

REPORT TO COUNTY COUNCIL

Tavistock New Well Class Environmental Assessment Study – Notice of Completion

To: Warden and Members of County Council

From: Acting Director of Public Works

RECOMMENDATIONS

1. That County Council authorize Public Works staff to proceed with the preferred alternative solution which includes the preferred well location at Test Well 3 (TW3) and the preferred design Concept 6a, two-stage pumping with on-ground storage, iron and manganese filtration, and split-stream IX treatment for the Tavistock New Well Municipal Class Environmental Assessment Study (Class EA) as summarized in Report PW 2025-02;
2. And further, that County Council authorize Public Works staff to issue a Notice of Completion and post the Schedule C Environmental Study Report for the new Well supply in the Township of East Zorra-Tavistock in the public record for 30 days in accordance with the requirements of the Municipal Class EA process.

REPORT HIGHLIGHTS

- The purpose of this report is to obtain Council approval of the preferred alternative solution for the Tavistock New Well Municipal Class EA Study to improve the security and supply of drinking water for the community and to obtain Council approval to issue the Notice of Completion which triggers the mandatory 30-day public review period and posting the Schedule C Environmental Study Report (ESR) for the new Well supply in the public record.
- The recommended solution includes the negotiated transfer of property from the Township of East Zorra-Tavistock to Oxford County during the detailed design phase of the project for TW3 location.

IMPLEMENTATION POINTS

Following Council's adoption of this report, a Notice of Study Completion will be published in the local newspapers and on the County website. The Notice will be circulated to groups of interest

(e.g. adjacent property owners, review agencies, Area Municipalities, Councillors, and Indigenous Communities).

The Notice will inform the public and interested parties of completion of the Class EA Study project and the start of the minimum 30-day public review period of the Schedule C Class EA Study ESR. If no Section 16 order requests are received during the 30-day review period, staff shall commence the process of formulating budgetary plans and executing future endeavours, including but not limited to design and construction.

Financial Impact

The fiscal implications associated with the forthcoming project based on preliminary high-level planning estimates, suggest that the anticipated cost for the detailed design and construction is approximately \$6.5 million. These cost estimates are expected to undergo further refinement as the detailed design and planning phase advances.

This project is incorporated in the 2024 Development Charges (DC) Background Study. The estimated expenditures and funding sources for this project are integrated in the 2025 Capital Plan. The anticipated funding sources include development charges, reserve funds, and a debenture issuance on project completion.

Project Number	Description	Amount
960437	Design and Site Development 2025-2026	\$1,536,000
960437	Construction 2027-2028	\$4,752,000

Communications

Consultation with the public, property owners, review agencies and other impacted stakeholders early and often throughout the process is a key component of any Class EA Study. All interested parties were notified and consulted early and often throughout the development and evaluation of alternative solutions to recommend the preferred alternative solution.

The following is a summary of consultation activities:

- A Notice of Study Commencement was issued on February 24, 2022, to agency contacts, organizations, local utility companies and Indigenous Communities who may have been interested in the project.
- A copy of the Notice of Commencement and Notices of both Public Consultation Centers (2) were provided to Area Municipal staff (Township of East Zorra-Tavistock).
- A dedicated project website, regarding the Tavistock New Well Supply Class EA Study, was made available on *Speak Up Oxford!* at <https://speakup.oxfordcounty.ca/new-well-supply-tavistock>.
- Information about the project was shared through social media, traditional news media, online ads, and advertisements in local media.

County staff reviewed and gave careful consideration to all public feedback including comment forms, e-mail and written correspondence. Based on comments received from the Ontario Ministry of Citizenship and Multiculturalism, the study has been updated to include a stage one archaeological and heritage investigation.

Staff will continue the communication efforts during the forthcoming planning, design and construction phases to effectively mitigate any potential impacts associated with the project. Ongoing discussions with the Township of East Zorra-Tavistock will be maintained throughout the project.




Report PW 2025-02 will be circulated to Area Municipalities for information.

2023-2026 STRATEGIC PLAN

Oxford County Council approved the **2023-2026 Strategic Plan** on September 13, 2023. The Plan outlines 39 goals across three strategic pillars that advance Council’s vision of “Working together for a healthy, vibrant, and sustainable future.” These pillars are: (1) *Promoting community vitality*, (2) *Enhancing environmental sustainability*, and (3) *Fostering progressive government*.

The recommendations in this report supports the following strategic goals.

