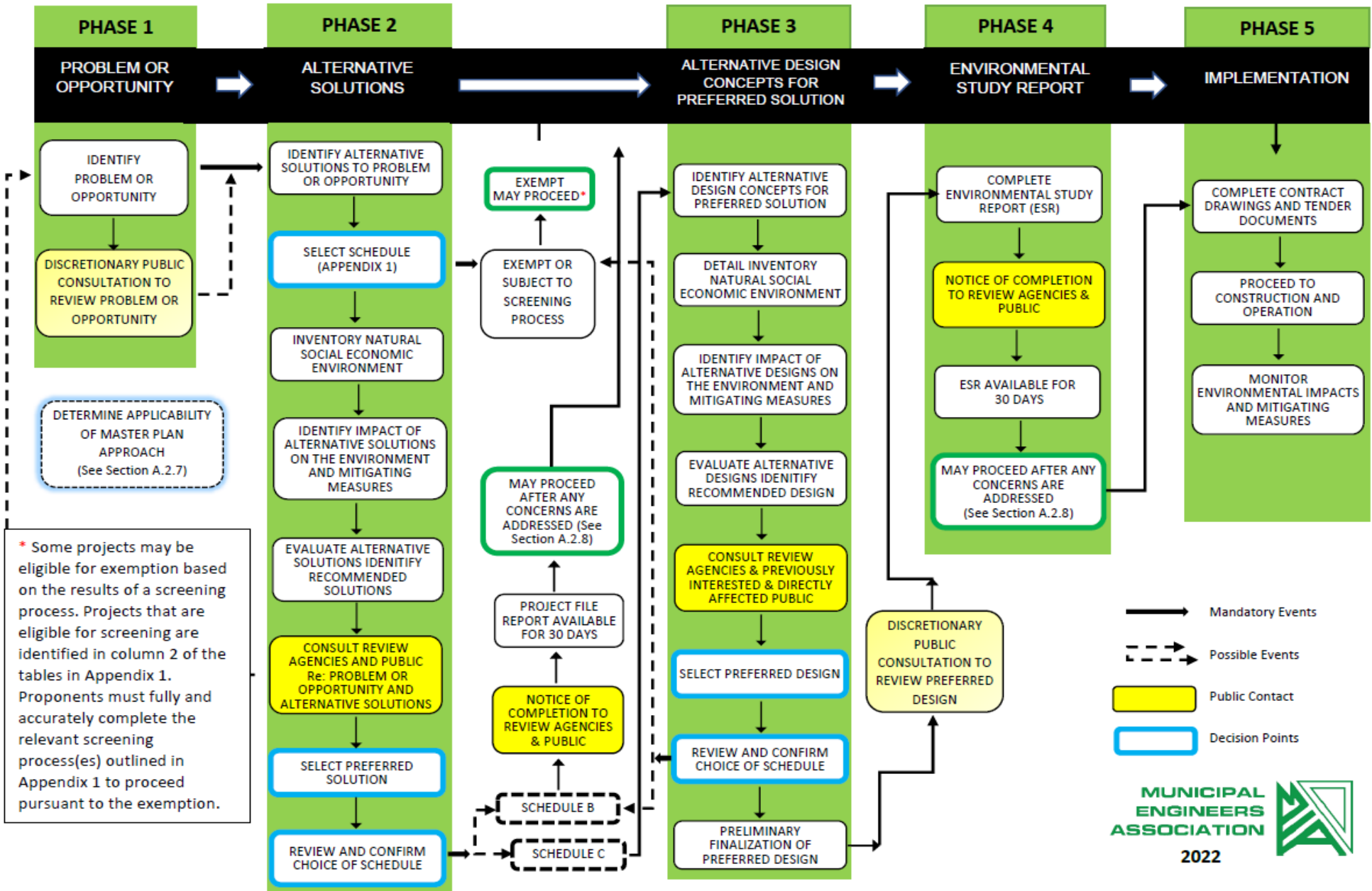
The Minister (or delegate) may, on their own initiative, within a time limited period, require a proponent to undertake a comprehensive EA, referred to as a s.16(1) order, or impose conditions on an undertaking, referred to as a s.16(3) order.

If the Minister (or delegate) is considering making an order on their own initiative, the Minister must make the order no later than 30 days after the end of the comment period set out in the Notice of Completion or Notice of Addendum, unless a Notice of Proposed Order is provided to the proponent. If the Director provides a Notice of Proposed Order to the proponent within the 30-day period, the Minister must make the order within 30 days of the Director’s notice being provided to the proponent unless the notice also includes a request for information.

The Minister (or delegate) will have 30 days to make an order following completion of certain procedures. In this case, the following are the outcomes:

# EXHIBIT A.2. MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

NOTE: This flow chart is to be read in conjunction with Part A of the MCEA



- If the Minister (or delegate) issues a s.16(1) order, the proponent cannot proceed with the project without first seeking and obtaining approval under Part II of the Act (i.e., comprehensive EA).
- If the Minister (or delegate) issues a s.16(3) order, the proponent must meet the conditions outlined in the order.
- If the Minister (or delegate) does not issue an order within 30 days of the Director giving a Notice of Satisfactory Response, the proponent can proceed with their project.

There are further details on procedures in the EA document, which is not provided here. Reader is referred to Municipal Class EA document issued February 2024.

Requests for s.16 orders on the grounds that the order may prevent, mitigate or remedy adverse impacts on Aboriginal and treaty rights.

In addition, the EAA allows a person with concerns pertaining to potential adverse impacts to Aboriginal or treaty rights, to request under section 16 of the EAA that the Minister make an order requiring a comprehensive EA) or that conditions be imposed on the project. A request can only be made on the grounds that the order may prevent, mitigate or remedy adverse impacts on Constitutionally protected Aboriginal or treaty rights. Requests that are not made on these grounds will not be considered by the Minister. If a section 16 order request is received by the Minister, the proponent shall not proceed with their project until a decision is made by the Minister on the request, or the ministry notifies the proponent that they may proceed.

The information in the notices should include what the grounds for a request must be (i.e., that the order may prevent, mitigate or remedy adverse impacts on Constitutionally protected Aboriginal or treaty rights), how to submit a request for a section 16 order, and timing for the public comment period, and information that must be submitted to the ministry in making a request. This includes:

- a. requester contact information, including full name;
- b. project name;
- c. proponent name;
- d. the type of order that is being requested (requiring a comprehensive EA before being able to proceed, or that conditions be imposed on the project);
- e. specific reasons on how an order may prevent, mitigate or remedy potential adverse impacts on Aboriginal and treaty rights;
- f. information about efforts to date to discuss and resolve concerns with the proponent;  
and
- g. any other information in support of statements in the request.

If a request for a section 16 order is received by the ministry that meets the grounds in section 16(6), the ministry will contact the proponent for a response to the concerns raised in the section 16 order request. The proponent must respond in a timely manner with complete information to any request.

#### **1.4.7 Canadian Environmental Assessment Act**

The Canadian Environmental Assessment Act (CEAA) forms the basis of the federal environmental assessment process at the project level. There are two (2) main conditions for the Act to apply:

- The proposed project has to meet the definition of "designated project" as set out in the Act. A "designated project" means one or more physical activities designated by the regulations; and
- Each physical activity must be linked to one of the following responsible authorities:
  - Canadian Environmental Assessment Agency;
  - Canadian Nuclear Safety Commission; or
  - National Energy Board.

This project currently does not meet the conditions for a federal environmental assessment.

#### **1.4.8 Ministry Codes of Practice and Climate Change Guidance**

This sub-section provides the relevant excerpts from Municipal Class Environmental Assessment Planning Process Statement. The ministry has developed codes of practice to provide guidance on key aspects of the Class EA process. The codes of practice include:

- *Preparing, Reviewing and Using Class Environmental Assessments in Ontario;*
- *Consultation in Ontario's Environmental Assessment Process; and*
- *Using Mediation in Ontario's Environmental Assessment Process.*

Together, the codes of practice:

- Set out the ministry's expectations for the content of a variety of EA documents and provide guidance on the roles and responsibilities of all participants in the EA process;
- Provide clear direction to proponents, EA practitioners, and other stakeholders involved in both comprehensive and streamlined EA processes including Class EAs, consultation and mediation; and
- Promote the transparency of government involvement and the decision making process when projects must meet the requirements of the EAA.

In addition to these codes of practice, the ministry has also developed the following guidance document: *Considering Climate Change in the Environmental Assessment process.*

The guide is a companion to the codes of practice and sets out the ministry's expectations for considering climate change in the preparation, execution and documentation of EA studies and processes.

The guide describes two types of climate change effects that can be considered. The first is the effect that a project can have on climate change. In this instance, the issue to be considered is

the degree to which the project can provide some climate change **mitigation** measures by reducing carbon emissions and/or enhancing/protecting natural landscapes that act as carbon sinks. The second is the effect climate change has on a project. In this instance, the issue to be considered is the degree to which the project can demonstrate **adaptation** to climate change impacts.

#### **1.4.8.1 Climate Change Mitigation**

Climate change mitigation is a "big picture" issue. The most significant impact where decisions are made for climate change mitigation (i.e., greenhouse gas emission reduction / protection and enhancement of natural areas as carbon sinks) relates to high level planning in a community. These types of planning decisions generally take place long before an undertaking is considered in the context of the *EAA*.

The Provincial Policy Statement and A Place to Grow: Infrastructure system development expansion and improvement projects that fall under the MCEA follow the strategic direction of the high-level planning decisions. The impact on climate change mitigation between alternative conceptual solutions (Phase 2 of the MCEA) or optional design approaches (Phase 3 of the MCEA) could be relatively minor at this stage of the development of an undertaking. This would be a basis for a proponent to scale the level of evaluation associated with climate change mitigation assessment in the project.

A logical approach to incorporate some consideration into the MCEA evaluation is to include climate change mitigation criteria into the decision-matrix as one of the factors impacting the selection of a preferred solution (Phase 2 of the MCEA) and/or preferred project design option (Phase 3 of the MCEA). Possible criteria descriptions may be as follows:

- Potential for greenhouse gas emission reduction measures; and
- Potential for protecting/enhancing carbon sinks (i.e., natural landscapes)

These accommodate qualitative statements, such as "high / medium / low" to be part of the decision matrix based on potential measures that an option may be able to accommodate in reducing greenhouse gas emissions or protecting / enhancing carbon sinks.

#### **1.4.8.2 Climate Change Adaptation**

Climate change adaptation is a project specific issue. Any weather event related to climate change that exerts an influence on a project can be considered an effect of climate change on a project. Extreme weather events and phenomenon are changing the performance of level of service for existing infrastructure systems and impacting the basis of designing new systems for the future.

Climate change effects can be localized to property / project specific sites (e.g., flooding from extreme rainfall events), or widespread over large areas or regions (e.g., higher community water demands from drought conditions), ecosystem resilience issues from rain, drought, ice and windstorms or other extreme events of nature).

Effects of climate change on widespread areas would typically be addressed in master plan and high-level planning studies of community infrastructure needs. Many of these decisions would be addressed through higher level community planning processes under the *Planning Act* and aligning with appropriate Provincial Policy Statements, and other policies that incorporate climate change considerations.

Addressing the potential effects of climate change on localized properties and projects ultimately becomes part of the design process, where infrastructure systems and structures are designed in such a way as to adapt and be resilient to extreme weather events. The impact on climate change adaptation between alternative conceptual solutions (Phase 2 of the MCEA) or optional design approaches (Phase 3 of the MCEA) could be relatively minor at this stage of the development of an undertaking.

A logical approach to incorporate some consideration into the evaluation, if warranted, is to include climate change adaptation criteria into the decision-matrix as one of the factors impacting the selection of a preferred solution (Phase 2 of the MCEA) and/or preferred project design option (Phase 3 of the MCEA). Possible criteria descriptions may be stated as follows:

- Vulnerability of project/infrastructure to climate change effects; and
- Flexibility to incorporate climate change adaptation measures in design.

These criteria accommodate qualitative statements, such as “high / medium / low” to be part of the decision matrix based on degree of vulnerability between options to climate change effects and flexibility to accommodate adaptation features into the design of an undertaking.

In summary, climate change considerations need to be incorporated into the MCEA process, but these must be scaled appropriately to be practically applied for the types of projects proceeding pursuant to MCEA.

#### **1.4.9 Provincial Planning Statement (PPS), 2024 (PPS)**

This section outlines the pertinent information from PPS along with section numbers (as they appear in PPS).

### **Chapter 1: Introduction**

#### **Vision**

Ontario is a vast, fast-growing province that is home to many urban, rural and northern communities distinguished by different populations, economic activity, pace of growth, and physical and natural conditions.

Cultural heritage and archaeology in Ontario will provide people with a sense of place. And while many Ontarians still face a complex range of challenges, municipalities will work with the Province to support the long term prosperity and well-being of residents through the design of communities responsive to the needs of all Ontarians.

Ontario will continue to recognize the unique role Indigenous communities have in land use planning and development, and the contribution of Indigenous communities’ perspectives and traditional knowledge to land use planning decisions. Meaningful early engagement and constructive, cooperative relationship-building between planning authorities and Indigenous communities will facilitate knowledge-sharing and inform decision-making in land use planning.

### **Role of the Provisional Planning Statement**

The Provincial Planning Statement provides policy direction on matters of provincial interest related to land use planning and development. As a key part of Ontario’s policy-led planning system, the Provincial Planning Statement sets the policy foundation for regulating the development and use of land province-wide, helping achieve the provincial goal of meeting the needs of a fast-growing province while enhancing the quality of life for all Ontarians.

Zoning and development permit by-laws are important for the implementation of the Provincial Planning Statement. Zoning and development permit by-laws prepared by municipalities should be forward-looking and facilitate opportunities for an appropriate range and mix of *housing options* for all Ontarians.

The Province’s rich cultural diversity is one of its distinctive and defining features. Indigenous communities have a unique relationship with the land and its resources, which continues to shape the history and economy of the Province today. Ontario recognizes the unique role Indigenous communities have in land use planning and development, and the contribution of Indigenous communities’ perspectives and traditional knowledge to land use planning decisions. The Province recognizes the importance of consulting with Aboriginal communities on planning matters that may affect their section 35 Aboriginal or treaty rights.

### **Legislative Authority**

The Provincial Planning Statement is a policy statement issued under the authority of section 3 of the Planning Act and came into effect on October 20, 2024. The Provincial Planning Statement applies to all decisions in respect of the exercise of any authority that affects a planning matter made on or after October 20, 2024.

In respect of the exercise of any authority that affects a planning matter, section 3 of the *Planning Act* requires that decisions affecting planning matters shall be consistent with policy statements issued under the Act.

The key policies that apply to the development of a new water supply well in Arran-Elderslie, in subsequent chapters of PPS, are listed as follows:

## **Chapter 2: Building Homes, Sustaining Strong and Competitive Communities**

### **2.1 Planning for People and Homes**

2. Municipalities may continue to forecast growth using population and employment forecasts previously issued by the Province for the purposes of land use planning.

3. At the time of creating a new official plan and each official plan update, sufficient land shall be made available to accommodate an appropriate range and mix of land uses to meet projected needs for a time horizon of at least 20 years, but not more than 30 years, informed by provincial guidance. Planning for *infrastructure*, *public service facilities*, *strategic growth areas* and *employment areas* may extend beyond this time horizon.
4. To provide for an appropriate range and mix of *housing options* and densities required to meet projected requirements of current and future residents of the *regional market area*, planning authorities shall:
  - a) maintain at all times the ability to accommodate residential growth for a minimum of 15 years through lands which are *designated and available* for residential development; and
  - b) maintain at all times where new development is to occur, land with servicing capacity sufficient to provide at least a three-year supply of residential units available through lands suitably zoned, including units in draft approved or registered plans.

## **2.3 Settlement Areas and Settlement Area Boundary Expansions**

### **2.3.1 General Policies for Settlement Areas**

2. Land use patterns within *settlement areas* should be based on densities and a mix of land uses which:
  - a) efficiently use land and resources;
  - b) optimize existing and planned *infrastructure* and *public service facilities*;
6. Planning authorities should establish and implement phasing policies, where appropriate, to ensure that development within *designated growth areas* is orderly and aligns with the timely provision of the *infrastructure and public service facilities*.

## **2.9 Energy Conservation, Air Quality and Climate Change**

1. Planning authorities shall plan to reduce greenhouse gas emissions and prepare for the *impacts of a changing climate* through approaches that:
  - a) incorporate climate change considerations in planning for and the development of *infrastructure*, including stormwater management systems, and *public service facilities*;
  - b) support energy conservation and efficiency;
  - c) promote *green infrastructure*, *low impact development*, and *active transportation*, protect the environment and improve air quality; and
  - d) take into consideration any additional approaches that help reduce greenhouse gas emissions and build community resilience to the *impacts of a changing climate*.

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## Chapter 3: Infrastructure and Facilities

### 3.1 General Policies for Infrastructure and Public Service Facilities

1. *Infrastructure* and *public service facilities* shall be provided in an efficient manner while accommodating projected needs.
2. Before consideration is given to developing new *infrastructure* and *public service facilities*:
  - a) the use of existing *infrastructure* and *public service facilities* should be optimized; and
  - b) opportunities for adaptive re-use should be considered, wherever feasible.
3. *Infrastructure* and *public service facilities* should be strategically located to support the effective and efficient delivery of emergency management services, and to ensure the protection of public health and safety in accordance with the policies.

### 3.6 Sewage, Water and Stormwater

1. Planning for *sewage and water services* shall:
  - a) accommodate forecasted growth in a timely manner that promotes the efficient use and optimization of existing *municipal sewage services* and *municipal water services* and existing *private communal sewage services* and *private communal water services*;
  - b) ensure that these services are provided in a manner that:
    1. can be sustained by the water resources upon which such services rely;
    2. is feasible and financially viable over their life cycle;
    3. protects human health and safety, and the natural environment, including the *quality and quantity of water*; and
    4. aligns with comprehensive municipal planning for these services, where applicable.
  - c) promote water and energy conservation and efficiency;
  - d) integrate servicing and land use considerations at all stages of the planning process;
  - e) consider opportunities to allocate, and re-allocate if necessary, the unused system capacity of *municipal water services* and *municipal sewage services* to support efficient use of these services to meet current and projected needs for increased housing supply; and
2. Municipal sewage services and municipal water services are the preferred form of servicing for settlement areas to support protection of the environment and minimize potential risks to human health and safety. For clarity, *municipal sewage services* and *municipal water services* include both centralized servicing systems and decentralized servicing systems.

7. Planning authorities may allow lot creation where there is confirmation of sufficient *reserve sewage system capacity* and *reserve water system capacity*.

#### **Chapter 4: Wise Use and Management of Resources**

##### **4.1 Natural Heritage**

4. *Development and site alteration* shall not be permitted in:
- a) *significant wetlands* in Ecoregions 5E, 6E and 7E1; and
  - b) *significant coastal wetlands*.
5. *Development and site alteration* shall not be permitted in:
- a) *significant woodlands* in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River)1;
  - b) *significant valleylands* in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River)1;
  - c) *significant wildlife habitat*;
  - d) *significant areas of natural and scientific interest*; and
6. *Development and site alteration* shall not be permitted in *fish habitat* except in accordance with *provincial and federal requirements*.
7. *Development and site alteration* shall not be permitted in *habitat of endangered species and threatened species*, except in accordance with *provincial and federal requirements*.
8. *Development and site alteration* shall not be permitted on *adjacent lands* to the *natural heritage features and areas* identified in policies unless the *ecological function* of the *adjacent lands* has been evaluated and it has been demonstrated that there will be no *negative impacts* on the natural features or on their *ecological functions*.

##### **4.2 Water**

1. Planning authorities shall protect, improve or restore the *quality and quantity of water* by:
- e) implementing necessary restrictions on *development and site alteration* to:
    - 1. protect all municipal drinking water supplies and *designated vulnerable areas*; and
    - 2. protect, improve or restore vulnerable surface and ground water, and their *hydrologic functions*;
  - f) planning for efficient and sustainable use of water resources, through practices for water conservation and sustaining water quality;

2. Development and site alteration shall be restricted in or near sensitive surface water features and sensitive ground water features such that these features and their related hydrologic functions will be protected, improved or restored, which may require mitigative measures and/or alternative development approaches.
3. Municipalities are encouraged to undertake, and *large and fast-growing municipalities* shall undertake *watershed planning* to inform planning for *sewage and water services* and stormwater management, including *low impact development*, and the protection, improvement or restoration of the *quality and quantity of water*.

## **Chapter 5: Protecting Public Health and Safety**

### **5.2 Natural Hazards**

3. *Development and site alteration* shall not be permitted within:
  - c) areas that would be rendered inaccessible to people and vehicles during times of *flooding hazards, erosion hazards and/or dynamic beach hazards*, unless it has been demonstrated that the site has safe access appropriate for the nature of the *development* and the natural hazard;
4. Planning authorities shall prepare for the *impacts of a changing climate* that may increase the risk associated with natural hazards.

## **Chapter 6: Implementation and Interpretation**

### **6.1 General Policies for Implementation and Interpretation**

2. The Provincial Planning Statement shall be implemented in a manner that is consistent with the recognition and affirmation of existing Aboriginal and treaty rights in section 35 of the *Constitution Act, 1982*.

## **2 INTENT OF PROJECT FILE REPORT (PFR)**

The intent of this report is to outline the steps that Arran-Elderslie has taken to satisfy the requirements of the Municipal Class Environmental Assessment Planning Process for a Schedule B project. The Project File Report (PFR) details the following:

- Background of the project;
- Review of nature and extent of the problem or opportunity, outlines the source of the concern or issue;
- Inventory of Natural, Social, Economic Environment
- Identifies the solutions that are possible and impact of solutions on the environment and the mitigating measures;
- Evaluate alternative solutions and identify recommended solutions.

### **3 PUBLIC AND REVIEW AGENCY CONSULTATION**

#### **3.1 Consultation**

##### **3.1.1 General**

The consultation process is an integral component of the Municipal Class EA process. This section details the consultation process adopted by the proponent.

##### **3.1.2 Stakeholder Consultation**

Potential stakeholders included but are not limited to:

- Public – This includes individual members of the public including property owners who may be affected by the project, individual citizens who may have a general interest in the project, special interest groups, community representatives and the general public;
- Review agencies – This includes government agencies who represent the policy positions of their respective departments, ministries, authorities or agencies; and
- Identified Aboriginal Communities.

Members of the public were notified of project commencement and invited to attend the Public Consultation/Meetings by way of notices published by the proponent.

A list of relevant agencies and the appropriate contact person was developed at the onset of the process and was updated after determining the impact of new well on private residence's water supplies. These contacts were sent letters notifying them of the project and milestones including the development of the preferred planning alternative and the preferred design solutions.