Strategic Plan Pillars and Goals

PILLAR 1	PILLAR 2	PILLAR 3
		
Promoting community vitality	Enhancing environmental sustainability	Fostering progressive government
Goal 1.2 – Sustainable infrastructure and development		Goal 3.1 – Continuous improvement and results-driven solutions Goal 3.2 – Collaborate with our partners and communities

See: [Oxford County 2023-2026 Strategic Plan](#)

DISCUSSION

Background

Oxford County undertook a Municipal Class EA study to identify the most appropriate locations for a new well supply in the Village of Tavistock to improve redundancy of the water supply, support ongoing servicing needs and anticipated community growth to the year 2046 (study area as shown in Figure 1). A key map showing the location of the Study Area in Oxford County is included in Attachment 1.

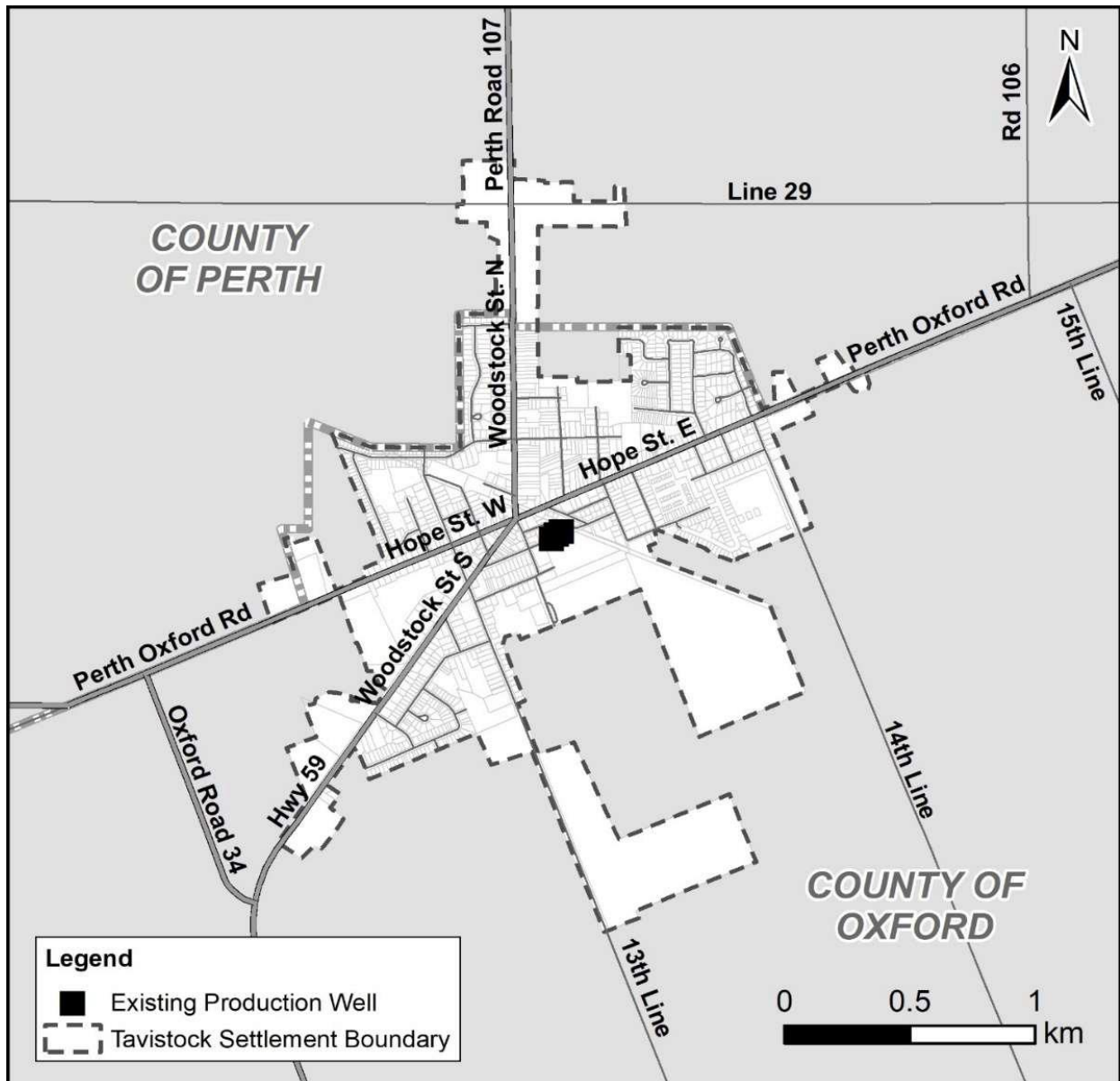


Figure 1: Study Area – Tavistock New Well Supply

Oxford County retained Stantec Inc. to lead the study. A Notice of Commencement letting the public know the study had begun was issued on February 24, 2022.