##### **3.1.3 Aboriginal Consultation**

A list of relevant Aboriginal Communities were provided with letters notifying them of project commencement and project details.

**Appendix A** contains the contact list for the review agencies and Aboriginal communities. **Appendix C** contains a copy of each response received.

#### **3.2 Notice of Commencement**

The Notice of Commencement for "New Well for Arran-Elderslie Water Works" was posted on the municipal website. A copy of the notice is included in **Appendix B**.

### **3.3 Public Information Meetings**

#### **3.3.1 General**

The general public was notified of Discretionary Public Consultation and Phase 2 meeting through advertising and postings on municipal website. Copies of these notifications can be found in **Appendix B**.

#### **3.3.2 Discretionary Public Consultation**

A discretionary public consultation was undertaken by way of providing the following information on municipal website:

- Background
- Identification of the Problem Statement
- Description of Alternative Solutions and pertinent information relating to each solution. A total of seven (7) Alternative Solutions were presented.
- Screening of alternative solutions and rationale of carrying or not carrying forward
- Preliminary recommended alternative
- Comment Sheet

No comment sheet was received in response to the posted information.

#### **3.3.3 Phase 2 Public Meeting**

Phase 2 Mandatory Public Meeting was held on Thursday, May 2, 2024 at Arran-Elderslie's Chesley Community Centre. A formal PowerPoint presentation was made at 7:00 pm. The presentation outlined the following:

- Highlights of information provided for Discretionary Public Consultation.
- Review of alternative solutions and selection of the Preliminary Recommended alternative.

Only six (6) people were in attendance in addition to presenters. They were all municipal staff or council members. Following the presentation, a question period was held. No comment sheets were received in response to Public Meeting.

### **3.4 Notice of completion**

The Notice of Completion is intended to be published in Owen Sound Sun Times. The publishing of this notice will be the beginning of the 30 day review period. The PFR will be available for public viewing at the following locations:

- Arran-Elderslie Municipal Office
- Arran-Elderslie Public Library
- Arran-Elderslie Municipal Website

#### **4 GUIDING/SERVICING PRINCIPLES**

In general, Servicing principles/guide should:

- Allow the proponent to translate the Municipalities Strategic Plan and Official Plan policies into more specific servicing proprieties;
- Allow the proponent to identify other servicing principles such as population growth and committed development. This was not a factor or concern for this project.
- Allow for proposed solutions to be tested based on whether or not they meet the proponent's priorities; and
- Allow for comparison and ranking of proposed solutions (number of principles met, to what degree, etc.).

Chesley and Paisley being small towns do not have a Master Plan or a Strategic Development plan that must be adhered to. Paisley community does have a potential for subdivisions development as a few developers have submitted proposals for draft plan approval or final design approval.

The water works rated capacity utilization is low, and there is no need to increase water works capacity. Therefore, the only guiding principle that must be considered is ensuring that rated capacity of the water works remain unchanged.

## **5 NATURAL ENVIRONMENT REVIEW**

### **5.1 Overview**

As required by the Municipal Class EA, a review of the Natural Environment was considered to characterize the significance and sensitivity of the natural features in the study area and consider potential impacts and appropriate measures in order to avoid or minimize potential negative impacts on the surrounding environment.

A detailed natural environment list was not attempted because the well construction was in the existing Community Park and not too far from existing well CPW #3, thereby causing little impact to the environment.

### **5.2 Study Area**

The study area is defined as the geographical area that could be affected by any of the project alternatives and was designed on the basis of the expected range of social and natural environmental effects associated with the construction of new well. For practical purposes, the study area was considered to be the urban area of Chesley and Paisley and additionally the area within the anticipated cone of depression of well during its short-term and extended use.

The following describes the project study area, including its location, existing land uses, natural environmental features and socio economic environment. The following information was considered when reviewing potential effects of alternative solutions and design concepts.

#### **5.2.1 Existing Land Use**

Land uses within Chesley and Paisley can generally be described as predominantly urban development including residential communities, institutional, recreational and commercial downtown core. Refer to **Figures No. 5.1 and 5.2**.

#### **5.2.2 Future Land Use**

Future land use changes anticipated in the Chesley area include minor growth in the urban area, (i.e. additional urban development) and new residential development in Paisley community. New residential development in Chesley will occur on vacant land area where full municipal services are available. Based on the past population growth pattern, the urban area is anticipated to have enough land to provide for 10-15 years of residential growth in Chesley. Chesley's Official Plan anticipated that the existing pattern of development will remain unchanged in the future.

Paisley, however, is experiencing growth of land development by developers and is anticipated to run out of lands identified for development. Bruce County has identified some vacant land that could be developed by way of zoning changes. Such developments are not anticipated to exert adverse impact on rated capacity of Arran-Elderslie Water Works.

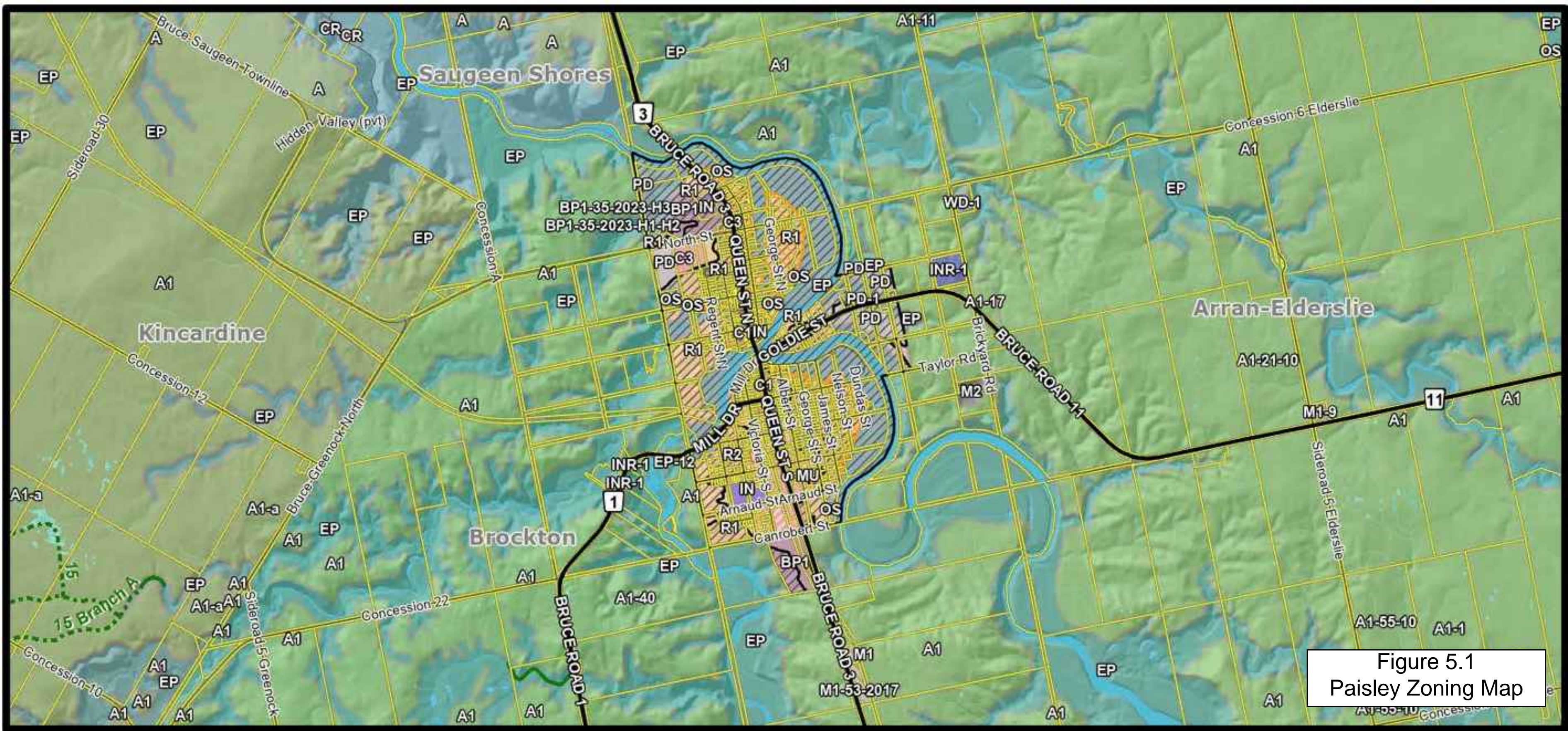


Figure 5.1  
Paisley Zoning Map

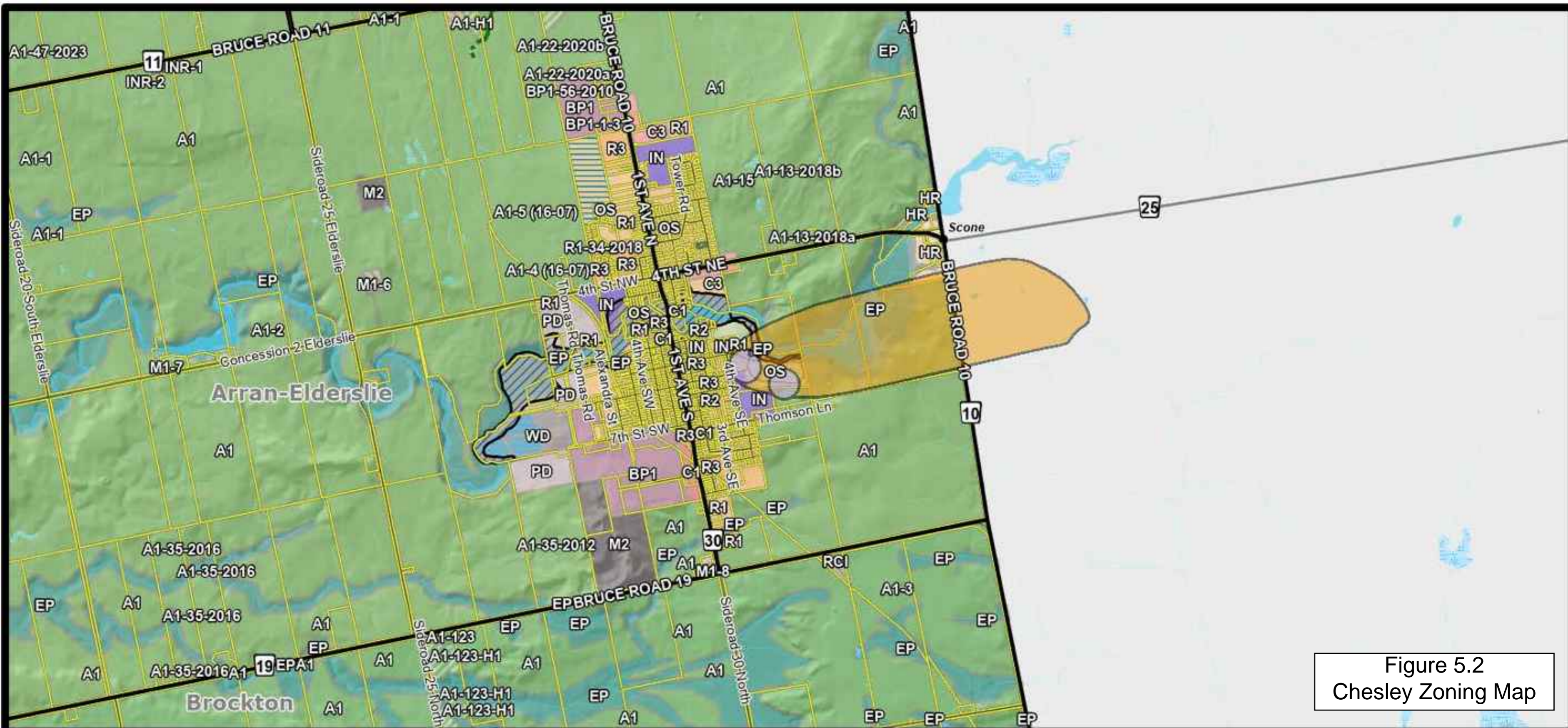


Figure 5.2  
Chesley Zoning Map

### **5.2.3 Socio Economic Environment**

Based on its location, Chesley and Paisley have a mix of commercial, institutional and minor recreational tourism based economy. The Municipality intends to maintain existing vibrant commercial activity in the downtown area. The Bluewater District School Board has its head office in Chesley and is the largest employer in Chesley. Paisley is located approximately 20 minutes' drive away from Bruce Nuclear Plant, who is the largest employer in Bruce County. The development potential and pressure in Paisley is due to relatively affordable housing availability and proximity to the nuclear plant

### **5.2.4 Natural Environment**

Chesley is developed along the banks of the North Saugeen River, whereas Paisley is located at the confluence of North Saugeen River and Teeswater River. Significant natural features of the area include the lands adjacent to the riverbanks. The North Saugeen River provides a warm water fish habitat and provides sport fishing opportunities to local anglers. The predominant species are thought to be bass and potentially northern pike.

### **5.3 Field Studies and Investigations**

Field work was not incorporated into the natural environment characterization due to very limited disturbance that will be caused by the construction of test well and production well.

### **5.4 Hydrology**

The study area is under the jurisdiction of the Saugeen Valley Conservation Authority (SVCA) and falls in the North Saugeen River watershed. However, no impact was anticipated by well construction unless well would be directly under the influence of surface water or has a direct draw of water from the river.

### **5.5 Aquatic Resources**

The North Saugeen River and Teeswater River watershed supports warm water fish communities. Rainbow mussel and Hungerford's Crawling Water Beetle were identified as possible Species at risk in the subject area by SVCA and MNR. No potential impact was anticipated on aquatic resources by construction of a drilled bedrock well.

### **5.6 Wetlands**

There are no identified wetlands in the study area, which could be impacted by proposed upgrades.

### **5.7 Significant Woodlots and Natural Areas**

Testing or construction of a new well was anticipated to be confined to the existing community park site and therefore there is no significant woodlot or natural areas that is anticipated to be impacted by the well construction or the raw water piping from well to the Arran-Elderslie Water Treatment Plant Building.

## 6 IDENTIFICATION OF ALTERNATIVE SOLUTIONS

The Municipal Class EA process recognizes that there are several ways to solve the problem and requires that various alternative solutions are considered. The list of alternative solutions that were considered are as follows:

- 1) Do nothing;
- 2) Decommission CPW 1 well;
- 3) Increased water supply from existing well(s);
- 4) Construct new groundwater supply source in currently utilized aquifer(s) and continue to use existing water treatment plant;
- 5) Construct new water supply well in a different aquifer and construct new treatment equipment as needed in existing treatment plant building or new building;
- 6) Construct new surface water supply source intake and associated treatment plant;
- 7) Treated water supply from another Water Work in Arran-Elderslie or adjacent municipality

A description of each alternative and applicable comments are provided in **Table 6.1**

**Table 6.1 – Alternative Solutions to Upgrading Arran-Elderslie Water Work**

June 13, 2025

23-012

ALTERNATIVE	DESCRIPTION	COMMENTS
1. Do Nothing	<ul style="list-style-type: none"> <li>• No improvements or changes would be undertaken to CPW 1 well problem.</li> </ul>	<p>“Do Nothing” alternative represents what would occur if none of the alternative solutions were implemented</p>
2. Decommission CPW 1 well	<ul style="list-style-type: none"> <li>• Decommission and remove well CPW 1 from water works</li> <li>• Obtain amendment to Licence and Permit from MECP</li> <li>• Decommissioning will lead to reduction in water supply capacity of existing AE WW</li> <li>• May limit residential growth in Paisley &amp; Chesley</li> </ul>	<ul style="list-style-type: none"> <li>➢ Does not address problem</li> <li>➢ Irresponsible to reduce water supply capacity of existing water system</li> <li>➢ Will limit growth in Chesley &amp; Paisley</li> </ul>
3. Increased water supply from existing well(s)	<ul style="list-style-type: none"> <li>• Hydrogeological investigation to determine if existing well(s) CPW 2 and 3 can supply more water</li> <li>• If yes, obtain permits and approval from MECP</li> <li>• Undertake Sch B EA</li> </ul>	<ul style="list-style-type: none"> <li>➢ May not provide additional supply in adequate quantity is suitable</li> <li>➢ Alternative is suitable to supplement other viable alternative(s)</li> </ul>
4. Construct new groundwater supply source in currently utilized aquifer(s) and continue to use existing water treatment plant	<ul style="list-style-type: none"> <li>• Drill new water well for additional water supply, (preferably near existing water treatment building’s locations) from aquifers that are currently being utilized</li> <li>• Obtaining water from existing utilized aquifer will ensure raw water is similar and will avoid need for new and different treatment equipment, that could be expensive</li> <li>• Undertake detailed hydrogeological investigation to ensure long-term water supply capabilities</li> <li>• Undertake EA and obtain new License &amp; Permit from MECP</li> <li>• Undertake Source Water Protection study as needed</li> <li>• Connect to exiting water treatment plant</li> </ul>	<ul style="list-style-type: none"> <li>➢ Risks are associated with new drilled well being incapable of supplying adequate quantity of water, or water quality not complying with ODWS</li> <li>➢ Relatively easier method to add additional treatment capacity</li> </ul>

**Table 6.1 – Alternative Solutions to Upgrading Arran-Elderslie Water Work**

June 13, 2025

23-012

ALTERNATIVE	DESCRIPTION	COMMENTS
<p>5. Construct new water supply well in a different aquifer and construct new treatment equipment as needed in existing treatment plant building or new building</p>	<ul style="list-style-type: none"> <li>• Drill new water well for needed water supply, preferably near existing water treatment plant building location.</li> <li>• Undertake detailed hydrogeological assessment</li> <li>• Undertake EA</li> <li>• Obtain PTTW and Licence &amp; Permit from MECP</li> <li>• Undertake Source Water Protection study as needed</li> <li>• Construct new or upgrade existing water treatment plant equipment and building, as required</li> <li>• Procure new land(s) as needed.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Risks are associated with new drilled well capability of supplying adequate water quantity, or water quality not complying with ODWS</li> <li>➤ This alternative is next best solution after a combination of alternatives #3 and #4 and can be pursued if alternatives #3 &amp; #4 fail.</li> </ul>
<p>6. Construct new surface water supply source intake and associated treatment plant</p>	<ul style="list-style-type: none"> <li>• N. Saugeen River is a potential water supply source</li> <li>• Determine suitable location and construct river water intake, after obtaining all approvals</li> <li>• May be required to construct raw water pumping station to supply water to treatment plant</li> <li>• Construct new WTP building or expand existing treatment plant building and connect to existing water distribution networks. Existing plant building shall not have room to accommodate new treatment equipment</li> <li>• Undertake Sch C EA</li> <li>• Obtain PTTW and also complete Source Water Protection Study</li> </ul>	<ul style="list-style-type: none"> <li>➤ Surface water sources are more prone to contamination and have more variable water quality</li> <li>➤ Treatment process can be far more complex and expensive when compared to groundwater source</li> <li>➤ Operators need to remain on guard during period of water quality changes during spring and fall and take timely corrective steps. Highly skilled operation is required</li> <li>➤ Generally, less desirable option when good groundwater supply source is readily available</li> <li>➤ Capital Project Cost is anticipated to be highest among all alternatives</li> <li>➤ Timeline for this alternative is anticipated to be much longer than other viable alternatives</li> </ul>

**Table 6.1 – Alternative Solutions to Upgrading Arran-Elderslie Water Work**

June 13, 2025

23-012

<b>ALTERNATIVE</b>	<b>DESCRIPTION</b>	<b>COMMENTS</b>
<p>7. Treated water supply from another Water Work in Arran-Elderslie or adjacent municipality</p>	<ul style="list-style-type: none"> <li>• Will require approval from County and neighbouring municipality that could supply water</li> <li>• Arran-Elderslie has Tara WW, but with insufficient spare capacity to support Arran-Elderslie Water Works</li> <li>• Shall require construction of long water mains, associated booster pumping system and re-chlorination facility(ies)</li> <li>• Hanover is another water works that <u>may</u> be able to spare supply, but is at a significant distance</li> </ul>	<ul style="list-style-type: none"> <li>➤ Not likely a viable option</li> <li>➤ Tara water works is not capable to supply additional water without significant upgrading of existing water works</li> <li>➤ Hanover is another water works that <u>may</u> be able to spare supply, but is at a significant distance</li> <li>➤ Typically, neighbouring municipalities saves surplus capacity of their water works for their own use rather than provide to others</li> </ul>

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## **7 NEW WATER SUPPLY INVESTIGATION PROGRAM**

Arran-Elderslie began exploration of new well supply in 2022 by hiring R.J. Burnside Engineers. A test well TW1-22 was drilled in Community Park and tested in 2022. However, during testing it was found to be a low-yield well. Therefore, the efforts for another well commenced. Another test well TW1-23 was drilled in Community Park, to the west of municipal well CPW #3 and TW1-22. The short term and long term pumping tests as well as water quality testing to Drinking Water standards, confirmed this well's capacity to be developed into a municipal well. However, during testing, it was noted by way of water level measurement and data logging that cone of influence of the new well would affect eight (8) private wells due to increased drawdown at their wells.

Private property owners were contacted and were informed about the concern. They were informed that municipality would consider providing them with new well pumps installed at deeper depths to ensure that over a period of time, the static water level or the pumping level does not drop below their pump's settling depth.

The above investigation program was presented at Phase 2 Public Meeting Presentation. Following the comment period expiration and no objections, council by way of a resolution authorized the construction of a production well at location of TW2-23. The new well CPW #4 construction detail is provided overleaf, which has been borrowed from RJ Burnside's report entitled "Chesley Well CPW4 Production Well Construction and PTTW Application, April 2025". A copy of the well log is also included overleaf. The testing of the well confirms that it is capable of providing a long term well yield of 34 L/sec.

Following the commissioning of CPW #4, the existing well CPW #1 will be decommissioned in accordance with O.Reg 903.

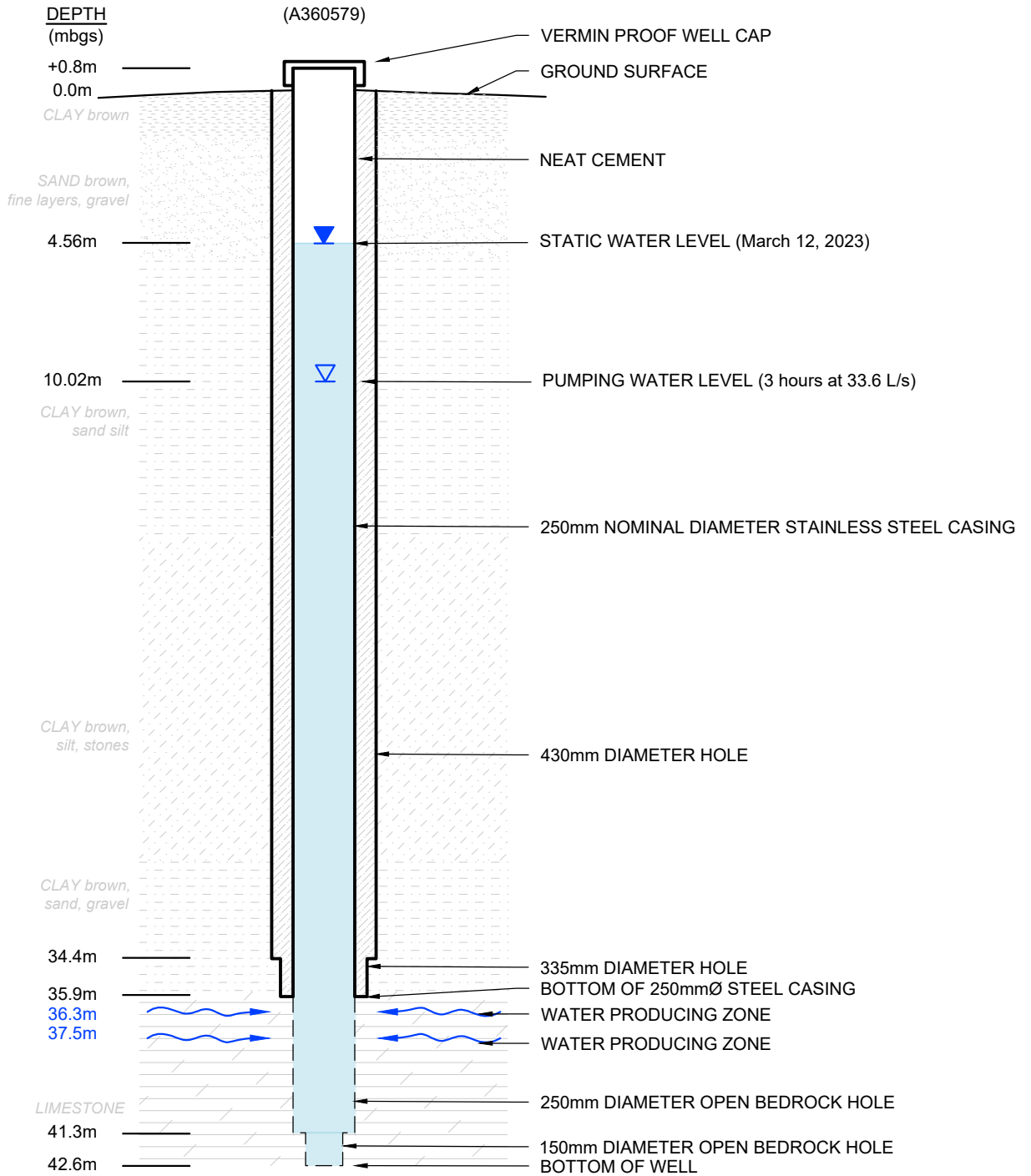


Figure Title

**CHESLEY WELL CPW4**

**WELL CONSTRUCTION DETAIL**

Client

**MUNICIPALITY OF ARRAN-ELDERSLIE  
CHESLEY, ONTARIO**

Drawn

SK

Checked

JD

Date

April 2025

Scale

N.T.S.

Project No.

300057828

Figure No.

**3**



A360579

Measurements recorded in:  Metric  Imperial

Page 1 of 1

**Well Owner's Information**

First Name: \_\_\_\_\_ Last Name/Organization: Municipality of Arran-Elderslie E-mail Address: Water@arran-elderslie.com  Well Constructed by Well Owner

Mailing Address (Street Number/Name): 1925 Bruce Rd 10, PO Box 70 Municipality: Chesley Province: ONT Postal Code: N0K1L4 0 Telephone No. (inc. area code): 5119361310139

**Well Location**

Address of Well Location (Street Number/Name): 129 4th Ave SE Township: Arran-Elderslie Lot: \_\_\_\_\_ Concession: \_\_\_\_\_

County/District/Municipality: Bruce City/Town/Village: Chesley Province: **Ontario** Postal Code: N0K1L4 0

UTM Coordinates: Zone: 18Q Easting: 11741913 Northing: 419104171915 Municipal Plan and Sublot Number: \_\_\_\_\_ Other: \_\_\_\_\_

**Overburden and Bedrock Materials/Abandonment Sealing Record** (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft)
				From To
Brown	Clay			0 1.8
Brown	Sand		Fine	1.8 3.1
Brown	Sand	Gravel		3.1 6.7
Brown	Clay	Sand silt		6.7 17.7
Brown	Clay	Silt Stones		17.7 30.5
Brown	Clay	Sand Gravel		30.5 35.7
Grey	Limestone			35.7 38.7
Brown	Limestone			38.7 39.6
Grey	Limestone			39.6 42.6

**Annular Space**

Depth Set at (m/ft)	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
From To		
0 35.9	Neat Portland Cement	3.3

**Results of Well Yield Testing**

Time (min)	Draw Down		Recovery	
	Water Level (m/ft)	Time (min)	Water Level (m/ft)	Time (min)
Static Level	6.07			
1	7.22	1	10.39	
2	7.47	2	10.24	
3	7.58	3	10.09	
4	7.74	4	9.98	
5	7.82	5	9.87	
10	8.35	10	9.48	
15	8.54	15	9.09	
20	8.53	20	8.88	
25	8.62	25	8.70	
30	8.74	30	8.58	
40	8.93	40	8.33	
50	9.06	50	8.15	
60	9.21	60	7.98	

After test of well yield, water was:  
 Clear and sand free  
 Other, specify \_\_\_\_\_

If pumping discontinued, give reason: \_\_\_\_\_

Pump intake set at (m/ft): 25.35

Pumping rate (l/min/GPM): 540

Duration of pumping: 6 hrs + 0 min

Final water level end of pumping (m/ft): 11.50

If flowing give rate (l/min/GPM): \_\_\_\_\_

Recommended pump depth (m/ft): 25.35

Recommended pump rate (l/min/GPM): > 500

Well production (l/min/GPM): > 500

Disinfected?  Yes  No

**Method of Construction**

Cable Tool  Diamond  Public  Commercial  Not used  
 Rotary (Conventional)  Jetting  Domestic  Municipal  Dewatering  
 Rotary (Reverse)  Driving  Livestock  Test Hole  Monitoring  
 Boring  Digging  Irrigation  Cooling & Air Conditioning  
 Air percussion  Industrial  Other, specify \_\_\_\_\_  
 Other, specify \_\_\_\_\_

**Construction Record - Casing**

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		Status of Well
			From	To	
25.4	Stainless Steel		0.77	35.9	<input checked="" type="checkbox"/> Water Supply <input type="checkbox"/> Replacement Well <input type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Observation and/or Monitoring Hole <input checked="" type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned, Insufficient Supply <input type="checkbox"/> Abandoned, Poor Water Quality <input type="checkbox"/> Abandoned, other, specify _____ <input type="checkbox"/> Other, specify _____

**Construction Record - Screen**

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)	
			From	To

**Water Details**

Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested	Hole Diameter	
		Depth (m/ft)	Diameter (cm/in)
		From	To
35.3-38	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	0	34.4 43.2
37.5-41.3	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	34.4	35.9 35.6
	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	35.9	41.3 25.4
	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	41.3	42.6 15.6

**Well Contractor and Well Technician Information**

Business Name of Well Contractor: Well Initiatives Limited Well Contractor's Licence No.: 7121211

Business Address (Street Number/Name): 15 Townsend Rd Municipality: Orangeville

Province: ONT Postal Code: L1R1W3R4 Business E-mail Address: info@wellinitiatives.com

Bus. Telephone No. (inc. area code): 519 846 8289 Name of Well Technician (Last Name, First Name): Blek Phil

Well Technician's Licence No.: 319122 Signature of Technician and/or Contractor: \_\_\_\_\_ Date Submitted: 2020/06/10

**Map of Well Location**

Please provide a map below following instructions on the back.

Comments: 6" casing removed. Reamed hole and installed 10" casing. Reamed Rock.

Well owner's information package delivered:  Yes  No

Date Package Delivered: 2020/06/10

Date Work Completed: 2020/06/10

Ministry Use Only

Audit No.: 2411147

Received: \_\_\_\_\_

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## 8 SCREENING OF ALTERNATIVE SOLUTIONS

It is probable that environmental components as identified in Section 5.0 will not necessarily be adversely impacted by all of the alternative solutions. In view of this, it is imperative that the identified alternative solutions are screened for suitability and short-listed before a detailed review process is undertaken.

The rationale for screening of the alternative solution was based on the following:

- Inability of an Alternative to address the problem statement;
- Time consuming, especially if other suitable alternative is available; and
- Too expensive, especially if other suitable alternative is available.

A summary of the screening process is presented in **Table 8.1**, which is self-explanatory. Alternatives #1 and #4 were considered for a more detailed investigation.

### **Preliminary Recommended Alternative**

Based on information outlined in **Table 6.1 and Table 8.1**, Arran-Elderslie proposed to undertake further steps to complete Alternative #3 and Alternative #4 simultaneously.

Alternative #3 was to explore hydrogeological assessment of existing water supply wells CPW #2 & #3 by way of desktop assessment of background reports and wells operational data to determine if the existing water wells could supply additional water on long term basis. The desktop analysis confirmed that additional water supply cannot be obtained from remaining wells CPW #2 and #3, if CPW #1 supply is lost completely.

Alternative #4 was to focus on long term pump testing of new Well CPW #4 to determine whether it can match or exceed water supply that was originally available from existing Well CPW #1.

Alternative #5 was to be pursued only if Alternatives #3 and #4 were unsuccessful. However, construction and testing of the new test well TW2-23 indicated that there was no need to pursue Alternative #5.

**TABLE 8.1 – Screening of Alternative Solutions**

June 13, 2025

23-012

ALTERNATIVE	DECISION	RATIONALE FOR NOT CARRYING FORWARD
1. Do Nothing	✓	Carried forward – must be considered
2. Decommission CPW 1	X	Screened – does not address the problem
3. Increased water supply from existing well(s)	✓	Carried forward in conjunction with Alternative #4
4. Construct new groundwater supply source in currently utilized aquifer and continue to use existing water treatment plant)	✓	Carried forward – feasible alternative
5. Construct new water supply well in a different aquifer and construct new treatment equipment as needed in existing treatment plant building or new building	✓	Carried forward – feasible alternative, and to be pursued only if Alternatives #3 & #4 are unable to address problem definition
6. Construct new surface water supply source intake and associated treatment plant	X	Screened – addresses the problem but time consuming and expensive and with operational challenges
7. Treated water supply from another Water Work in Arran-Elderslie or adjacent municipality	X	Screened – not a feasible alternative

## **9 EVALUATION METHODOLOGY**

### **9.1 Development of Evaluation Framework and Criteria**

Evaluation criterion for the short listed alternative solutions were developed based on the following environmental components which address the broad definition of the environment described in the EAA<sup>1</sup>.

The environmental components are briefly described in **Table 9.1**

Based on the environmental components, the evaluation criteria were developed and used to evaluate the short list of alternative solutions. Refer to **Table 9.2**

<sup>1</sup> The Environmental Assessment Act (Section 1. (i)(a) to (f), defines the "environment" as: "air, land, water, plant and animal life including human life; the social, economic and cultural conditions that influence the life of humans or a community; any building, structure, machine or other device or thing made by humans; any solid, liquid, gas, odor, heat, sound, vibration or radiation resulting directly or indirectly from human activities, or; any part or combination of the foregoing and the interrelationship between any two (2) or more of them in or of Ontario". This definition of the environment is used and is reflected in the environmental components used in the Phase Two evaluation.

**Table 9.1 Environmental Components**

**23-012**

<b>Environmental Component</b>	<b>Description</b>
Public Health and Safety	<ul style="list-style-type: none"> <li>• Component having regard for protecting the public’s health and safety including drinking water.</li> </ul>
Natural Environment	<ul style="list-style-type: none"> <li>• Component having regard for protecting the natural and physical components of the environment (i.e. air, land, water and biota) including natural heritage-environmentally sensitive areas.</li> </ul>
Social/Cultural	<ul style="list-style-type: none"> <li>• Component that evaluates potential effects on residents, neighborhoods, businesses, community character, social cohesion, community features and historical/archaeological and heritage components in addition to municipal development objectives.</li> </ul>
Legal/Jurisdictional	<ul style="list-style-type: none"> <li>• Component that considers the Municipality’s ability to control such as water rates as well as land and approval requirement for each alternative.</li> <li>• Component that considers the Aboriginal/First Nations Community rights.</li> </ul>
Provincial Policy Statement	<ul style="list-style-type: none"> <li>• Component that considers growth forecast, which much be for a time horizon of at least 20 years, but not more than 30 years.</li> <li>• Component that considers development that aligns with the timely provision of infrastructure and public service facilities.</li> <li>• Component that considers climate change.</li> <li>• Component that considers infrastructure is provided in an efficient manner, while accommodating projected needs.</li> <li>• Component that considers that use of existing infrastructure is optimized and reused before considering development of new infrastructure.</li> <li>• Component that considers infrastructure is strategically located to support effective and efficient delivery of EMS to ensure protection of public health and safety.</li> <li>• Component that considers opportunities to allocate and reallocate system capacity of municipal water and sewage services to support efficiency to meeting increased housing supply.</li> </ul>

**Table 9.1 Environmental Components (Continued)**

**23-012**

<b>Environmental Component</b>	<b>Description</b>
Provincial Policy Statement (Continued)	<ul style="list-style-type: none"> <li>• Component that considers that planning authorities allow lot creation where there is a confirmation of sufficient reserve water and sewage system capacity.</li> <li>• Component that considers restriction to protect drinking water supplies and designated vulnerable areas.</li> <li>• Component that considers efficient and sustainable use of water resources through conservation and sustaining water quality.</li> <li>• Component that considers access during times of flooding or erosion hazards.</li> </ul>
Technical	<ul style="list-style-type: none"> <li>• Component that considers technical suitability and other engineering aspects of the system including constructability and operations.</li> </ul>
Economic/Financial	<ul style="list-style-type: none"> <li>• Component that addresses estimated capital and operating costs.</li> </ul>

**Table 9.2 Criteria for Evaluating Short List Alternative Solutions**

Criteria	Short List Evaluation Criteria
Public Health and Safety	<ul style="list-style-type: none"> <li>• Ability to comply with Provincial Ontario Drinking Water Quality Standards</li> </ul>
Natural Environment	<ul style="list-style-type: none"> <li>• Potential effects to natural environment (air, land, water):</li> <li>• Environmentally Sensitive Areas and Species:               <ul style="list-style-type: none"> <li>• Distance to or impact on designated natural heritage areas (lands classified as ESAs, ANSIs, PSWs); and</li> <li>• Vulnerable, threatened and/or endangered species identified by the MNR, SVCA, DFO in the area.</li> <li>• Wetlands</li> </ul> </li> <li>• Vegetation:               <ul style="list-style-type: none"> <li>• Amount of vegetation, woodlands, hedgerows, etc. affected or removed.</li> </ul> </li> <li>• Wildlife and birds               <ul style="list-style-type: none"> <li>• Potential impact by construction and prolonged use of the constructed asset.</li> </ul> </li> <li>• Potential private well interference</li> </ul>
Social/Cultural	<ul style="list-style-type: none"> <li>• Policies and guidelines               <ul style="list-style-type: none"> <li>• Conformity with planning policies and guidelines;</li> <li>• Official Plan;</li> <li>• Zoning By-Law:</li> <li>• Provincial Policy Statement; and</li> <li>• MECP policies.</li> </ul> </li> <li>• Land Use:               <ul style="list-style-type: none"> <li>• Compatibility with current and future land uses;</li> <li>• Residential</li> <li>• Open Space;</li> <li>• Agricultural</li> <li>• Size of buffer zone; and</li> <li>• Aesthetics.</li> </ul> </li> <li>• Archaeological and Cultural Areas, First Nations Land Claims:               <ul style="list-style-type: none"> <li>• Potential impact to cultural and/or archeological resources; and</li> <li>• Existence of land claims</li> </ul> </li> <li>• Potential interference with private well supplies</li> </ul>

Criteria	Short List Evaluation Criteria
Legal/Jurisdictional	<ul style="list-style-type: none"> <li>• Required Approvals: <ul style="list-style-type: none"> <li>• Complexity and timeline for approvals.</li> </ul> </li> <li>• Ability to control operations and rates: <ul style="list-style-type: none"> <li>• Nature of required inter-municipal agreements.</li> </ul> </li> <li>• Land Acquisition: <ul style="list-style-type: none"> <li>• Amount required; and</li> <li>• Nature of property acquisition (public vs. private)</li> </ul> </li> <li>• Source Water Protection Areas (SWPA) <ul style="list-style-type: none"> <li>• Potential impact of SWPA of the new well</li> </ul> </li> </ul>
Climate Change	<ul style="list-style-type: none"> <li>• Climate Change Obligation <ul style="list-style-type: none"> <li>• Potential for greenhouse gas emission reduction measures.</li> <li>• Potential for protecting/enhancing carbon sinks.</li> </ul> </li> <li>• Climate Change Adaptation <ul style="list-style-type: none"> <li>• Vulnerability of project to climate change effects.</li> <li>• Flexibility to incorporate climate change adaptation measures in the design.</li> </ul> </li> </ul>
Provincial Policy Statement	<ul style="list-style-type: none"> <li>• Component that considers growth forecast, which must be for a time horizon of at least 20 years, but not more than 30 years.</li> <li>• Component that considers development that aligns with the timely provision of infrastructure and public service facilities.</li> <li>• Component that considers climate change.</li> <li>• Component that considers infrastructure is provided in an efficient manner, while accommodating projected needs.</li> <li>• Component that considers that use of existing infrastructure is optimized and reused before considering development of new infrastructure.</li> <li>• Component that considers infrastructure is strategically located to support effective and efficient delivery of EMS to ensure protection of public health and safety.</li> <li>• Component that considers opportunities to allocate and reallocate system capacity of municipal water and sewage services to support efficiency to meeting increased housing supply.</li> <li>• Component that considers that planning authorities allow lot creation where there is a confirmation of sufficient reserve water and sewage system capacity.</li> </ul>

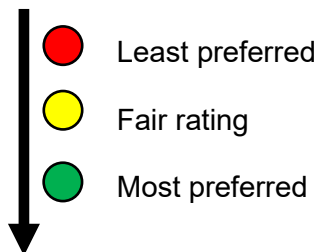
	<ul style="list-style-type: none"> <li>• Component that considers restriction to protect drinking water supplies and designated vulnerable areas.</li> <li>• Component that considers efficient and sustainable use of water resources through conservation and sustaining water quality.</li> <li>• Component that considers access during times of flooding erosion hazards.</li> </ul>
Technical	<ul style="list-style-type: none"> <li>• Ability to meet capacity requirements: <ul style="list-style-type: none"> <li>• Ability to supply water equal to or more than capacity of Well CPW #1</li> </ul> </li> <li>• Compatibility with existing infrastructure: <ul style="list-style-type: none"> <li>• Ability to reuse existing infrastructure and the amount of new infrastructure required.</li> </ul> </li> <li>• Degree of Operation Complexity: <ul style="list-style-type: none"> <li>• Level of treatment required; and</li> <li>• Number of facilities to operate.</li> </ul> </li> <li>• Construction Issues and Impacts: <ul style="list-style-type: none"> <li>• Impact to general public; and</li> <li>• Degree of mitigation required.</li> </ul> </li> </ul>
Economic/Financial	<ul style="list-style-type: none"> <li>• Capital and operating costs</li> <li>• Impact on Cost Recovery: <ul style="list-style-type: none"> <li>• Water Rates; and</li> <li>• Government Grants.</li> </ul> </li> </ul>

## 9.2 Use of Descriptive Information and Qualitative Evaluation

An evaluation of screened alternative was completed based on the previously described evaluation criteria components. Alternatives were ranked under each evaluation criteria.

The evaluation used in this report is not based on a descriptive or qualitative evaluation and considers the suitability of alternative solutions. In this respect, the trade-offs that have been made between alternatives are described in the text of the report and these trade-offs form the rationale for the identification of the preferred solution(s). Trade-offs involve forfeiting an advantage or accepting a disadvantage to address a higher priority consideration. The screened alternatives have been ranked in order of preference (based on advantages/disadvantages) under the discussion with respect to each aspect of the environment. This is intended to assist the reader in understanding the results of the evaluation process.

As shown on **Table 10.1** (in Section 10), the following colored rating symbols were used to summarize the results of the evaluation.



## **10 EVALUATION OF SHORT LIST ALTERNATIVE SOLUTIONS**

During first public consultation, Alternative #5 was intended to be pursued, if Alternative #4 investigation was unsuccessful. Construction of test well confirmed that new well could be constructed in the aquifer and it was possible to continue to utilize existing water treatment plant. Accordingly, Alternative #5 was not pursued.

### **10.1 Evaluation of Short List of Alternative Solutions**

The evaluation of short listed solutions was undertaken and summarized in **Tables 10.1 to 10.5** at the end of section 10. Significant findings of this evaluation are presented below.

#### **10.1.1 Public Health and Safety**

Ability of Alternative to comply with Ontario Drinking Water Standards, MECP issued license and permit for Water Works.

Continued population growth in Chesley and Paisley would ultimately lead to Alternative No. 1 resulting in non-compliance with MECP issued license and permits, as water demands will exceed water supply permitted. Alternatives 4 would allow for continued growth while complying with ODWS, license and permit..

#### **10.1.2 Natural Environmental Considerations**

Potential effects to the natural environment: effect on air, land, water and biota considerations or constraints (where applicable).

Potential impact on air, land, biota is minimal to non-existent. However, there will be potential impact on aquifer supplying water to the well. Indiscriminate withdrawal can deplete aquifer faster than it can recuperate. However, detailed hydrogeological studies and investigations, and review and approval by MECP will eliminate/minimize such impact.

Alternative 4 may have an impact but it is manageable.

#### **10.1.3 Social/Cultural Considerations**

##### ***Conformity with local, county and provincial planning policies and guidelines.***

Alternative No. 1 is incompatible with Arran-Elderslie and Bruce County Official Plans and policies as well as Provincial Policy Statement requirements. Alternative No. 4 conforms with Arran-Elderslie and Bruce County Official Plan goals and policies as well as the Provincial Policy Statement requirements.

#### **10.1.4 Legal/Jurisdictional Considerations**

Potential land use impacts including compatibility with surrounding land uses as well as cultural/heritage/agricultural resources was considered for Alternative #4.

Alternatives No. 4 achieves conformity with Provincial Planning policies, guidelines and MECP issued License & Permit requirements. Land impact will be negligible and can be mitigated by appropriate construction practices. Alternative No. 4 requires consultation with the First Nations communities.