Over the course of this project, the County consulted with the public, Indigenous Communities, and regulatory agencies. Any potential impacts of the new well supply alternatives on social, heritage/cultural, technical feasibility, County Operations, economic and natural environments were evaluated and assessed during the Class EA Study.

Comments

Currently, the Village of Tavistock receives water services from three wells located within the Centre of the Village, near Queen's Park. Oxford County initiated a Class EA Study outlining potential opportunities for a new well supply to improve the security and supply of drinking water for the community and enhance servicing needs to the year 2046.

The Class EA study was conducted in accordance with the planning and design process for Schedule C projects outlined in the Municipal Engineers Association Municipal Class Environmental Assessment (October 2000, as amended in 2007, 2011, 2015), which is an approved process under Ontario's Environmental Assessment Act. This project was initiated prior to the release of the 2023 Municipal Class EA document in March 2023, which provided updates to the classification of some projects, although the general process is unchanged. As such, the 2015 MEA document continued to govern the EA process for this study.

The study process consisted of all five Phases of the Planning and Design Process. The purpose of this Class EA is to summarize all information collected and alternatives developed and evaluated (including the "do nothing" alternative), in a manner consistent with the Class EA process for Schedule C projects, as indicated in Attachment 2.

The primary objective is to identify the "Preferred Solution" for implementing a new well supply in the Village of Tavistock based on the evaluation of natural, social, and environmental concerns, operations, constructability, and economic analysis, as well as public health and safety concerns. If the recommendations in this report are approved, the project will then proceed to Phase 4, publishing the ESR for public record and posting the Notice of Study Completion and subsequently proceeding to Phase 5 which includes the final design and construction.

Phase 1 – Identification of the problem or opportunity.

The Tavistock New Well Municipal Class EA addresses the following Problem/Opportunity Statement:

The Village of Tavistock currently receives water services from three wells located within the center of the village, near Queen's Park. The County of Oxford is initiating a Municipal Class Environmental Assessment Study to explore potential opportunities for a new well supply to improve the security and supply of drinking water for the community.

Phase 2– Identification and evaluation of alternative solutions and selection of the preferred solution(s).

Currently, all three municipal water supply wells are located within close proximity to each other and receive centralized treatment (Figure 1). The two bedrock wells (Well 2A and 3) cannot operate at the same time due to conditions within their Permit to Take Water, since the current supply wells draw from the same location. Potential disruption to the facility or well field would significantly impact the ability to supply drinking water to the community. In addition to this, additional residential and employment growth is expected to increase the maximum day water demand beyond the current water systems capacity as early as 2036.

As a result, 6 alternatives were considered as solutions in the new well supply class EA Study:

1. Do Nothing: Status quo and involves no changes to the existing well-supply system in Tavistock.
2. Limit Community Growth: Implement municipal policy restrictions to limit growth and new servicing needs.
3. Water Conservation Measures: Implement programs and incentives or other measures to reduce demand.
4. Water Supply from Adjacent System: Construct a water supply connection to another community to provide the required water supply needs.
5. New Well on the Same Site: New well on the existing site in central Tavistock to provide additional water supply.
6. New Well at a Different Location: Advance a new well at a new location to provide water supply in Tavistock.

The evaluation of these options is shown in Figure 2; however, it was noted that water conservation measures alone would not fully satisfy the objectives of the project though should be carried forward in conjunction with any alternative solution as part of the County's overall water supply strategy.

Alternative Solution	Discussion	Recommendation. Carry forward?
Alternative 1 Do Nothing (Status Quo)	<ul style="list-style-type: none"> Does not satisfy the problem/opportunity statement - no change in water supply/ improvements. Lack of system resiliency and potentially higher costs if existing wells cannot operate. 	YES – for comparison purposes
Alternative 2 Limit Community Growth	<ul style="list-style-type: none"> Does not satisfy the problem/opportunity statement - no change in supply or water security. Does not adhere to water infrastructure planning requirements or growth approaches in the Provincial Policy Statement (PPS) or Oxford Official Plan (OP). 	No
Alternative 3 Water Conservation Measures	<ul style="list-style-type: none"> Does not satisfy the problem/opportunity statement – water supply security concerns are not addressed. Does not address long-term needs for additional capacity. Does not adhere to water infrastructure planning requirements or growth approaches in the PPS or Oxford OP. 	YES - part of County's overall water supply strategy
Alternative 4 Water Supply from Adjacent System	<ul style="list-style-type: none"> May have potential to address the problem/opportunity statement if capacity is available in a nearby system. 	YES
Alternative 5 New Well on Same Site	<ul style="list-style-type: none"> Does not address the problem/opportunity statement - water security is not addressed. 	No
Alternative 6 New Well at Different Location	<ul style="list-style-type: none"> May have potential to address the problem/opportunity statement if capacity is available at a new location. 	YES – technical review completed to confirm water quantity and quality is available