#### **10.1.5 Climate Change**

Climate change impact was considered for implementation of Alternative No. 4, in terms of mitigation measures as well as adaptation measures.

Regarding mitigation measures relating to greenhouse gas emission reduction and carbon sink impact, there is not much that the proponent can do, other than utilization of high efficiency pump motors. Other project activity relating to construction is installation of raw water main from well location to existing water treatment plant building, which is planned to be installed by way of directional drilling. Directional drilling is anticipated to require less energy, disturbance to vegetation and consequently less greenhouse gas emission and carbon sink impact.

Climate changes can affect recharging of water supply aquifer. There is not much that can be done under this project. However, aquifer analysis considered sustained pumping of aquifer over 20 years. Therefore, reduced recharge, if it occurs, is not anticipated to adversely impact water supply. Therefore, the project is deemed to have low vulnerability to climate change and no adaptation measures are necessary.

#### **10.1.6 Provincial Policy Statement**

Provincial policy statement impact on Alternative #4 was considered for various PPS components that are identified in Table 9.1. The following bullets indicate how the various components were addressed:

- Growth forecast was not utilized as the project is for the replacement of an existing well with a new well in a different aquifer. And that the new well supplies water in quantities more than the well it is replacing, therefore there is no adverse impact.
- Project is a timely replacement of well to ensure water works rated capacity does not decline.
- Project follows principal of efficient utilization of current assets by treating the raw water in the existing water treatment plant.
- Well is constructed in a place not prone to flooding hazard, and therefore, will always be accessible.
- Project is designed to deliver allocation of unused system capacity to efficient utilization for housing needs.

- The well head protection area which has been defined by way of modelling and vulnerability assessment in accordance with provincial guidelines and in consultation with Local Source Water Protection Committee, remains unchanged, since water will be withdrawn from same aquifer, where CP Well #3 draws its water.

### **10.1.7 Technical Considerations**

#### ***Capability, Reliability, Flexibility***

Alternative No. 1 cannot meet current water works rated capacity requirements; while Alternative No. 4 meets the capacity requirements and will utilize proven technology and provide redundancy as needed, which is anticipated to be better than Well CPW #1.

#### ***Implementation and Operability***

Alternatives No. 1 and 4 will utilize the existing water treatment facility/infrastructure, treated water conveyance and water distribution system. Construction of replacement well to Well CPW #1 will not lead to any significant changes in operability of the water works.

#### ***Construction Issues and Impacts***

Construction related impacts for Alternative No. 4 is limited to on-site impacts only. Alternative No. 4 will have minimal traffic impact in the town during construction of well and raw watermain.

Construction issues and impacts for Alternative No. 4 is typical and minimal. No specific mitigation measures are needed during evaluation of design concepts, development of Contract Documents and appropriate construction techniques.

#### ***Approval, Implementation Requirements***

To implement Alternative No. 1, a development freeze would be required. License & Permit requirements for Alternative No. 4 would be limited to obtaining review and approval by MECP. Implementation impact for Alternatives No. 4 will be manageable.

Alternative No. 4 has no additional property or easement requirements, as the municipality already owns the land at the proposed well site.

Alternative No. 4 will allow approvals to remain completely under the control of the Municipality.

### **10.1.8 Economic/Financial Considerations**

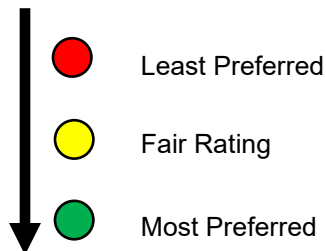
#### ***Lifecycle Costs***

Alternative No. 1 would cost the least as there will be no capital expense. However, as demonstrated previously, it would not allow for planned community growth. As such, the cost of restricting community development cannot be justified.

Alternative No. 4 will have costs associated with construction of test well and production well, well testing, hydrogeological investigation and study report, construction of well and associated raw watermain to the existing Water Treatment Plant building. The plant will have reduced O & M cost as iron bacteria related maintenance cost will be eliminated.

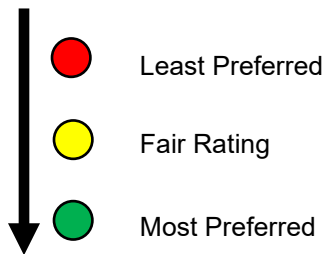
**Table 10.1: Evaluation of Alternative Solutions  
(Public Health Natural Environment, Social/Cultural/Legal)**

Shortlist Alternative Solutions ↓	Public Health and Safety	Natural Environment	Evaluation Summary
Criteria →	Ability to comply with ODWO, License & Permits	Potential Effects on Natural Environment	Least Preferred ● ↓ Most Preferred ●
<u>Alternative 1</u> Do nothing	✖ Non-compliance if growth continues Incompatible with: ✖ Municipal goals and ✖ Provincial policies	✖ None	●
<u>Alternative 4</u> Construct New Groundwater Supply in Currently Utilized Aquifer(s) & continued to Use Existing Water Treatment Plant	✖ Can comply with Ontario Drinking Water Standards Will Meet: ✖ Provincial Policies ✖ MECP License & Permit	✖ Impact on Aquifer, but per Provincial Approval ✖ Private wells interference	●



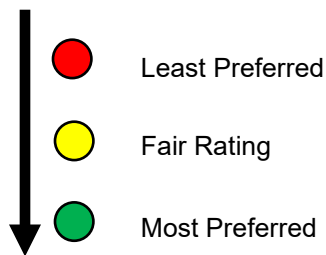
**Table 10.2: Evaluation of Alternative Solutions (Social/ Cultural/ Legal)**

Shortlist Alternative Solutions ↓	Social/ Cultural Considerations	Legal/ Jurisdictional Considerations	Evaluation Summary
Criteria →	Conforming with local, county and provincial policies and guidelines	Land use, cultural, heritage and agricultural resources	Least Preferred ● ↓ Most Preferred ●
Alternative 1 Do nothing	★ Incompatible with all criteria	★ Incompatible with all criteria	●
Alternative 4 Construct New Groundwater Supply in Currently Utilized Aquifer(s) & continued to Use Existing Water Treatment Plant	Will Meet: ★ All Municipal, County and Provincial Policies	Will Meet: ★ Provincial Policy Statement ★MECP licenses, permits and guidelines ★Negligible land impact ★Includes resolution of any First Nations Communities concerns.	●





**Table 10.3: Evaluation of Alternative Solutions: (Technical)**

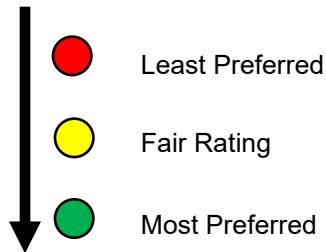
Shortlist Alternative Solution	Technical			Evaluation Summary
	Capability, Reliability, Flexibility	Implementation and Operability	Construction Issues and Approvals	
<u>Alternative 1</u> Do Nothing	*Cannot meet capacity requirements	* None	* No construction impact	●
<u>Alternative 4</u> Construct New Groundwater Supply in Currently Utilized Aquifer(s) & continued to Use Existing Water Treatment Plant	* Will meet capacity requirements * Higher level of redundancy	* Utilizes existing infrastructure * Plant operation will not change	* Construction impact limited to site * Some traffic impact * Construction impact minimal (with proper mitigation measures) * Approvals under AE control	●



**Table 10.4: Evaluation of Alternative Solutions: (Climate Change, Provincial Policy Statement Considerations)**

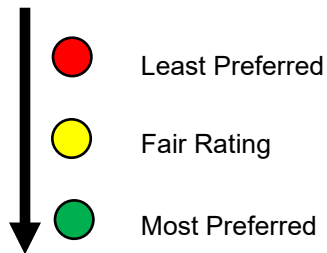
**23-012**

Short List Alternative Solutions	Climate Change Measures		Provincial Policy Statement						Evaluation Summary
	Mitigation	Adaptation	Growth Forecast	Timely Action	Efficient Utilization	All Time Access	Efficient Allocation of Resources	WHPA	
<b>Alternative #1</b>	* None	* None	*Cannot meet	* None	*Cannot meet	* None	* None	* None	
<b>Alternative #4</b>	*Optimization is possible	* Not needed or possible	* Not needed	*Addresses timely action	*Addresses efficient utilization of existing infrastructure	*Well site accessible at all times	*Addresses efficient allocation of capacity	*Addresses WHPA & vulnerability assesment	



**Table 10.5: Evaluation Summary**

Shortlist Alternative Solutions	Public Health & Safety and Natural Environment	Social/ Cultural Legal Jurisdiction	Technical	Climate Change	Provincial Planning Statement	Overall
<u>Alternative 1</u>	●	●	●	●	●	●
<u>Alternative 4</u>	●	●	●	●	●	●



## **11 PRELIMINARY RECOMMENDED ALTERNATIVE**

Based on the above evaluation, Alternative No. 4, which requires construction of new Well CPW #4 at the Community Park site is the recommended alternative to address the problem statement presented in Section 1.2.

## **12 RECOMMENDED MITIGATIVE MEASURES**

It is recognized that construction and operation of the proposed well and the associated raw water main may have potential negative impacts on the environment and local residents. To understand the net effect of construction and operation, a cursory assessment of the impacts and the mitigation measure to mitigate or negate these potential negative impacts has been prepared and is discussed in the following section. It is important to note that for this Municipal Class EA, potential impacts related to the construction of the new well are limited and short term.

Based on the evaluation of potential effects, the new well construction project is not expected to create any significant environmental impacts. However, a number of mitigate measures are recommended to ensure that any disturbances are managed by the best available methods.

### **12.1 Construction Related Impacts**

Impacts related to construction of the proposed well and associated raw watermain are short-term and minor. By incorporating proper construction techniques and controls, these impacts can be minimized. Anticipated construction related impacts are summarized below along with the associated mitigation measures. It is recommended that these mitigating measures be employed as required.

**Table 12.1 Mitigate Measures**

**23-012**

Potential Impact	Mitigation Measures
<b>NATURAL ENVIRONMENT</b>	
<b>Vegetation</b>	<ul style="list-style-type: none"> <li>• Removal of vegetation will not occur in the preferred design concept;</li> <li>• Restore any disturbed areas to natural or better conditions</li> </ul>
<b>Contamination of Soils Through Spills and Leaks</b>	<ul style="list-style-type: none"> <li>• This can be avoided by ensuring that fuel storage, refueling and maintenance of construction equipment are handled properly and not allowed in or adjacent to watercourses; and</li> <li>• Contingency plans must be prepared before projects begin for the control and cleanup of a spill if one should occur.</li> </ul>
<b>SOCIO ECONOMIC ENVIRONMENT</b>	
<b>Noise, Vibration and Dust</b>	<ul style="list-style-type: none"> <li>• Construction operations will be restricted to the day shift except a 24 to 72 pumping test. The contractor will be required to adhere to local noise bylaws;</li> <li>• Dust control, if required, by spraying water</li> </ul>
<b>Traffic</b>	<ul style="list-style-type: none"> <li>• Develop traffic plan for deliveries;</li> <li>• Make contractor responsible to maintain road conditions.</li> </ul>
<b>Public Communications</b>	<ul style="list-style-type: none"> <li>• Develop communications plan so that the public is aware of activities and planned work.</li> </ul>
<b>Private Wells Affected by Long-Term Drawdown</b>	<ul style="list-style-type: none"> <li>• In consultation with private well owners (already completed), make improvements to well-head and provide new well pumps at deeper depths to ensure aquifer drawdown does not affect their well water supplies.</li> </ul>

### **13 FIRST NATIONS CONSULTATION**

The proponent undertook a consultation with the following:

- Saugeen Ojibway Nation (SON)
- Historic Saugeen Metis (HSM)
- Great Lakes Metis Council (GLMC)

A preliminary project information letter was provided to all the First Nations. HSM responded to the letter and indicated that they have no comments or concerns.

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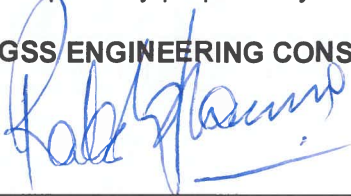
## 14 RECOMMENDATIONS

It is recommended that following the EA Approval process, the following are undertaken:

- An application for PTTW is submitted to MECP and the permit is obtained.
- Following PTTW, owner should submit the application to the MECP Approval Branch for license and permits amendment.
- The raw watermain from new well CPW #4 should be constructed and connected to existing WTP building. The existing water treatment plant is to be utilized to provide necessary treatment.
- Following commissioning of new well CPW #4, existing well CPW #1 should be decommissioned in accordance with O.Reg 903.

Respectfully prepared by:

**GSS ENGINEERING CONSULTANTS LTD.**



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Rakesh Sharma, P Eng., Secretary-Treasurer  
Designated Consulting Engineer

RS/mg

**APPENDIX A**

**Publications/Notices Issued**



## **PUBLIC NOTICE**

### **Schedule B EA (Phase 1 and 2) for New Water Supply Well for Arran-Elderslie Water Works Municipality of Arran-Elderslie (23-012)**

#### **Background**

The Municipality of Arran-Elderslie has Arran-Elderslie Water Works that is located in Chesley and provide potable water supply to Chesley & Paisley communities. The water works receives raw water supply from three (3) drilled wells, namely CPW 1, CPW 2 and CPW 3 which are located in Community Park of Chesley. CPW 1 and CPW 2 obtain the raw water supply from one aquifer whereas CPW 3 obtain water supply from a different aquifer. CPW 1 well got contaminated with iron bacteria and has been remediated several times by hiring specialized contractor to restore the water supply in this well. The restoration cost is rising and the frequency for remedial work is increasing, thereby forcing the Municipality to look for an alternative source of water supply.

Generally, well CPW 3 provides comparatively better water supply than CPW 1 and CPW 2. Accordingly, if Arran-Elderslie were to replace the CPW 1 with a new well, it would be better to obtain it from aquifer supplying water to CPW 3 well.

#### **Problem Statement**

Arran-Elderslie must replace raw water supplied from Well CPW 1 with an equivalent raw water supply. The new water supply source could be either a new drilled well in the same aquifer or a different aquifer. It can also be an additional water supply from existing well(s) or even a different water supply source such as a river, pond or lake.

#### **Alternatives**

Several alternative solutions are available to replace the water supply of well CPW 1. A brief description of each viable alternative and applicable comments are provided in **Table 1** and screening of alternatives is provided in **Table 2**.

#### **Public Input**

Arran-Elderslie has prepared this EA document that outlines the problem statement, list of alternatives and their brief details, that are being pursued to upgrade Water Work. Screening of Alternative Solutions is also provided in this document, based on which a Preliminary Recommended Alternative Solution(s) have been identified. Comments from all property owners and stakeholders is being requested.

***It may be noted that Arran-Elderslie shall conduct a Public Meeting after completion of Preliminary Recommended Alternative Solution(s).***

Please review documentation including Comment Sheet on Arran-Elderslie website at [www.arran-elderslie.ca](http://www.arran-elderslie.ca). Provide your comments on the comment sheet and send it to undersigned on June 16, 2023.

Issued on: June 2, 2023



Municipality of Arran-Elderslie  
Scott McLeod, Public Works Manager  
1925 Bruce Rd 10, Box 70  
Chesley, ON N0G 1L0



GSS Engineering Consultants Ltd.  
Rakesh Sharma, P. Eng.  
Suite 230 945 3<sup>rd</sup> Avenue East  
Owen Sound, ON N4K 2K8

Public Input for  
Schedule B EA  
for Construction of Replacement Well  
Municipality of Arran-Elderslie

June 2, 2023

23-012

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**Comment Sheet**

Background

The Municipality of Arran-Elderslie, Arran-Elderslie needs to replace existing well CPW 1 with a new well to maintain water supplies in sufficient quantity and obtain Province's License and Permit for Water Works. The Municipality is obligated to search for methods to replace the well with an equivalent capacity well in order that the water works can continue to supply potable water meeting Ontario Drinking Water Standards to water consumers.

Question and Comments

Question 1 Do you agree that this project is needed? Please indicate why or why not?

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Question 2 Construction and testing of a new ground water supply well (Alternative #4) and hydrogeological assessment of existing wells (Alternative #3) has been identified as the **Preliminary Recommended Alternative Solution**. Do you agree with this solution? Is there any other information that should be considered?

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Question 3 Is there any other information or comment that you would like to provide or be considered in the EA process?

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Question 4 You are: (check all those that apply):

- Resident or Business Owner of Arran-Elderslie (please specify Town/village)\_\_\_\_\_.
- Member of an Interest group (Please specify)\_\_\_\_\_.
- Agency Representative (Please specify)\_\_\_\_\_.
- Other (Please specify)\_\_\_\_\_.

Thank you for participating in this study.

Please return this completed Comment Sheet to Municipal Office to the attention of Mr. Scott McLeod by **June 16, 2023**.



Municipality of Arran-Elderslie  
Scott McLeod, Public Works Manager  
1925 Bruce Rd 10, Box 70  
Chesley, ON N0G 1L0



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## **NOTICE OF PUBLIC MEETING**

### **Arran-Elderslie Water Works, Arran-Elderslie Municipal Class Environmental Assessment**

#### **THE STUDY**

The Municipality of Arran-Elderslie is completing a Municipal Class Environmental Assessment (Class EA) that will address need for replacement of existing water supply Well CPW #1 with a new well.

#### **THE PROCESS**

The study is being conducted in accordance with the requirements as described in the Municipal Engineers Association's "Municipal Class Environmental Assessment" document. The Class EA process includes public and review agency consultation, an evaluation of alternatives and design concepts, an assessment of the impacts of the proposed improvements, and identification of measures to mitigate any adverse impacts.

#### **PUBLIC INFORMATION CENTRE**

As part of the study, a public meeting is being held to provide background information on the study and various alternatives considered, including a comparative analysis of those alternatives. Representatives from the Municipality and its consultants, GSS Engineering Consultants Ltd and R.J. Burnside Ltd. will be present at the meeting to answer questions and discuss the next steps in the study. The meeting is scheduled for:

**Date: Thursday, May 2, 2024**

**Time: 7:00 p.m.**

**Location: Chesley Community Centre**

You are encouraged to attend the meeting and provide your comments so that they may be included in the study. Comments received through the course of the study will be considered in finalizing the recommended solution as well as mitigation measures. Comments and information regarding this project will be collected in accordance with the municipal *Freedom of Information and Protections of Privacy Act* for the purpose of meeting environmental assessment requirements.

Upon completion of the study, an Environmental Study Report (ESR) documenting the planning process followed and will be made available for public review for a period of 30 calendar days. The public will be notified of the date, time and location of the filing of the ESR at the appropriate time through similar newspaper notices and flyer mailing.



Scott McLeod, Public Works Manager  
The Municipality of Arran-Elderslie  
1925 Bruce Road #10, P.O. Box 70  
Chesley, Ontario N0G 1L0  
smcLeod@arran-elderslie.ca

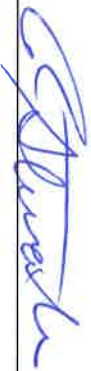







Rakesh Sharma P. Eng.  
GSS Engineering Consultants Ltd.  
Suite 230, 945 3<sup>rd</sup> Ave. E.  
Owen Sound, ON N4K 2K8  
rakeshsharma@gssengineering.ca

Public Meeting for Class Environmental Assessment Study for  
the Construction of New Well CPW #4

Thursday, May 2, 2024 – Chesley Community Centre

Sign In Sheet

Name	Address	Signature
Peter Steinacker	85 River St Targ	
Miken Penner	149 Annuud St	
Darryl Harpton	49, 3rd St. NW	
Silvia Kirkwood	758 Blune, Oobonbn	
Chs legr	72 concessn 8	
Scott McLeod	649 Grace Rd 17	

**APPENDIX B**

**Review Agency Contact List and  
Project Information Letter Issued**

## Agency Contact List

23-012

1	<p>Ministry of the Environment, Conservation and Parks Owen Sound District Office</p> <p>101 17<sup>th</sup> St. East Owen Sound, ON N4K 0A5</p> <p>Tel: 519-371-2901 Fax: 519-371-2905</p>	<p>John Ritchie</p> <p>Director</p> <p>john.s.ritchie@ontario.ca</p>
2	<p>Ministry of Natural Resources and Forestry, Owen Sound District Office</p> <p>1450 7<sup>th</sup> Ave East Owen Sound, ON N4K 2Z1</p> <p>Tel: 519-376-3860</p>	<p>John Almond</p> <p>District Manager</p> <p>john.almond@ontario.ca</p>
3	<p>Ministry of Transportation, Owen Sound District Office</p> <p>1450 7<sup>th</sup> Ave East Owen Sound, ON N4K 2Z1</p> <p>Tel: 519-376-7350</p>	<p>Fred Hemstock</p> <p>Contract Services Administrator</p> <p>fred.hemstock@ontario.ca</p>
4	<p>Ministry of Citizenship and Multiculturalism, Citizenship Inclusion and Heritage Division,</p> <p>5<sup>th</sup> Floor, 400 University Ave. Toronto, ON M7A 2R9</p> <p>Tel: 613-242-3743</p>	<p>Joseph Harvey</p> <p>Heritage Planner</p> <p>Joseph.Harvey@ontario.ca</p>
5	<p>Ministry of Citizenship and Multiculturalism, Heritage Planning Branch</p> <p>5<sup>th</sup> Floor, 400 University Ave. Toronto, ON M7A 2R9</p> <p>Tel: 416-660-1027</p>	<p>Karla Barboza</p> <p>Team Lead</p> <p>Karla.Barboza@ontario.ca</p>
6	<p>Ministry of Agriculture, Food and Agribusiness Environmental Management Branch</p> <p>3<sup>rd</sup> Floor, 1 Stone Road West Guelph, ON N1G 4Y2</p> <p>Tel: 1-888-466-2372 ext 63325</p>	<p>Cale Selby</p> <p>Director</p> <p>cale.selby@ontario.ca</p>

7	<p>Fisheries and Oceans Canada, District Office</p> <p>520 Exmouth St. Sarnia, ON N7T 8B1</p> <p>Tel: 519-383-1809</p>	<p>To Whom it May Concern</p> <p>info@dfo-mpo.gc.ca</p>
8	<p>The County of Bruce</p> <p>30 Park Street Walkerton, ON N0G 2V0</p> <p>Tel: 519-881-1291</p>	<p>Department of Planning and Development</p> <p>bcplwa@brucecounty.on.ca</p>
9	<p>Niagara Escarpment Commission, Owen Sound Office</p> <p>1450 7<sup>th</sup> Ave. Owen Sound, ON N4K 2Z1</p> <p>Tel: 519-371-1001</p>	<p>Laurie Golden</p> <p>Municipal Representative – Bruce County</p> <p>nec@ontario.ca</p>
10	<p>Saugeen Valley Conservation Authority</p> <p>1078 Bruce Rd. #12, Formosa, ON N0G 1W0</p> <p>Tel: 519-362-1255</p>	<p>Erik Downing</p> <p>Manager, Environmental Planning and Regulations</p> <p>e.downing@svca.on.ca</p>
11	<p>Grey Sauble Conservation Authority</p> <p>237897 Inglis Falls Rd., Owen Sound, ON N4K 5N6</p> <p>Tel: 519-376-3076</p>	<p>MacLean Plewes</p> <p>Manager of Environmental Planning</p> <p>m.plewes@greysauble.on.ca</p>
12	<p>Saugeen Ojibway Nation, Environment Office</p> <p>10129 Highway 6 Georgian Bluffs, ON N0H 2T0</p> <p>Tel: 519-534-5507</p>	<p>Charlene Leonard</p> <p>Resources &amp; Infrastructure Manager</p> <p>Manager.ri@saugeenojibwaynation.ca</p>
13	<p>Historic Saugeen Métis</p> <p>204 High St. Southampton, ON N0H 2L0</p> <p>Tel: 519-483-4000</p>	<p>To Whom it May Concern</p> <p>saugeenmetis@bmts.com</p>

14	<p>Great Lakes Métis Council Tel: 519-370-0435</p>	<p>Peter Coture President Peterc1908@hotmail.com</p>
15	<p>Grey Bruce Public Health 101 17<sup>th</sup> St. East Owen Sound, ON N4K 0A5 Tel: 519-376-9420</p>	<p>To Whom it May Concern publichealth@publichealthgreybruce.on.ca</p>
16	<p>Ministry of Municipal Affairs and Housing 2<sup>nd</sup> Floor, 659 Exeter Rd. London, ON N6E 1L3 Tel: 519-873-4020</p>	<p>Dianne Gould-Brown, Municipal Advisor dianne.gould-brown@ontario.ca  Jane Parnell, Municipal Advisor jane.parnell@ontario.ca  Reed Waldick, Municipal Advisor reed.waldick@ontario.ca  Sebastien Haley, Municipal Advisor sebastien.haley@ontario.ca</p>



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**Similar Letter Issued to all Agencies**

July 18, 2024

23-012

The County of Bruce – Department of Planning and Development  
30 Park St.  
Walkerton, Ontario  
N0G 2V0

To Whom it May Concern,

We are writing this letter to inform you that the Municipality of Arran-Elderslie initiated a Schedule B Class Environmental Assessment for the review of alternatives to replace the existing municipal well CPW #1 in Chesley with a new well.