Figure 2: Evaluation of alternatives

Alternative 6, a new well at a different location from the existing well sites was identified as the preferential solution when considering the social, cultural, environmental, technical, and financial implications of the solution. The new well at a different location best addresses technical requirements and has lower complexity in constructability and more conservative financial implications than Alternative 4.

Three potential locations for the new well (Figure 3) were further evaluated considering the social, cultural, environmental, technical, and financial implications. Of these, the test well located North of Optimist Park (Site W3) is the preliminary preferred location for a new well. This location provides an adequate footprint for localized water treatment infrastructure and construction and achieves the highest water capacity estimate of the test wells.

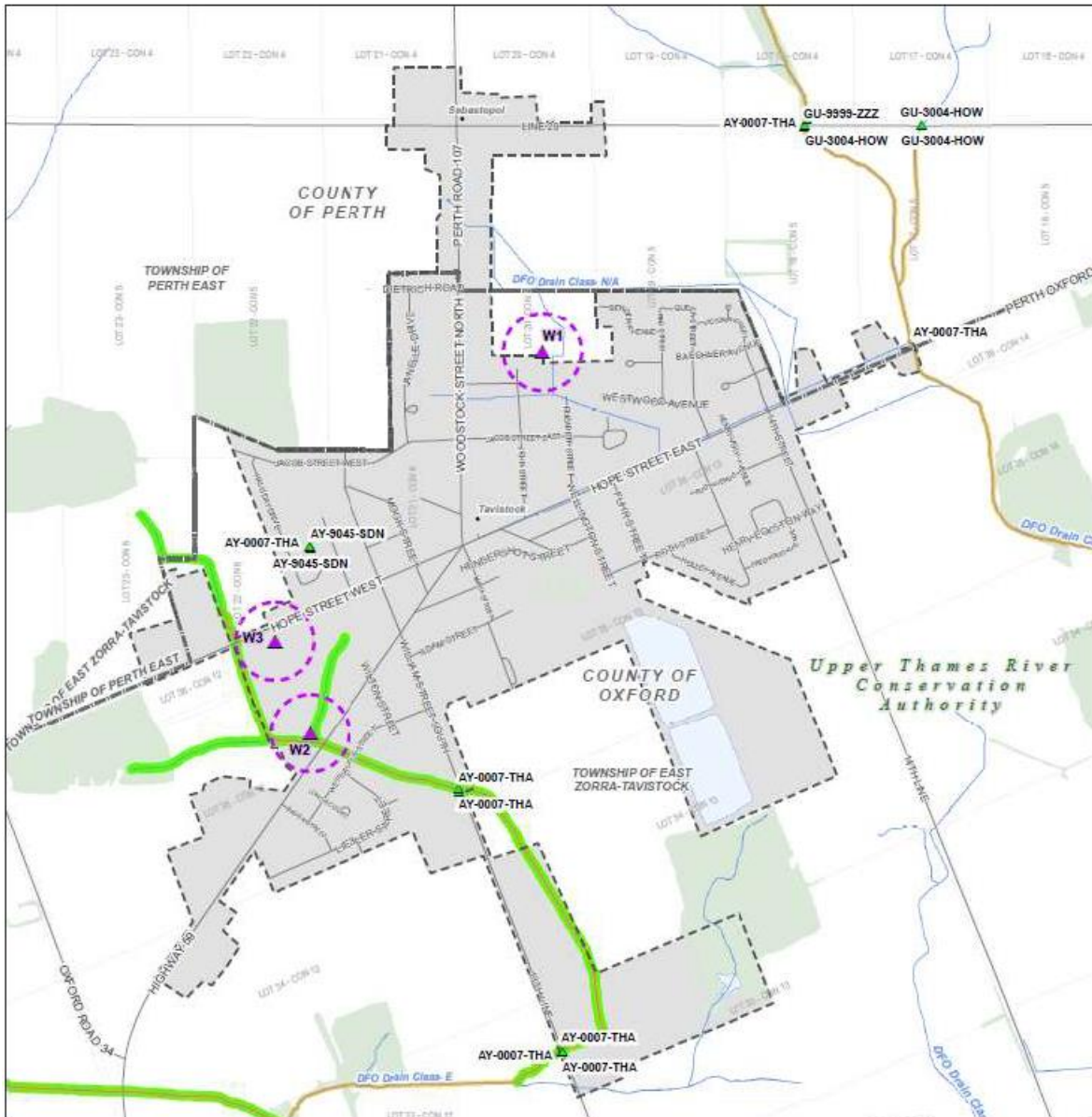


Figure 3: Potential new well locations

Phase 3 – Alternative Design Concepts for the Preferred Solution

Following the 30 day public review period and if no Section 16 filing is received, the next phase of the Class EA Study aims to develop and evaluate alternative design concepts and identify a preferred design. Both decentralized (on-site) and centralized (at existing site) treatment options were considered for the preferred well site. These options were evaluated against social, cultural, natural, and technical environment criteria, and were assessed from a financial perspective.

It was determined that on-site decentralized treatment would be the preferred design option. Decentralized treatment best addresses the need for redundancy in the water supply system,

has lower capital costs, avoids the need for a significant watermain installation, localizes social impacts of construction (noise, traffic, etc), and can be designed with consideration for future treatment requirements. Ongoing water conservation initiatives will be maintained as part of this preferred alternative.

Several water quality parameters were identified that guided the selection of potential treatment options for the new well, including free ammonia, iron, manganese, and strontium. Free ammonia can be removed by the addition of chlorine to the water, which is also required for disinfection purposes. Iron and manganese treatment can be achieved through sequestration or filtration. The removal of strontium, although not presently required by Ontario's Drinking Water Standards, can be achieved through ion exchange (IX) and is a potential water quality enhancement that could be implemented in the future. In addition, the County of Oxford's 2024 Water and Wastewater Master Plan identified existing water storage deficiencies in Tavistock which could be addressed by adding on-ground or below-ground water storage at the new well location.

All treatment and storage needs were considered when developing the six alternative Site Concepts for a decentralized water treatment facility at the preferred well location. The alternatives were evaluated based on their technical and financial feasibility, as well as potential social, cultural, and environmental impacts. Descriptions of each design concept can be found in Attachment 3.

It was determined that Site Concept 6a (Attachment 4) is the preferred alternative design concept. This solution provides the opportunity to: address the current water storage deficit, mitigate pressure fluctuations in the local water distribution system through an on-ground equalization tank, provide adequate footprint for water treatment (filtration for iron removal) and future water quality improvements. While this concept had a higher cost in capital than some of the other design options, it is the solution that best achieves all key servicing objectives.

Phase 4 – Completion of the Environmental Study Report (ESR)

A draft ESR is available on the project webpage and was preliminarily circulated for comment. Comments received from the Ministry of Citizenship and Multiculturalism recommended the completion of a Stage 1 Archeological Assessment and a Cultural Heritage Assessment. Both studies have been completed and incorporated into the updated ESR.

Upon Council approval, a Notice of Study Completion will be advertised letting the public and interested parties know that the complete ESR is available for comment for 30-days. The ESR will be filed with the Ministry of Environment, Conservation, and Parks (MECP). In the event that no outstanding concerns under Section 16 of the Environmental Assessment Act require a higher level of study (i.e., requiring an individual/comprehensive EA approval before being able to proceed), or that conditions be imposed (e.g., require further studies), the project will progress to Phase 5 of the Municipal Class EA.

Phase 5 – Project Implementation, detail design, contractor procurement and construction of works.

Phase 5 is implementation of the Municipal Class EA Study process and involves the completion of detailed design drawings, specifications and tender documents to be provided to

a successful contractor for the construction of the proposed project. During the implementation phase, the County will adhere to mitigation measures and monitoring plans as documented in the ESR to be posted to the project webpage.

CONCLUSION

Staff recommend that Council approve the preferred alternative solution for the Tavistock New Well Municipal Class EA Study to improve the security and supply of drinking water for the community and that the Notice of Study Completion be posted for a 30-day public review period.

SIGNATURES

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Original signed by

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Approved for submission:

Original signed by

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ATTACHMENTS

- Attachment 1: Oxford County Key Map
- Attachment 2: Municipal Class EA Study Process for Schedule C Undertakings
- Attachment 3: Alternative Design Concepts
- Attachment 4: Preferred Alternative 6a Site Design