The Chesley water works draws water from three wells (CPW 1-3). CPW #1 supplies 1,800 m<sup>3</sup>/day. The location of all three (3) wells is indicated in the attached Figure #1.

CPW #1 is experiencing significant iron bacteria formation that has clogged the well screen. This has led to a significant reduction in water supply from CPW #1. Methods to control the iron bacteria have become expensive and largely ineffective. The loss of water supply from CPW #1 results in loss of redundancy for the Chesley water works and is a serious issue. The Municipality therefore must proceed to reinstate the water supply lost from CPW #1.

As part of the EA process the following alternatives were explored:

- Alternative 1 Do Nothing;
- Alternative 2 Decommission CPW 1;
- Alternative 3 Increased Water Supply from Existing Well(s);
- Alternative 4 Construct New Groundwater Supply Source in Currently Utilized Aquifer(s) and Continue to Use Existing Water Treatment Plant. **PREFERRED**;
- Alternative 5 Construct New Water Supply Well in a Different Aquifer;

- Alternative 6 Construct New Surface Water Supply Source Intake and Associated Treatment Plant; and
- Alternative 7 Treated Water Supply from Another Water Work in Arran-Elderslie or Adjacent Municipality.

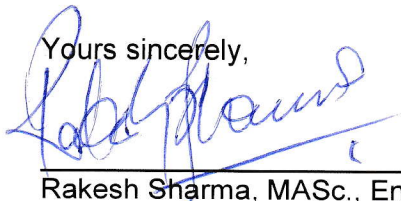
Alternative 4 is the preferred alternative as determined from two public consultations. This alternative is to construct a new ground water supply source well (CPW #4).

In 2022 a test well (TW #1) was drilled east of CPW #3, however, it was considered unsuitable due to low capacity. A second test well (TW #2) was drilled between CPW #3 and TW #1 which will draw water from the same aquifer as CPW #3. It has been determined to be a suitable location for a new municipal well. Therefore, construction of a new well (CPW #4) at the location of TW #2 is the preferred alternative. After the construction of CPW #4 in place of TW #2, CPW #1 shall be decommissioned after a PTTW and approval from MECP's Approval Branch is obtained.

It may be noted that per investigations completed to date, the new well shall potentially impact a few nearby private wells where well pumps shall have to be lowered to deeper depth. Those well owners have been contacted by Arran-Elderslie, and their wells shall be improved at municipal expense.

By way of this letter, on behalf of the Municipality, we request you to inform us if your office has any concerns or requirements that must be addressed through the EA process for construction of a new water supply well to replace CPW #1 for the Chesley water works.

Yours sincerely,

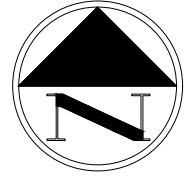
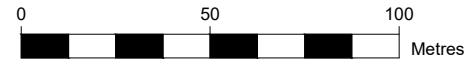
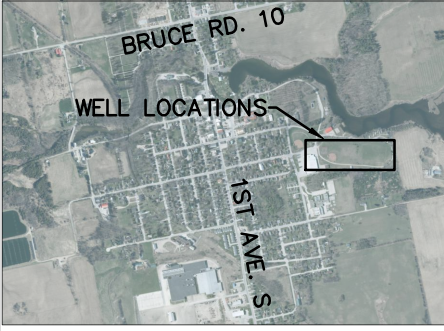


Rakesh Sharma, MAsc., Eng., P. Eng.,  
GSS Engineering Consultants Ltd.

RS/JB

cc Scott McLeod, Manager of Public Works, Arran-Elderslie

**KEY PLAN**



July 16, 2024 10:37:46 AM



**MUNICIPAL WELL LOCATION PLAN  
COMMUNITY OF CHESLEY  
MUNICIPALITY OF ARRAN-ELDERSLIE**

Design:	WBB
Drawn:	TDL
APPROVED:	WBB
Date:	JAN. 2024
Scale:	1:2000
FILE No.	23-012
FIG. No.	1



REFERENCES:  
BRUCE COUNTY PARCEL MAPPING  
BRUCE COUNTY MAPS IMAGE (2020)

**APPENDIX C**

**Summary of Responses from Agencies**

**Ministry of the Environment,  
Conservation and Parks**

**Ministère de l'Environnement,  
de la Protection de la nature  
et des Parcs**

Environmental Assessment  
Branch

Direction des évaluations  
environnementales

1<sup>st</sup> Floor  
135 St. Clair Avenue W  
Toronto ON M4V 1P5  
**Tel.:** 416 314-8001  
**Fax.:** 416 314-8452

Rez-de-chaussée  
135, avenue St. Clair Ouest  
Toronto ON M4V 1P5  
**Tél. :** 416 314-8001  
**Télééc. :** 416 314-8452

*Via E-mail Only*

September 8, 2025

Rakesh Sharma  
GSS Engineering Consulting

**Re: Construction of New Water Supply Well, Arran-Elderslie Water Works  
Municipality of Arran-Elderslie  
Municipal Class Environmental Assessment – Schedule B  
Project Review Unit Comments –Project File Report**

Dear Rakesh,

This letter is in response to the above noted Class Environmental Assessment (EA) project. The Ministry of the Environment, Conservation and Parks (ministry) provides the following comments for your consideration.

**General**

- 1) Page 14 of the report states that the indigenous correspondences can be found on Appendix C, however it is found in Appendix D.

**Class EA Process & Master Plan Approach**

- 2) Per the MCEA, notices need to be sent to the appropriate MECP regional inbox, in this case [eanotification.swregion@ontario.ca](mailto:eanotification.swregion@ontario.ca) at the time they are issued. The notice of commencement was not received by MECP at the time of issuance; hence an acknowledgement letter was never sent. The notice of completion was not sent to MECP at the time issuance either. The communication requirements with MECP were not met.

## **Planning and Policy**

- 3) A discussion of the provincial planning and policy context, particularly of the Provincial Planning Statement (PPS), 2024, is missing from the Report. The [Provincial Planning Statement \(2024\)](#) contains policies that protect Ontario's natural heritage and water resources. As noted in the Municipal Class EA document, the PPS is a key consideration for identifying land-use planning objectives and evaluating alternative solutions in Phase of the 2 Class EA process. Applicable policies should be referenced in the report, and the proponent should describe how the proposed project is consistent with these policies. The ministry recommends revising the Report to include a discussion of the PPS.

## **Indigenous Engagement**

- 4) Page 14 states that Appendix C contains a copy of each response received, but it seems to be Appendix D where these correspondences are located.

## **Climate Change**

- 5) Climate change considerations have not been documented in the report. The document "Considering Climate Change in the Environmental Assessment Process" (Guide) ([www.ontario.ca/page/considering-climate-change-environmental-assessment-process](http://www.ontario.ca/page/considering-climate-change-environmental-assessment-process)) is now a part of the EA program's Guides and Codes of Practice. The Guide sets out the ministry's expectation for considering climate change in the preparation, execution and documentation of environmental assessment studies and processes. The guide provides examples, approaches, resources, and references to assist proponents with consideration of climate change in EA. The proponent should review this Guide in detail. The ministry expects proponents of Class EA projects to:
  - a. Consider the project's expected production of greenhouse gas emissions and impacts on carbon sinks (climate change mitigation), as well as resilience or vulnerability of the undertaking to changing climatic conditions (climate change adaptation).
  - b. Include a discrete section in the Report detailing how climate change was considered in the EA.

How climate change is considered can be qualitative or quantitative in nature and should be scaled to the project's level of environmental effect. In all instances, both a project's impacts on climate change (mitigation) and impacts of climate change on a project (adaptation) should be considered.

## **Excess Materials and Waste**

- 6) All waste generated during construction must be disposed of in accordance with ministry requirements.

## Species At Risk

- 7) Section 5.5 states that there were possible Species at Risk in the project area. It is unclear if any site assessments or studies were conducted to determine the presence of Species at Risk. Please confirm.
- 

Thank you for circulating this Report for the ministry's consideration. Please document the receipt of this Project Review Unit Comments letter in the final report. We look forward to receiving a written response from the Municipality of Arran-Elderslie to address our comments provided above.

Should you or any members of your project team have any questions regarding the material above, please contact me at [monika.macki@ontario.ca](mailto:monika.macki@ontario.ca).

Sincerely,

*Monika Macki*

Monika Macki  
Environmental Resource Planner / EA Coordinator  
Environmental Assessment Program Support, Environmental Assessment Branch  
Ontario Ministry of the Environment, Conservation and Parks

**Ministry of Citizenship  
and Multiculturalism**

Heritage Planning Unit  
Heritage Branch  
Citizenship, Inclusion and  
Heritage Division  
5th Flr, 400 University Ave  
Tel.: 613.242.3743

**Ministère des Affaires civiques  
et du Multiculturalisme**

Unité de la planification relative au  
patrimoine  
Direction du patrimoine  
Division des affaires civiques, de  
l'inclusion et du patrimoine  
Tél.: 613.242.3743



August 12, 2024

EMAIL ONLY

Jacob Bartley  
Project Consultant  
GSS Engineering Consultants Ltd  
Suite 230, 945 3rd Avenue East  
Owen Sound, ON N4K 2K8  
[jacobbartley@gssengineering.ca](mailto:jacobbartley@gssengineering.ca).

**MCM File** : **0022161**  
**Proponent** : **Municipality of Arran-Elderslie**  
**Subject** : **Municipal Class Environmental Assessment – Schedule B - Notice  
of Commencement**  
**Project** : **Chesley Water Works**  
**Location** : **Municipality of Arran-Elderslie**

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Dear Jacob Bartley:

Thank you for providing the Ministry of Citizenship and Multiculturalism (MCM) with the Notice of Commencement for the above-referenced project.

Please note that the responsibility for administration of the *Ontario Heritage Act* and matters related to cultural heritage recently transferred from the Ministry of Tourism, Culture and Sport (MTCS) to the Ministry of Citizenship and Multiculturalism (MCM). Individual staff roles and contact information remain unchanged. Please continue to send any notices, report and/or documentation to both Karla Barboza and [Insert planner name].

MCM's interest in this Environmental Assessment (EA) project relates to its mandate of conserving Ontario's cultural heritage, which includes:

- archaeological resources, including land and marine;
- built heritage resources, including bridges and monuments; and
- cultural heritage landscapes.

Under the EA process, the proponent is required to determine a project's potential impact on known (previously recognized) and potential cultural heritage resources.

## **Project Summary**

The Municipality of Arran-Elderslie initiated a Schedule B Class Environmental Assessment for the review of alternatives to replace the existing municipal well CPW #1 in Chesley with a new well.

## **Identifying Cultural Heritage Resources**

While some cultural heritage resources may have already been formally identified, others may be identified through screening and evaluation.

## **Archaeological Resources**

This EA project may impact archaeological resources and should be screened using the Ministry's [Criteria for Evaluating Archaeological Potential](#) and [Criteria for Evaluating Marine Archaeological Potential](#) to determine if an archaeological assessment is needed. MCM archaeological sites data are available at [archaeology@ontario.ca](mailto:archaeology@ontario.ca).

If the EA project area exhibits archaeological potential, then an archaeological assessment (AA) shall be undertaken by an archaeologist licenced under the *Ontario Heritage Act (OHA)*, who is responsible for submitting the report directly to MCM for review.

## **Built Heritage Resources and Cultural Heritage Landscapes**

The Ministry's [Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes](#) should be completed to help determine whether this EA project may impact built heritage resources and/or cultural heritage landscapes.

If there is potential for built heritage resources and/or cultural heritage landscapes on the property or within the project area, a Cultural Heritage Evaluation Report (CHER) should be undertaken by a qualified person to determine the cultural heritage value or interest of the property (or project area). If the property (or project area) is determined to be of cultural heritage value or interest and alterations or development is proposed, MCM recommends that a Heritage Impact Assessment (HIA), prepared by a qualified consultant, be completed to assess potential project impacts. Please send the HIA to MCM (and Municipality of Arran-Elderslie) for review and comment and make it available to local organizations or individuals who have expressed interest in review.

Community input should be sought to identify locally recognized and potential cultural heritage resources. Sources include, but are not limited to, municipal heritage committees, historical societies and other local heritage organizations.

Cultural heritage resources are often of critical importance to Indigenous communities. Indigenous communities may have knowledge that can contribute to the identification of cultural heritage resources, and we suggest that any engagement with Indigenous communities includes a discussion about known or potential cultural heritage resources that are of value to them.

## **Environmental Assessment Reporting**

All technical cultural heritage studies and their recommendations are to be addressed and incorporated into EA projects. Please advise MCM whether any technical cultural heritage studies will be completed for this EA project and provide them to MCM before issuing a Notice of Completion or commencing any work on the site. If screening has identified no known or potential cultural heritage resources, or no impacts to these resources, please include the completed checklists and supporting documentation in the EA report or file.

Please remove Lorraine Dooley from circulation and continue to send any notices, report and/or documentation to both Karla Barboza and myself.

- Karla Barboza, Team Lead - Heritage | Heritage Planning Unit (Citizenship and Multiculturalism) | 416-660-1027 | [karla.barboza@ontario.ca](mailto:karla.barboza@ontario.ca)
- Joseph Harvey, Heritage Planner | Heritage Planning Unit (Citizenship and Multiculturalism) | 613-242-3743 | [joseph.harvey@ontario.ca](mailto:joseph.harvey@ontario.ca)

Thank you for consulting MCM on this project and please continue to do so throughout the EA process. If you have any questions or require clarification, please do not hesitate to contact me.

Joseph Harvey  
Heritage Planner  
[joseph.harvey@Ontario.ca](mailto:joseph.harvey@Ontario.ca)

Copied to: Nancy Cluthé, Senior Administrative Assistant, GSS Engineering Consultants Ltd.

It is the sole responsibility of proponents to ensure that any information and documentation submitted as part of their EA report or file is accurate. The Ministry of Citizenship and Multiculturalism (MCM) makes no representation or warranty as to the completeness, accuracy or quality of the any checklists, reports or supporting documentation submitted as part of the EA process, and in no way shall MCM be liable for any harm, damages, costs, expenses, losses, claims or actions that may result if any checklists, reports or supporting documents are discovered to be inaccurate, incomplete, misleading or fraudulent.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the *Ontario Heritage Act*.

The *Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33* requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with *Ontario Regulation 30/11* the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (at [archaeology@ontario.ca](mailto:archaeology@ontario.ca)) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the *Ontario Heritage Act*.

**From:** [Harvey, Joseph \(MCM\)](#)  
**To:** [Jacob Bartley](#)  
**Cc:** [Nancy Cluthe](#)  
**Subject:** FW: File 0022161: Letter of Initiation for a Schedule B EA for Chesley Water Works (23-012)  
**Date:** Monday, August 12, 2024 2:51:25 PM  
**Attachments:** [image002.jpg](#)  
[image001.png](#)  
[MCM Heritage Planning Branch - Karla Barboza.pdf](#)  
[2024-08-12\\_ChelsevWW-MCM-Ltr.pdf](#)

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Jacob Bartley,

Please find attached our initial advice on the above referenced undertaking.

Please remove Lorraine Dooley from circulation and continue to send any notices, report and/or documentation to both Karla Barboza and myself.

Please do not hesitate to contact me with any questions or concerns.

Regards,

Joseph Harvey

Heritage Planner | Heritage Branch | Citizenship Inclusion and Heritage Division  
Ministry of Citizenship and Multiculturalism | Ontario Public Service  
613.242.3743 | [Joseph.Harvey@ontario.ca](mailto:Joseph.Harvey@ontario.ca)



---

**From:** Nancy Cluthe <[nancycluthe@gssengineering.ca](mailto:nancycluthe@gssengineering.ca)>  
**Sent:** Friday, July 19, 2024 9:48 AM  
**To:** Barboza, Karla (She/Her) (MCM) <[Karla.Barboza@ontario.ca](mailto:Karla.Barboza@ontario.ca)>  
**Subject:** Letter of Initiation for a Schedule B EA for Chesley Water Works (23-012)

**CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.**

Good Morning,

In regard to the above Schedule B EA, please find attached our Letter of Initiation.

If you have any questions, please contact Jacob Bartley at [jacobbartley@gssengineering.ca](mailto:jacobbartley@gssengineering.ca).

Thank you



*Nancy Cluthé* | Senior Administrative Assistant

GSS Engineering Consultants Ltd.

Suite 230, 945 3<sup>rd</sup> Avenue East  
Owen Sound, ON N4K 2K8

Tel: 519-372-4828 Ext. 101 | [nancycluthe@gssengineering.ca](mailto:nancycluthe@gssengineering.ca)

<http://www.gssengineering.ca/>

**From:** [Gordon, Alison \(MNR\)](#)  
**To:** [Jacob Bartley](#)  
**Subject:** RE: Letter of Initiation for a Schedule B EA for Chesley Water Works (July 22, 2024)  
**Date:** Monday, July 22, 2024 10:12:45 AM  
**Attachments:** [image002.jpg](#)  
[image003.jpg](#)  
[MNRF Owen Sound Office - John Almond.pdf](#)  
[2024-07-22 MNRF Response.pdf](#)

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Good morning Jacob,

I hope you're well. The Ministry of Natural Resources (MNR) received your Letter of Initiation on July 18, 2024. Thank you for circulating this to our office. Please note that we have not completed a screening of natural heritage or other resource values for the project at this time. This response, however, does provide information (attached) to guide you in identifying and assessing natural features and resources as required by applicable policies and legislation, as well as engaging with the Ministry for advice as needed.

Thank you,

Alison Gordon (She/Her)

Regional Planner | Land Use Planning and Strategic Issues Section

Ministry of Natural Resources | Ontario Public Service

(289)380-0540 | [alison.gordon@ontario.ca](mailto:alison.gordon@ontario.ca)



*Taking pride in strengthening Ontario, its places and its people*

As part of providing [accessible customer service](#), please let me know if you have any accommodation needs or require communication supports or alternate formats.

---

**From:** Nancy Cluthe <[nancycluthe@gssengineering.ca](mailto:nancycluthe@gssengineering.ca)>  
**Sent:** Friday, July 19, 2024 9:23 AM  
**To:** Almond, John (MNRF) <[john.almond@ontario.ca](mailto:john.almond@ontario.ca)>  
**Subject:** Letter of Initiation for a Schedule B EA for Chesley Water Works (23-012)

**CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.**

Good Morning,

In regard to the above Schedule B EA, please find attached our Letter of Initiation.

If you have any questions, please contact Jacob Bartley at [jacobbartley@gssengineering.ca](mailto:jacobbartley@gssengineering.ca).

Thank you



*Nancy Cluthé* | Senior Administrative Assistant

GSS Engineering Consultants Ltd.

Suite 230, 945 3<sup>rd</sup> Avenue East

Owen Sound, ON N4K 2K8

Tel: 519-372-4828 Ext. 101 | [nancycluthe@gssengineering.ca](mailto:nancycluthe@gssengineering.ca)

<http://www.gssengineering.ca/>

**From:** [Rakesh Sharma](#)  
**To:** [Nancy Cluthe](#)  
**Subject:** FW: Notice of Commencement for Water Supply Well Class EA for Durham Water Works  
**Date:** Monday, October 28, 2024 10:01:15 AM  
**Attachments:** [PastedGraphic-5.png](#)

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file



**Rakesh Sharma, MSc Eng, P.Eng. Consulting Engineer,**

Secretary –Treasurer

GSS Engineering Consultants Ltd.

Suite 230-945 3<sup>rd</sup> Ave E, Owen Sound, ON N4K 2K8

Tel: 519-372-4828 Ext. 105 | [rakeshsharma@gssengineering.ca](mailto:rakeshsharma@gssengineering.ca)

---

**From:** Coordinator LRC HSM <hsmrcc@bmts.com>  
**Sent:** October 28, 2024 9:59 AM  
**To:** Rakesh Sharma <rakeshsharma@gssengineering.ca>  
**Subject:** Notice of Commencement for Water Supply Well Class EA for Durham Water Works

**Municipality of West Grey**

**RE: Water Supply Well Class EA - Durham Water Works**

The Historic Saugeen Métis (HSM) Lands, Waters and Consultation Department has reviewed the notice of commencement for the Durham Water Works New Water Supply Well Class EA. HSM has no concerns or comments at this time, but wishes to remain informed and would greatly appreciate updates as the project progresses.

Thank you for the opportunity to engage and review this project.

Regards,

Georgia Lumley

Coordinator, Lands, Waters & Consultation  
Historic Saugeen Métis  
204 High Street  
Southampton, ON  
[saugeenmetis.com](http://saugeenmetis.com)  
519.483.4000



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**From:** [Harvey, Joseph \(MCM\)](#)  
**To:** [Jacob Bartley](#)  
**Cc:** [Nancy Cluthe](#)  
**Subject:** FW: File 0022161: Letter of Initiation for a Schedule B EA for Chesley Water Works (23-012)  
**Date:** Monday, August 12, 2024 2:51:25 PM  
**Attachments:** [image002.jpg](#)  
[image001.png](#)  
[MCM Heritage Planning Branch - Karla Barboza.pdf](#)  
[2024-08-12\\_ChelsevWW-MCM-Ltr.pdf](#)

---

Jacob Bartley,

Please find attached our initial advice on the above referenced undertaking.

Please remove Lorraine Dooley from circulation and continue to send any notices, report and/or documentation to both Karla Barboza and myself.

Please do not hesitate to contact me with any questions or concerns.

Regards,

Joseph Harvey

Heritage Planner | Heritage Branch | Citizenship Inclusion and Heritage Division  
Ministry of Citizenship and Multiculturalism | Ontario Public Service  
613.242.3743 | [Joseph.Harvey@ontario.ca](mailto:Joseph.Harvey@ontario.ca)



---

**From:** Nancy Cluthe <[nancycluthe@gssengineering.ca](mailto:nancycluthe@gssengineering.ca)>  
**Sent:** Friday, July 19, 2024 9:48 AM  
**To:** Barboza, Karla (She/Her) (MCM) <[Karla.Barboza@ontario.ca](mailto:Karla.Barboza@ontario.ca)>  
**Subject:** Letter of Initiation for a Schedule B EA for Chesley Water Works (23-012)

**CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.**

Good Morning,

In regard to the above Schedule B EA, please find attached our Letter of Initiation.

If you have any questions, please contact Jacob Bartley at [jacobbartley@gssengineering.ca](mailto:jacobbartley@gssengineering.ca).

Thank you



*Nancy Cluthé* | Senior Administrative Assistant

GSS Engineering Consultants Ltd.

Suite 230, 945 3<sup>rd</sup> Avenue East  
Owen Sound, ON N4K 2K8

Tel: 519-372-4828 Ext. 101 | [nancycluthe@gssengineering.ca](mailto:nancycluthe@gssengineering.ca)

<http://www.gssengineering.ca/>

**From:** [Michael Oberle](#)  
**To:** [Jacob Bartley](#)  
**Cc:** [Rakesh Sharma](#); [Scott McLeod](#); [Moiken Penner - Arran-Elderslie](#)  
**Subject:** SVCA comment-Schedule B EA for Chesley Water Works (23-012)  
**Date:** Tuesday, July 30, 2024 12:46:46 PM  
**Attachments:** [image002.jpg](#)  
[01a. SVCA - Erik Downing.pdf](#)  
[SVCA Map - Municipality of Arran-Elderslie.pdf](#)

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Good afternoon Jacob Bartley,

This email is further to the email of below regarding the above referenced proposal (attached).

The proposed work area will include lands that are not within the SVCA's Approximate Screening Area/SVCA Approximate Regulated Area, based on SVCA mapping (attached for reference), therefore review/permit of the proposal is not required. The SVCA environmental planning and regulations department does not have the mandate or ability to provide meaningful assistance to this proposal for lands that are beyond/outside of the SVCA Approximate Screening Area. We thank you for circulating the SVCA on this proposal, and the SVCA looks forward to continue working together with our municipal partners, where required.

I trust that the above is helpful at this time. Any questions, please do not hesitate to ask.

As per SVCA practice I am copying on this email, the Arran-Elderslie Manager of Public Works, and the SVCA director who represents Arran-Elderslie.

Kind regards,

Mike

Michael Oberle

*Environmental Planning Coordinator*

Cell: 519-373-4175

1078 Bruce Road 12, PO Box 150, Formosa, ON N0G 1W0

[m.oberle@svca.on.ca](mailto:m.oberle@svca.on.ca)

[www.saugeenconservation.ca](http://www.saugeenconservation.ca)

---

**From:** Nancy Cluthe <[nancycluthe@gssengineering.ca](mailto:nancycluthe@gssengineering.ca)>  
**Sent:** Friday, July 19, 2024 11:39 AM  
**To:** Erik Downing <[E.Downing@SVCA.ON.CA](mailto:E.Downing@SVCA.ON.CA)>  
**Subject:** Letter of Initiation for a Schedule B EA for Chesley Water Works (23-012)

**\*\*[CAUTION]: This email originated from outside of the organization. Do not click on links or open attachments unless you recognize the sender and know the content is safe.**

Good Morning,

In regard to the above Schedule B EA, please find attached our Letter of Initiation.

If you have any questions, please contact Jacob Bartley at [jacobbartley@gssengineering.ca](mailto:jacobbartley@gssengineering.ca).

Thank you



*Nancy Cluthé* | Senior Administrative Assistant

GSS Engineering Consultants Ltd.

Suite 230, 945 3<sup>rd</sup> Avenue East

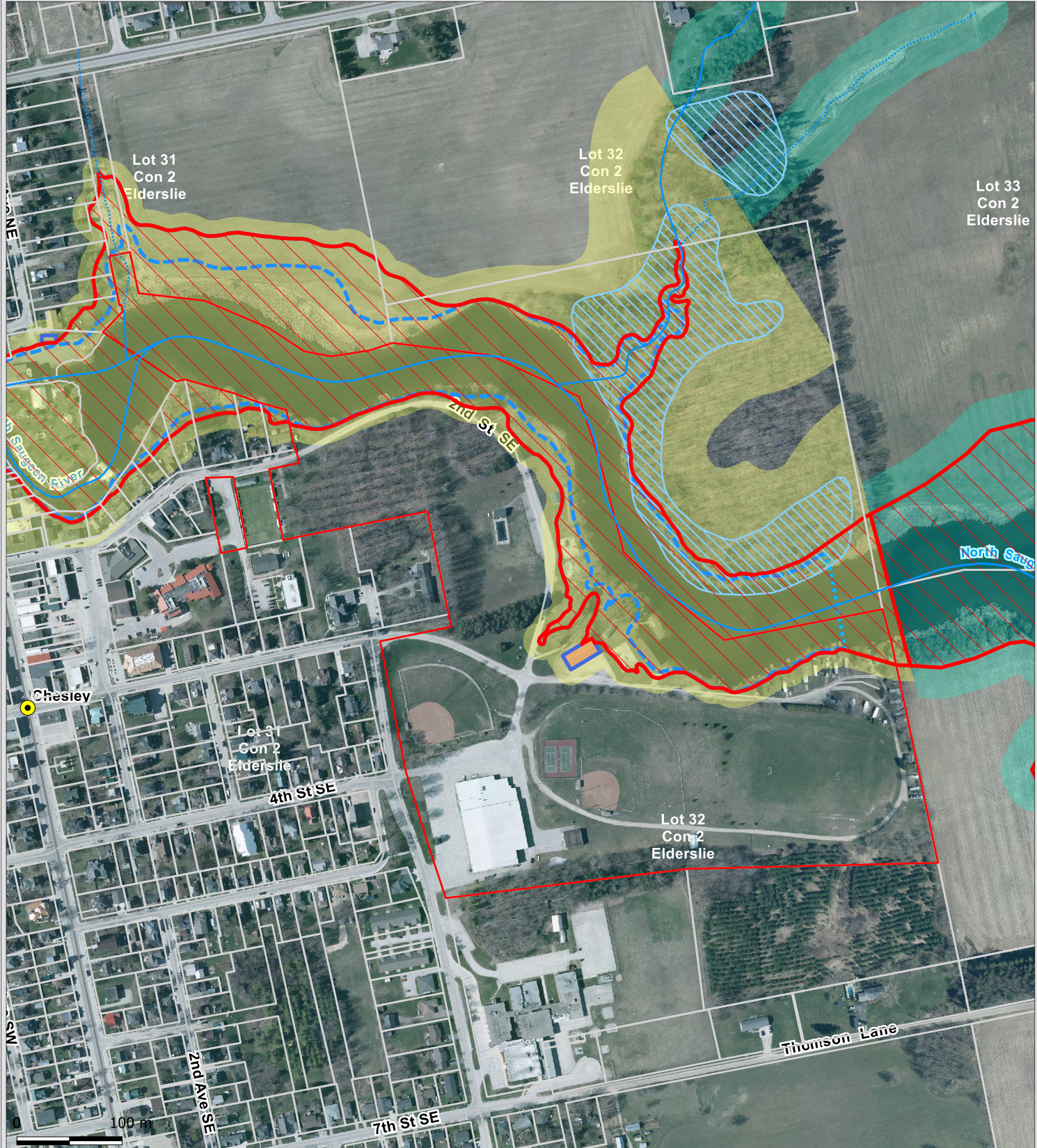
Owen Sound, ON N4K 2K8

Tel: 519-372-4828 Ext. 101 | [nancycluthe@gssengineering.ca](mailto:nancycluthe@gssengineering.ca)

<http://www.gssengineering.ca/>

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The included mapping has been compiled from various sources and is for information purposes only. Saugeen Valley Conservation Authority (SVCA) is not responsible for, and cannot guarantee, the accuracy of all the information contained within the map.

Produced by SVCA and includes material ©[2024] of the Queen's Printer for Ontario. All Rights Reserved. [2024] May Not be Reproduced without Permission. THIS IS NOT A PLAN OF SURVEY.

This mapping contains products of the South Western Ontario Orthophotography Project 2020 (SWOOP2020). These images were taken in 2020 at 16cm resolution by Mapcon Mapping Ltd. They are the property of Saugeen Valley Conservation Authority ©2024.








July 26, 2024



UTM Zone 17N, NAD 83

1:5000

### Legend

-  100 Year Flood line
-  Watercourse
-  Regulatory Flood Line
-  Unevaluated Wetland
-  Hazard Lands
-  SVCA Regulated Area
-  SVCA Screening Area

Municipality of Arran-Elderslie  
 129 4th Avenue SE  
 Roll No. 410339000205200  
 Park PT Lot A to Pt Lot D, Plan 149  
 Geographic Town of Chelsey  
 Municipality of Arran-Elderslie



**APPENDIX D**

**First Nation Consultation Documentation**



July 18, 2024

23-012

Great Lakes Métis Council

Attention: Peter Coture: President

Dear Mr. Coture,

We are writing this letter to inform you that the Municipality of Arran-Elderslie initiated a Schedule B Class Environmental Assessment for the review of alternatives to replace the existing municipal well CPW #1 in Chesley with a new well.

The Chesley water works draws water from three wells (CPW 1-3). CPW #1 supplies 1,800 m<sup>3</sup>/day. The location of all three (3) wells is indicated in the attached Figure #1.

CPW #1 is experiencing significant iron bacteria formation that has clogged the well screen. This has led to a significant reduction in water supply from CPW #1. Methods to control the iron bacteria have become expensive and largely ineffective. The loss of water supply from CPW #1 results in loss of redundancy for the Chesley water works and is a serious issue. The Municipality therefore must proceed to reinstate the water supply lost from CPW #1.

As part of the EA process the following alternatives were explored:

- Alternative 1 Do Nothing;
- Alternative 2 Decommission CPW 1;
- Alternative 3 Increased Water Supply from Existing Well(s);
- Alternative 4 Construct New Groundwater Supply Source in Currently Utilized Aquifer(s) and Continue to Use Existing Water Treatment Plant. **PREFERRED**;
- Alternative 5 Construct New Water Supply Well in a Different Aquifer;

- Alternative 6 Construct New Surface Water Supply Source Intake and Associated Treatment Plant; and
- Alternative 7 Treated Water Supply from Another Water Work in Arran-Elderslie or Adjacent Municipality.

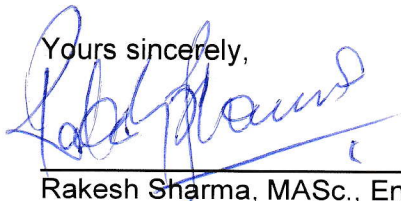
Alternative 4 is the preferred alternative as determined from two public consultations. This alternative is to construct a new ground water supply source well (CPW #4).

In 2022 a test well (TW #1) was drilled east of CPW #3, however, it was considered unsuitable due to low capacity. A second test well (TW #2) was drilled between CPW #3 and TW #1 which will draw water from the same aquifer as CPW #3. It has been determined to be a suitable location for a new municipal well. Therefore, construction of a new well (CPW #4) at the location of TW #2 is the preferred alternative. After the construction of CPW #4 in place of TW #2, CPW #1 shall be decommissioned after a PTTW and approval from MECP's Approval Branch is obtained.

It may be noted that per investigations completed to date, the new well shall potentially impact a few nearby private wells where well pumps shall have to be lowered to deeper depth. Those well owners have been contacted by Arran-Elderslie, and their wells shall be improved at municipal expense.

By way of this letter, on behalf of the Municipality, we request you to inform us if your office has any concerns or requirements that must be addressed through the EA process for construction of a new water supply well to replace CPW #1 for the Chesley water works.

Yours sincerely,

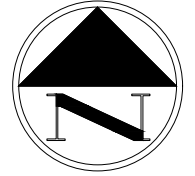
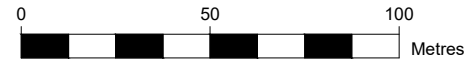
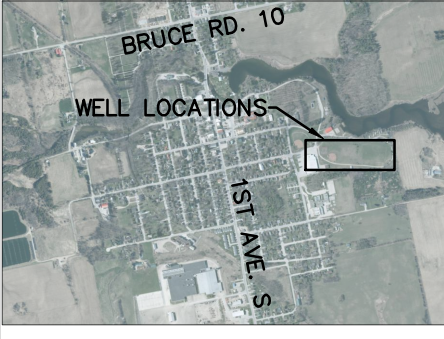


Rakesh Sharma, MAsc., Eng., P. Eng.,  
GSS Engineering Consultants Ltd.

RS/JB

cc Scott McLeod, Manager of Public Works, Arran-Elderslie

**KEY PLAN**



July 16, 2024 10:37:46 AM



**MUNICIPAL WELL LOCATION PLAN  
COMMUNITY OF CHESLEY  
MUNICIPALITY OF ARRAN-ELDERSLIE**

Design:	WBB
Drawn:	TDL
APPROVED:	WBB
Date:	JAN. 2024
Scale:	1:2000
FILE No.	23-012
FIG. No.	1



REFERENCES:  
BRUCE COUNTY PARCEL MAPPING  
BRUCE COUNTY MAPS IMAGE (2020)

**From:** [Coordinator LRC HSM](#)  
**To:** [Jacob Bartley](#)  
**Subject:** Notice of Environmental Assessment Chesley Well Environmental Assessment  
**Date:** Monday, July 22, 2024 3:11:28 PM  
**Attachments:** [PastedGraphic-5.png](#)

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## Municipality of Arran-Elderslie

The Historic Saugeen Métis (HSM) Lands, Waters and Consultation Department has received your notice of Class B Environmental Assessment for the municipal well in Chesley. HSM does not have any comments or concerns at this time but wishes to remain informed with any updates as the assessment progresses.

Thank you for the opportunity to engage and consult on this project.

Regards,

Georgia Lumley

Coordinator, Lands, Waters & Consultation  
Historic Saugeen Métis  
204 High Street  
Southampton, ON  
[saugeenmetis.com](http://saugeenmetis.com)  
519.483.4000



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July 18, 2024

23-012

Historic Saugeen Métis  
204 High St.  
Southampton, Ontario  
N0H 2L0

To Whom it May Concern,

We are writing this letter to inform you that the Municipality of Arran-Elderslie initiated a Schedule B Class Environmental Assessment for the review of alternatives to replace the existing municipal well CPW #1 in Chesley with a new well.

The Chesley water works draws water from three wells (CPW 1-3). CPW #1 supplies 1,800 m<sup>3</sup>/day. The location of all three (3) wells is indicated in the attached Figure #1.

CPW #1 is experiencing significant iron bacteria formation that has clogged the well screen. This has led to a significant reduction in water supply from CPW #1. Methods to control the iron bacteria have become expensive and largely ineffective. The loss of water supply from CPW #1 results in loss of redundancy for the Chesley water works and is a serious issue. The Municipality therefore must proceed to reinstate the water supply lost from CPW #1.

As part of the EA process the following alternatives were explored:

- Alternative 1 Do Nothing;
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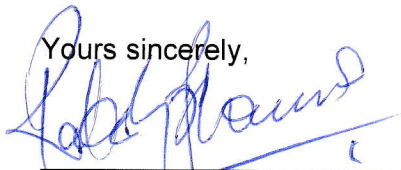
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It may be noted that per investigations completed to date, the new well shall potentially impact a few nearby private wells where well pumps shall have to be lowered to deeper depth. Those well owners have been contacted by Arran-Elderslie, and their wells shall be improved at municipal expense.

By way of this letter, on behalf of the Municipality, we request you to inform us if your office has any concerns or requirements that must be addressed through the EA process for construction of a new water supply well to replace CPW #1 for the Chesley water works.

Yours sincerely,

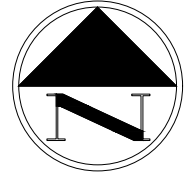
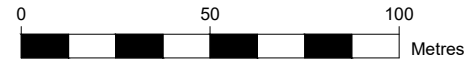
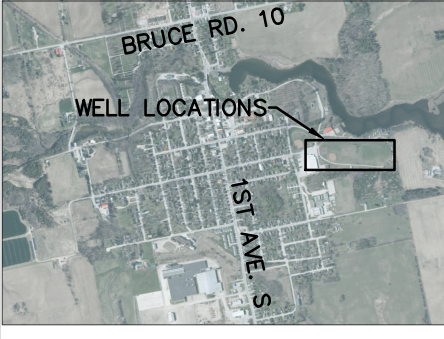


Rakesh Sharma, MAsc., Eng., P. Eng.,  
GSS Engineering Consultants Ltd.

RS/JB

cc Scott McLeod, Manager of Public Works, Arran-Elderslie

**KEY PLAN**



July 16, 2024 10:37:46 AM



**MUNICIPAL WELL LOCATION PLAN  
COMMUNITY OF CHESLEY  
MUNICIPALITY OF ARRAN-ELDERSLIE**

Design:	WBB
Drawn:	TDL
APPROVED:	WBB
Date:	JAN. 2024
Scale:	1:2000
FILE No.	23-012
FIG. No.	1



REFERENCES:  
BRUCE COUNTY PARCEL MAPPING  
BRUCE COUNTY MAPS IMAGE (2020)



July 18, 2024

23-012

Saugeen Ojibway Nation – Environment Office  
10129 Highway 6  
Georgian Bluffs, Ontario  
N0H 2T0

Attention: Charlene Leonard; Resources & Infrastructure Manager

Dear Ms. Leonard,

We are writing this letter to inform you that the Municipality of Arran-Elderslie initiated a Schedule B Class Environmental Assessment for the review of alternatives to replace the existing municipal well CPW #1 in Chesley with a new well.

The Chesley water works draws water from three wells (CPW 1-3). CPW #1 supplies 1,800 m<sup>3</sup>/day. The location of all three (3) wells is indicated in the attached Figure #1.

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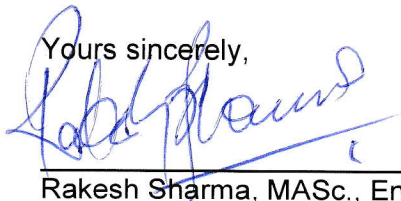
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Yours sincerely,

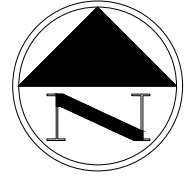
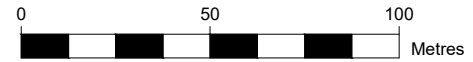
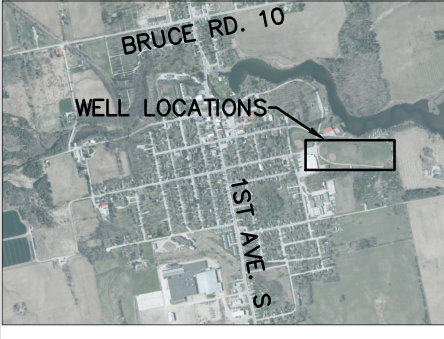


Rakesh Sharma, MAsc., Eng., P. Eng.,  
GSS Engineering Consultants Ltd.

RS/JB

cc Scott McLeod, Manager of Public Works, Arran-Elderslie

**KEY PLAN**



July 16, 2024 10:37:46 AM



**MUNICIPAL WELL LOCATION PLAN  
COMMUNITY OF CHESLEY  
MUNICIPALITY OF ARRAN-ELDERSLIE**

Design:	WBB
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FILE No.	23-012
FIG. No.	1



REFERENCES:  
BRUCE COUNTY PARCEL MAPPING  
BRUCE COUNTY MAPS IMAGE (2020)

**APPENDIX E**

**Correspondence with Private Well Owners  
Impacted by New Well**



**The Municipality of Arran-Elderslie**  
1925 Bruce Road 10, PO Box 70, Chesley, ON N0G 1L0  
Phone 519.363.3039 Fax 519.363.2203  
info@arran-elderslie.ca

May 8, 2024

**HAND DELIVERED**

TIBBO JAYNE

THOMSON JACKIE

**Property Address:** 224 Thomson Lane, Chesley

**Re: Construction of New Municipal Well CPW #4 in County Park, Chesley**

Dear Resident,

You may be aware that Arran-Elderslie commenced an Environmental Assessment (EA) Study process in June 2023 aimed at replacing the existing municipal well CPW #1 with a new well. CPW #1 is an  $\pm$  80-year-old well experiencing significant iron bacteria fouling which has become expensive to control, and without much success.

In an effort to replace the well and associated water supply, several alternatives were considered and investigated. As part of the EA process, a test well TW2-23 was drilled last year and tested for quality and quantity. During pumping test, it was noted that water withdrawal from a new well at TW2-23 site, will impact some wells water supply, in the long term. In short-term, impact will likely not be noticeable.

Your private well is among the wells that will be impacted. Arran-Elderslie, as responsible municipal government, will implement all remedial measures as needed to ensure that your water supply is not adversely affected.

The remedial measures that may be necessary include:

- Improvement to Well Head, i.e., replace a well pit with Pitless adapter, to prevent accidental contamination of aquifer that supplies water to TW2-23.
- Lower the well pump in the casing to deeper depth, or replace existing pump with a new pump.
- Extension of well casing, at least 400 mm above grade.
- Provision of new well caps
- Any other measures, that may be relevant to an individual situation

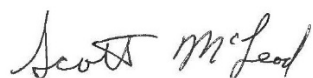
While viewing the above list, note that all specified measures might not be needed at your property. Municipality's representative shall contact you and work with you to address the problem.

On May 2, 2024, a public meeting was held and a detailed presentation was made. A copy of the presentation was posted on the municipal website. No comments have been received on the Preliminary Recommended Alternative. In the next few weeks, the municipality shall formally adopt the Preliminary Recommended Alternative and proceed to implement it by constructing a new well CPW #4 at the location of TW2-23. Additional pump test and water level monitoring (in private wells also) shall be completed. At that time, we will undertake additional investigations at your property and confirm the remedial measures needed and how they will be implemented.

The implementation methods for remedial measure shall be reviewed at a council meeting to determine the best course to execute them and you will be informed accordingly.

If you have any questions or require any additional information, please feel free to contact this office.

Yours sincerely,

A handwritten signature in cursive script that reads "Scott McLeod".

Scott McLeod  
Manager of Public Works



**The Municipality of Arran-Elderslie**  
1925 Bruce Road 10, PO Box 70, Chesley, ON N0G 1L0  
Phone 519.363.3039 Fax 519.363.2203  
info@arran-elderslie.ca

May 8, 2024

**HAND DELIVERED**

THOMSON JEFFREY

**Property Address:** 256 Thomson Lane, Chesley

**Re: Construction of New Municipal Well CPW #4 in County Park, Chesley**

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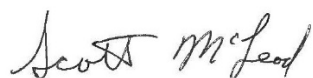
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Yours sincerely,

A handwritten signature in cursive script that reads "Scott McLeod".

Scott McLeod  
Manager of Public Works



**The Municipality of Arran-Elderslie**  
1925 Bruce Road 10, PO Box 70, Chesley, ON N0G 1L0  
Phone 519.363.3039 Fax 519.363.2203  
info@arran-elderslie.ca

May 8, 2024

**HAND DELIVERED**

JACQUES MATTHIEU CHARLES

JACQUES SARA LYNN

**Property Address:** 1689 Bruce Road 10, Chesley

**Re: Construction of New Municipal Well CPW #4 in County Park,  
Chesley**

Dear Resident,

You may be aware that Arran-Elderslie commenced an Environmental Assessment (EA) Study process in June 2023 aimed at replacing the existing municipal well CPW #1 with a new well. CPW #1 is an  $\pm$  80-year-old well experiencing significant iron bacteria fouling which has become expensive to control, and without much success.

In an effort to replace the well and associated water supply, several alternatives were considered and investigated. As part of the EA process, a test well TW2-23 was drilled last year and tested for quality and quantity. During pumping test, it was noted that water withdrawal from a new well at TW2-23 site, will impact some wells water supply, in the long term. In short-term, impact will likely not be noticeable.

Your private well is among the wells that will be impacted. Arran-Elderslie, as responsible municipal government, will implement all remedial measures as needed to ensure that your water supply is not adversely affected.

The remedial measures that may be necessary include:

- Improvement to Well Head, i.e., replace a well pit with Pitless adapter, to prevent accidental contamination of aquifer that supplies water to TW2-23.
- Lower the well pump in the casing to deeper depth, or replace existing pump with a new pump.
- Extension of well casing, at least 400 mm above grade.
- Provision of new well caps
- Any other measures, that may be relevant to an individual situation

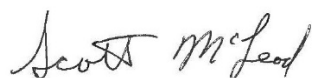
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May 8, 2024

**HAND DELIVERED**

KUEPFER KEITH

KUEPFER KATHRYN MAE

**Property Address:** 1720 Bruce Road 10, Chesley

**Re: Construction of New Municipal Well CPW #4 in County Park,  
Chesley**

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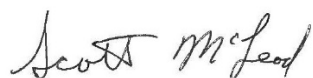
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May 8, 2024

**HAND DELIVERED**

BLACK THOMAS MACDONALD  
BLACK LORRAINE GLADYS

**Property Address:** 1735 Bruce Road 10, Chesley

**Re: Construction of New Municipal Well CPW #4 in County Park,  
Chesley**

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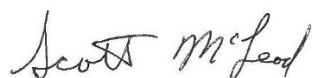
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May 8, 2024

**HAND DELIVERED**

RHODY NATHAN JOHN  
RHODY CHRISTINA LYNN

**Property Address:** 1747 Bruce Road 10, Chesley

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Chesley**

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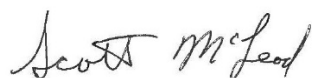
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May 8, 2024

**HAND DELIVERED**

P.K.W. FARMS LTD.

**Property Address:** 1748 Bruce Road 10, Chesley

**Re: Construction of New Municipal Well CPW #4 in County Park,  
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May 8, 2024

**HAND DELIVERED**

METZGER HOLDINGS CORPORATION

**Property Address:** 1773 Bruce Road 10, Chesley

**Re: Construction of New Municipal Well CPW #4 in County Park, Chesley**

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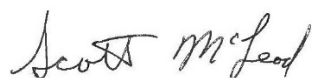
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**APPENDIX F**

**PowerPoint Presentation for Phase 2 Public Meeting**



# Public Meeting

## Class Environmental Assessment Study for Construction of a New Well CPW #4

Thursday, May 2, 2024  
Chesley Community Centre  
7:00 p.m.

23-012





# Welcome

---



- ❖ Please sign on sheet provided
- ❖ Please take a comment sheet and provide your comments





## Study Purpose/Problem Statement

- Existing well CPW #1 got fouled by Iron Bacteria. Well age is 80yrs approx.
- Iron Bacteria formed a clogging film over the well screen
- Remedial measures adopted were expensive and ineffective
- There was a significant reduction in Water Supply from CPW #1.
- Available water supply capacity reduction is a serious matter
- Losing redundancy in raw water supply source is also serious issue.
- Arran-Elderslie must take all steps necessary to reinstate from CPW #1



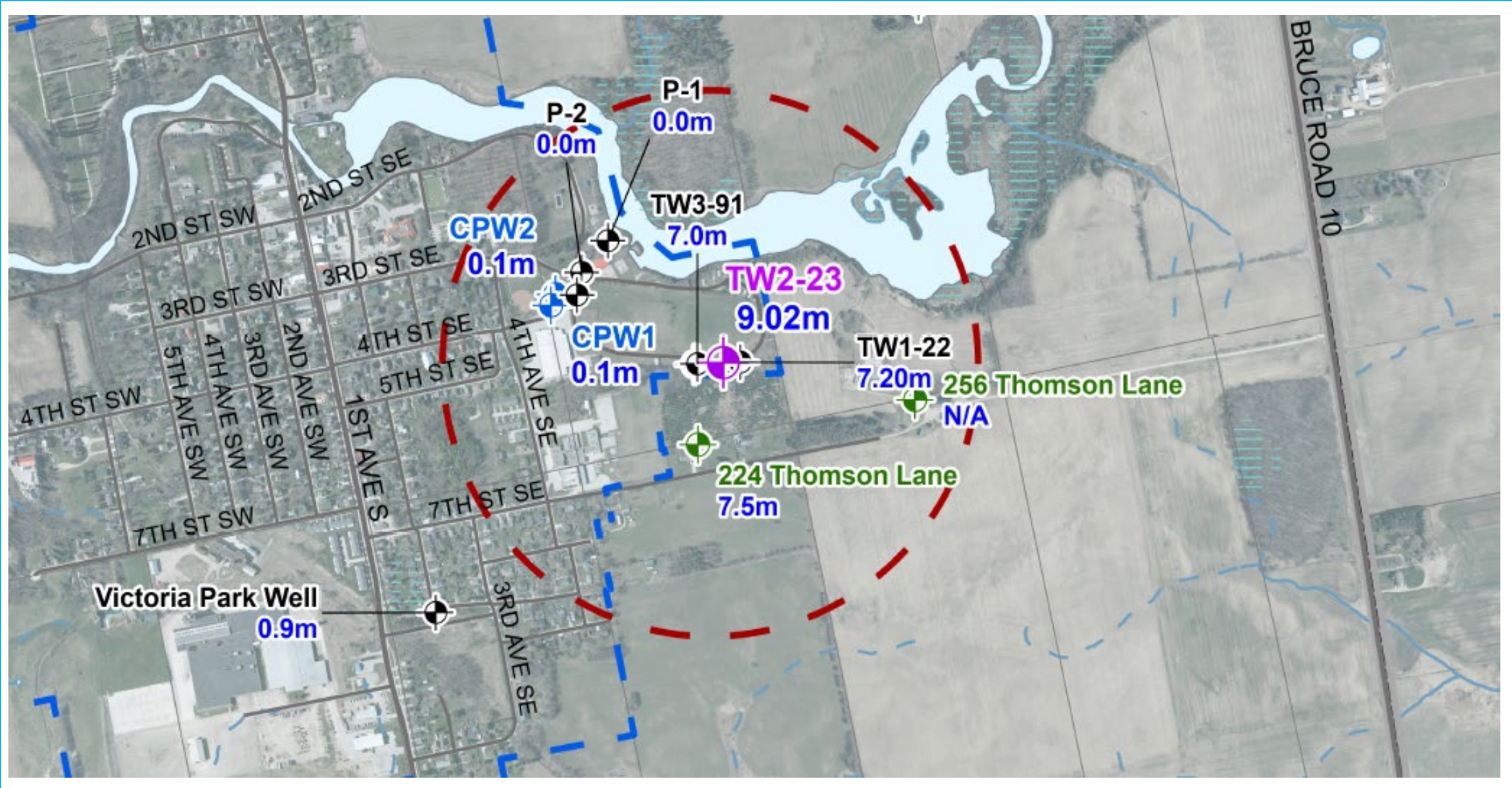




# Rated Capacity Utilization

Year	Max Day (m <sup>3</sup> /day)	% Rated Capacity
2023	1,490	<b>26.8%</b>
2022	1,687	<b>30.30%</b>
2021	1,512	<b>27.2%</b>
2020	1,820	<b>32.7%</b>
2019	1,765	<b>31.7%</b>
2018	1,778	<b>32.0%</b>
2017	1,436	<b>25.8%</b>
2016	1,905	<b>34.2%</b>
2015	1,851	<b>33.3%</b>
2014	1,862	<b>33.5%</b>
2013	1,720	<b>30.9%</b>
2012	1,939	<b>34.8%</b>
<b>Rated Capacity of Water Works</b>		<b>5,564m<sup>3</sup>/day</b>

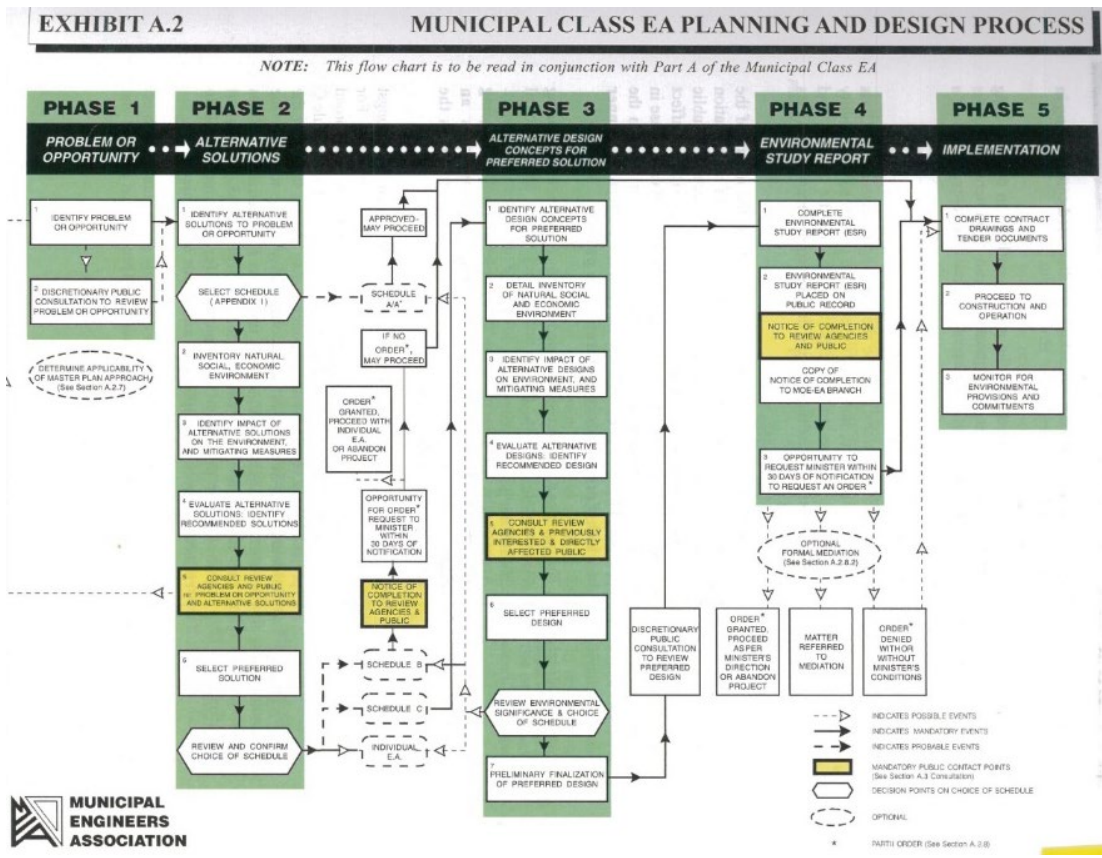






# Overview of Class EA Study Process

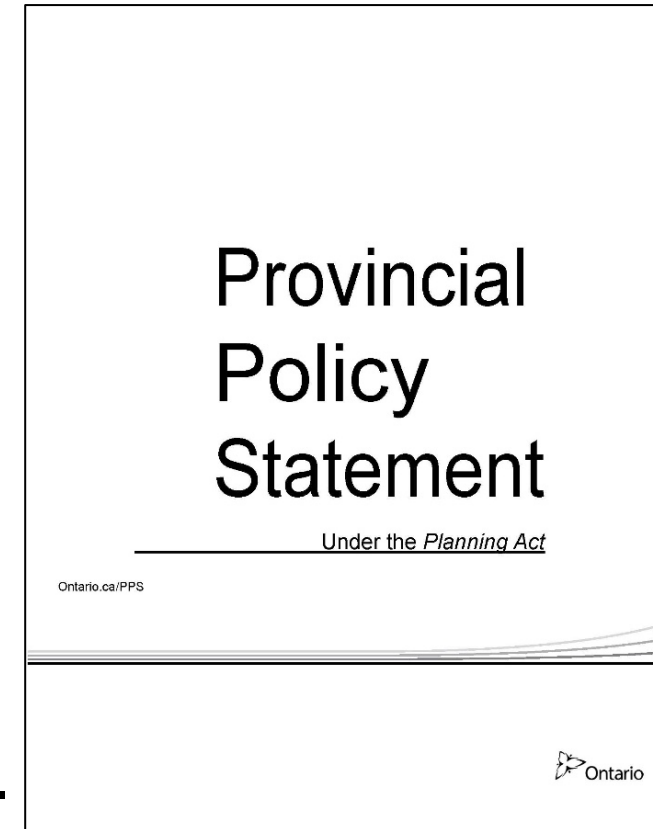
- Address water treatment capacity requirements by:
  - Completing a systematic evaluation of alternatives
  - Considering advantages and disadvantages including net environmental effects; and
  - Providing clear documentation that describes decision making.
- Following Schedule B
- Requires completion of Phase 1 & 2; and
- Will file ESR for 30-day review





# Population Forecast Planning Considerations

- Need to comply with Provincial Policy Statement;
- Ensure Sustainable growth within Arran-Elderslie Settlement Area; (Chesley & Paisley)
- Typically, 10 – 20 year projection/planning period.
- ONLY looking to replace capacity lost from CPW #1.





# Description of Alternative Solutions

## Alternative # 1: Do Nothing

- No improvements or changes would be undertaken to address problem statement;
- Will reduce Rated Capacity of Water Works;
- This alternative represents what would likely occur if none of the alternative solutions were implemented
- Irresponsible to “Do Nothing”





## Alternative # 2 - Decommission CPW 1 Well

- Decommission and remove well CPW 1 from water works
- Obtain amendment to Licence and Permit from MECP
- Will reduce rated capacity of Water Works eventually
- May limit residential growth in Paisley & Chesley
- Does not address problem
- Irresponsible to reduce water supply capacity of existing water system





## Alternative #3 - Increased Water Supply from Existing Well(s)

- Hydrogeological investigation to determine if existing well(s) CPW #2 and #3 can supply more water
- If yes, obtain permits and approvals from MECP
- Undertake Schedule B EA
- Hydrogeological analysis indicates a decline in efficiency of CPW #2





## Alternative #3 - Additional Supply from Existing Wells CPW #2 & #3.....continued

- The permitted capacity of CPW #2 is available on short-term basis only
- Additional long-term capacity for CPW #2 beyond current permitted capacity is unlikely
- Need for rehabilitation of CPW #2 to restore capacity
- A pump test after rehabilitation is needed to confirm rehabilitation success





## Alternative #4 - Construct New Groundwater Supply Source in Currently Utilized Aquifer(s) and continue to Use Existing Water Treatment Plant

- Drill new water well for additional water supply
- Preferably near existing plant building's and in currently used aquifers
- Advantages:
  - Raw water is similar to existing wells
  - Can use existing WTP building and equipment
- Detailed hydrogeological investigation to ensure long-term water supply capabilities
- Undertake EA and obtain new License and Permit from MECP
- Undertake Source Water Protection study as needed
- Connect to existing water treatment plant





## Alternative #5 - Construct New Water Supply Well in a Different Aquifer

- Drill new water well for needed water supply, preferably near existing water treatment plant building location.
- Undertake detailed hydrogeological assessment.
- Undertake EA.
- Obtain PTTW and license & permit from MECP.
- Undertake Source Water Protection study as needed.
- Construct new or upgraded existing water treatment plant equipment and building, as required.
- Procure new land(s) as needed.





## Alternative #5 - Construct New Water Supply Well in a Different Aquifer.....continued

- Risks are associated with new drilled well capability of supplying adequate water quantity, or water quality not complying with ODWS.
- This alternative is the next best solution after a combination for alternatives #3 and #4 and can be pursued if alternatives #3 & #4 fail.



## Alternative #6 - Construct New Surface Water Supply Source Intake and Associated Treatment Plant

- N. Saugeen River is a potential water supply source
- Surface water sources are more prone to contamination and have more variable water quality.
- Suitable location and river water intake needed, after obtaining approvals
- Need raw water pumping station to supply water to treatment plant
- Treatment process shall be more complex and expensive
- Construct new WTP building or expand existing treatment plant building and connect to existing water distribution networks
- Existing plant building shall not have room to accommodate new treatment equipment





## Alternative #6 - Construct New Surface Water Supply Source Intake and Associated Treatment Plant.....continued

- Operators need to remain on guard during period of water quality changes during spring and fall and take timely corrective steps. Highly skilled operation is required.
- Undertake Sch C EA
- Obtain PTTW and also complete Source Water Protection Study
- Capital Project Cost is anticipated to be highest among all alternatives
- Timeline for this alternative is anticipated to be much longer than other viable alternatives





## Alternative #7 - Treated Water Supply from Another Water Work in Arran-Elderslie or Adjacent Municipality

- Will require approval from County and neighbouring municipality that could supply water
- Arran-Elderslie has Tara WW, but with insufficient spare capacity
- Require construction of long watermains, associated booster pumping system and re-chlorination facility(ies)
- Hanover is another water works that may be able to spare supply but is at a significant distance



# Screening of Alternative Solutions

ALTERNATIVE	DECISION	RATIONALE FOR NOT CARRYING FORWARD
1. Do Nothing	✓	Carried forward – must be considered
2. Decommission CPW 1	X	Screened – does not address the problem
3. Increased water supply from existing well(s)	✓	Carried forward in conjunction with Alternative #4
4. Construct new groundwater supply source in currently utilized aquifer and continue to use existing water treatment plant)	✓	Carried forward – feasible alternative
5. Construct new water supply well in a different aquifer and construct new treatment equipment as needed in existing treatment plant building or new building	✓	Carried forward – feasible alternative, and to be pursued only if Alternatives #3 & #4 are unable to address problem definition
6. Construct new surface water supply source intake and associated treatment plant	X	Screened – addresses the problem but time consuming and expensive and with operational challenges
7. Treated water supply from another Water Work in Arran-Elderslie or adjacent municipality	X	Screened – not a feasible alternative





# New Well TW2 - 23/CPW #4

- Construction Program commenced in 2022



- Test Well TW1-22 was drilled and tested in 2022 and considered to be an unsuitable location for a new well due to low capacity
- Test Well TW2-23 was drilled and tested in 2023 and determined as a suitable location for a new well





# New Well TW2 - 23/CPW #4

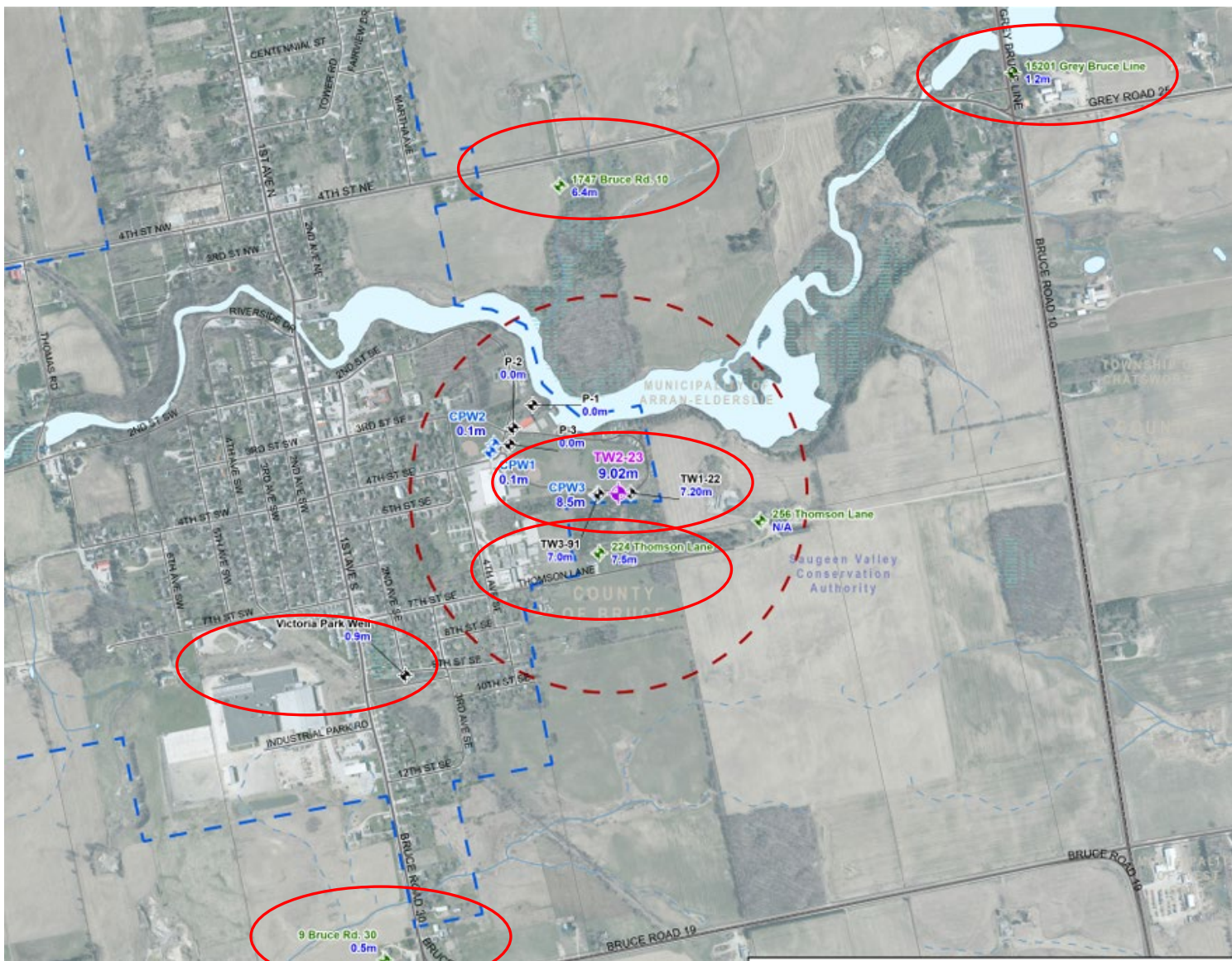
- Construction of Test Wells East of CPW#3

- Test Well TW1-22 was drilled and tested in 2022 and considered to be an unsuitable location for a new well due to low capacity
  - Test Well TW2-23 was drilled and tested in 2023 and determined as a suitable location for a new well





# Existing Well Survey and Monitoring Program





# Long Term Test of TW2 - 23/CPW #4







# Pumping Test of TW2-23 – Water Pumped to storm sewer beside Pumphouse at 22 L/s for 3 days





# Long Term Test of TW2 - 23/CPW #4



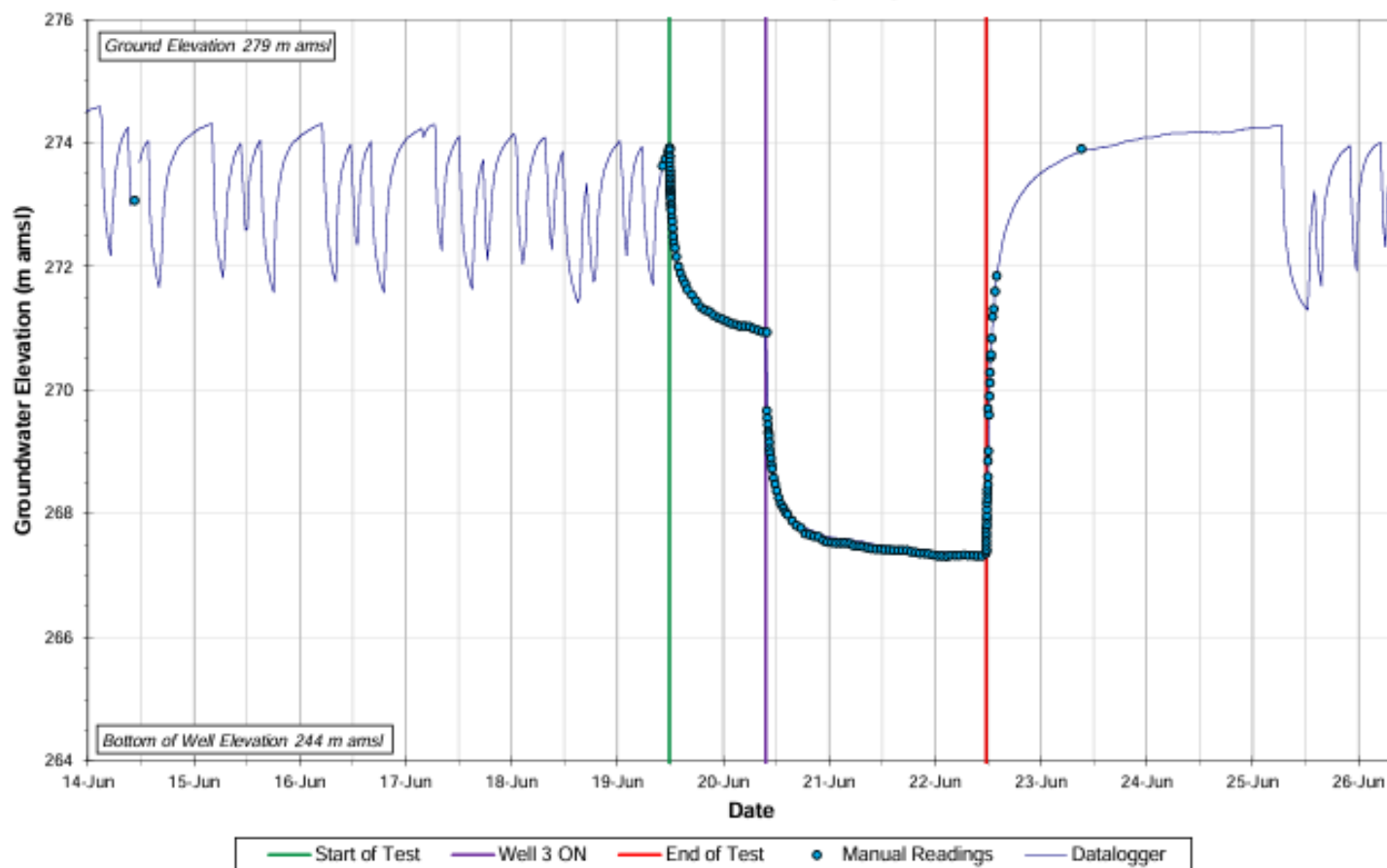
TW2-23 Long Test Test  
Supervised 24 hours per day for 3 days





# Pumping Test of TW2-23 – Site Well - Direct Connection

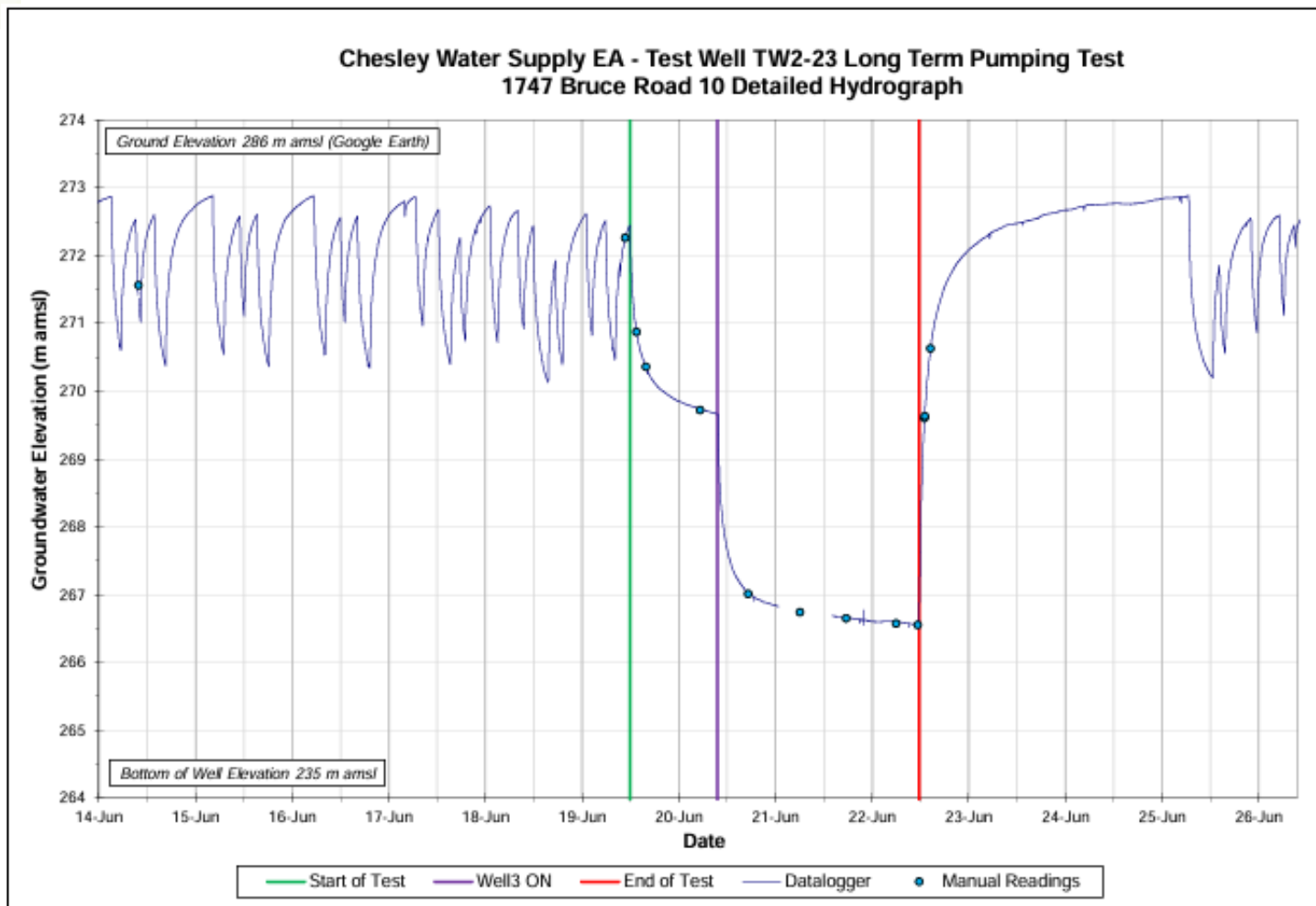
Chesley Water Supply EA - Test Well TW2-23 Long Term Pumping Test  
TW3-91 Detailed Hydrograph





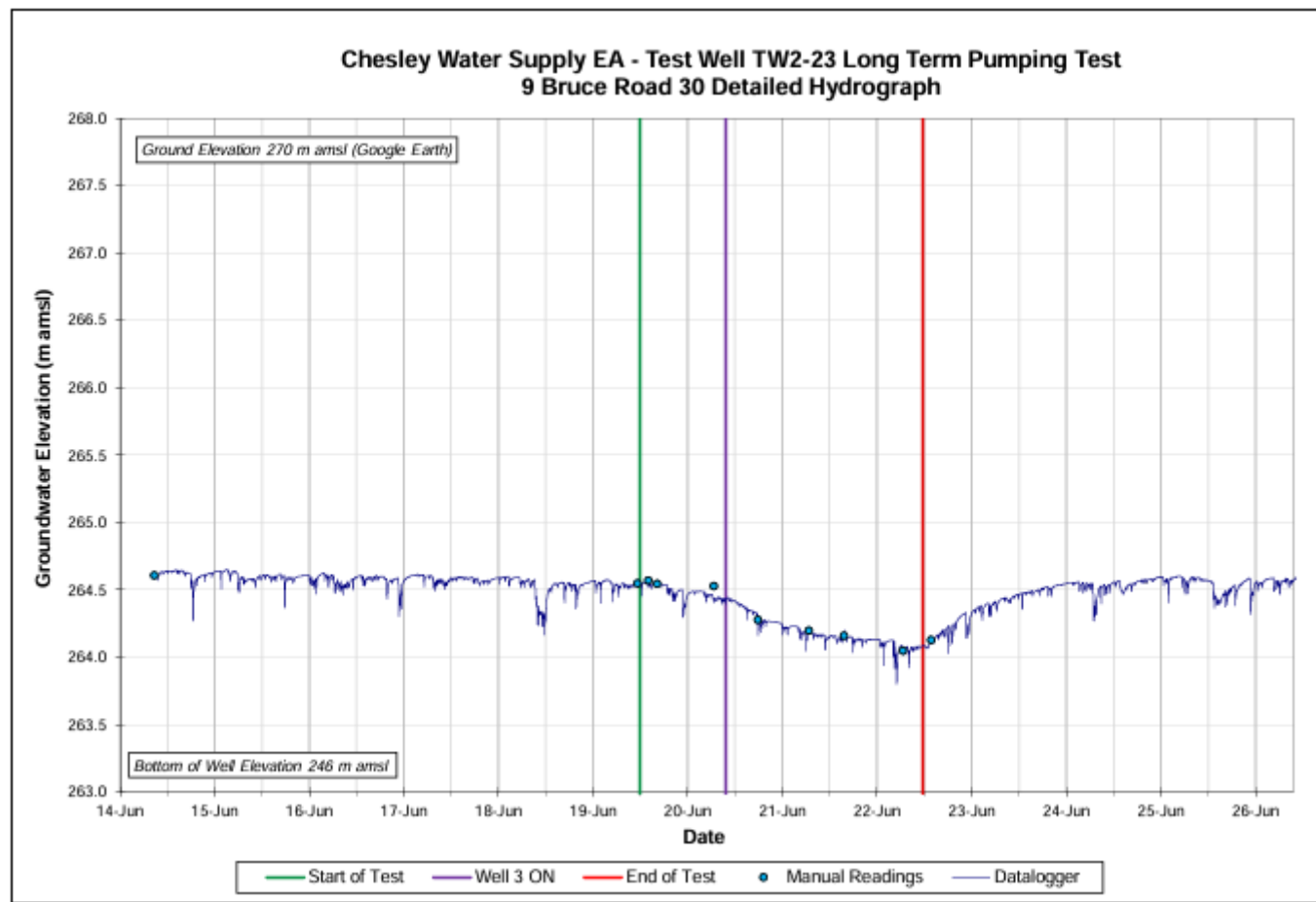
# Pumping Test of TW2-23

## Private Well to the North - Significant Affect





# Pumping Test of TW2-23 – Private Well Slightly Affected





# Recommendations if TW2-23 is selected as the source as part of the Water Supply EA

1. Reconstruct TW2-23 with larger diameter stainless steel casing that is cemented from the surface into the top of the rock.
2. Complete short term testing to confirm TW2-23 test results.
3. Sample for the complete Ontario Drinking Water Standards.
4. Upgrade nearby private wells to maintain water supplies and monitor water levels in a selected well.
5. Apply for an Amended Permit to Take Water and related approvals.





# Private Well Upgrades



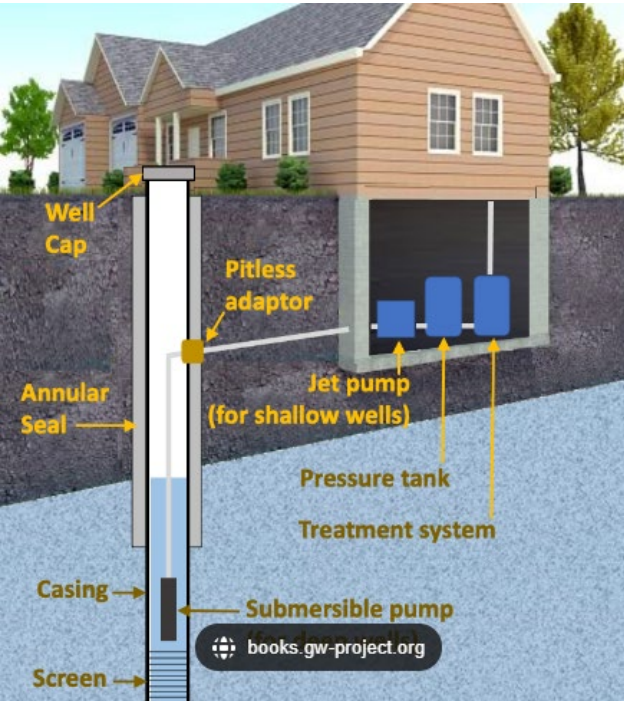
- Eight(8) private wells in the area are and will continue to be affected by pumping from Chesley Wells CPW#2, CPW#3 and the CPW#4
- Survey of pump depths is ongoing





# Aquifer Protection - Private Well Upgrades

Summary of recommended well upgrades to ensure the water supplies are not affected by the Chesley Wells and to protect the aquifer



- 3 Private Wells need to be extended 16 inches above grade
- 4 Private Wells need new well caps
- 2 Pumps need to be lowered to deeper depths in the well
- 4 Pump depths to be confirmed and potentially lowered





# Screening of Alternative Solutions

ALTERNATIVE	DECISION	RATIONALE FOR NOT CARRYING FORWARD
1. Do Nothing	✓	Carried forward – must be considered
2. Decommission CPW 1	X	Screened – does not address the problem
3. Increased water supply from existing well(s)	X	Screened- existing wells unable to solve the problem
4. Construct new groundwater supply source in currently utilized aquifer and continue to use existing water treatment plant)	✓	Carried forward – feasible alternative
5. Construct new water supply well in a different aquifer and construct new treatment equipment as needed in existing treatment plant building or new building	X	Screened – Alternatives #4 can address problem definition cost effectively. This alternative no longer needed.
6. Construct new surface water supply source intake and associated treatment plant	X	Screened – addresses the problem but time consuming and expensive and with operational challenges
7. Treated water supply from another Water Work in Arran-Elderslie or adjacent municipality	X	Screened – not a feasible alternative





## Evaluation Criteria: Categories for Evaluating Short List

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- Public Health and Safety
- Natural Environment
- Social/Cultural/Legal Jurisdictional
- Economic/Financial
- Technical





## Evaluation Criteria.....continued

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- Public Health and Safety
  - Ability to comply with Provincial ODWQS

### Natural Environment

- Potential effects to natural environment (air, land, water)
- Environmentally Sensitive Area
- ANSI (Areas of Natural & Scientific Interest)
- Woodlots





## Evaluation Criteria: Natural Environment...continued

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- Creeks
- Wetlands
- Wildlife and birds
- Vegetation
- Air Quality
- Groundwater





## Evaluation Criteria.....continued

### Social/Cultural/Legal Jurisdictional

- **Conformity** with local, county and Provincial policies and guidelines:
  - Official Plan
  - Zoning by laws
  - Provincial Policy Statement
  - **MECP Policies**
- **Potential Private Wells Interference**





## Evaluation Criteria: Social/Culture/Legal Jurisdictional...continued

- **Compatibility** with Cultural/Heritage/Agricultural resources:
  - Land use
  - **Community issues: Private wells interference**
  - Odours
  - Noise
  - Vibrations





## Evaluation Criteria-Social/Cultural/Legal Jurisdictional..... continued

- **Compatibility** with Cultural/Heritage/Agricultural resources: (cont.)
  - Heritage Sites
  - Agricultural Lands
  - Archaeology, Native land claims and Indian Affairs
  - Aesthetics
  - Property requirements including negotiations and agreements





## Evaluation Criteria....continued

### Technical

- Capability, Reliability, Flexibility
- Utilization of existing infrastructure
- Operating complexity
- Construction issues-on and off site
- Approvals, Implementation requirements





## Evaluation Criteria....continued

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### Economic/Financial

- Capital cost
- Annual O & M costs





# Short-Listed Evaluation Criteria

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## Applicable Evaluation Criteria are:



- Public Health & Safety
- Natural Environment
- Social
- Technical



# Evaluation of Alternative Solutions

Shortlist Alternative Solution	Public Health & Safety	Natural Environment	Evaluation Summary
	Ability to comply with ODWO, License & Permits	Potential Effects for Natural Environment:	<p>Least Preferred ●</p> <p>↓</p> <p>Most Preferred ●</p>
<p><u>Alternative 1</u> Do Nothing</p>	<p>✱ Non-Compliance if Growth Continues</p>	<p>✱ None</p>	<p>●</p>
<p><u>Alternative 4</u> Construct New Groundwater Supply in Currently Utilized Aquifer(s) &amp; continued to Use Existing Water Treatment Plant</p>	<p>✱ Can comply with Ontario Drinking Water Standards</p>	<p>✱ Impact on Aquifer, <u>but</u> per Provincial Approval</p>	<p>●</p>









# Evaluation of Alternative Solutions (cont.)

Shortlist Alternative Solution	Social/Cultural/Legal Jurisdictional		Evaluation Summary
	Conformity with local, county, provincial planning policies & guidelines	Potential land use impacts & cultural/heritage/agricultural resources	
<u>Alternative 1</u>  Do Nothing	<b>Incompatible with:</b> ✖ Municipal goals and ✖ Provincial policies		
<u>Alternative 4</u> Construct New Groundwater Supply in Currently Utilized Aquifer(s) & continued to Use Existing Water Treatment Plant	<b>Will Meet:</b> ✖ Provincial Policies ✖ MECP License & Permit	✖ Private wells interference	

## Evaluation of Alternative Solutions (cont.)

Shortlist Alternative Solution	Technical			Evaluation Summary
	Capability, Reliability, flexibility	Implementation & Operability	Construction Issues & Approvals	
<u>Alternative 1</u>  Do Nothing	<ul style="list-style-type: none"> <li>✖ Cannot meet capacity requirements</li> </ul>	<ul style="list-style-type: none"> <li>✖ None</li> </ul>	<ul style="list-style-type: none"> <li>✖ No construction impact</li> </ul>	●
<u>Alternative 4</u> Construct New Groundwater Supply in Currently Utilized Aquifer(s) & continued to Use Existing Water Treatment Plant	<ul style="list-style-type: none"> <li>✖ Will meet capacity requirements</li> <li>✖ Higher level of redundancy</li> </ul>	<ul style="list-style-type: none"> <li>✖ Utilizes existing infrastructure</li> <li>✖ Plant operation will not change</li> </ul>	<ul style="list-style-type: none"> <li>✖ Construction impact limited to site</li> <li>✖ Some traffic impact</li> <li>✖ Construction impact minimal (with proper mitigation measures)</li> <li>✖ Approvals under AE control</li> </ul>	●

# Evaluation of Alternative Solutions (cont.)

Shortlist Alternative Solutions	Public Health & Safety and Natural Environment	Social/Cultural Legal Jurisdictional	Technical	Overall
Alt # 1				
Alt # 4				



## PRELIMINARY RECOMMENDED ALTERNATIVE

### Alternative 4:

- Construct New Well CPW #4 at the location of TW2 – 23 and confirm it can produce 34 L/sec (450 igpm) which matches CPW #3 supply





Thank You  
Comment Sheets  
Questions?????

