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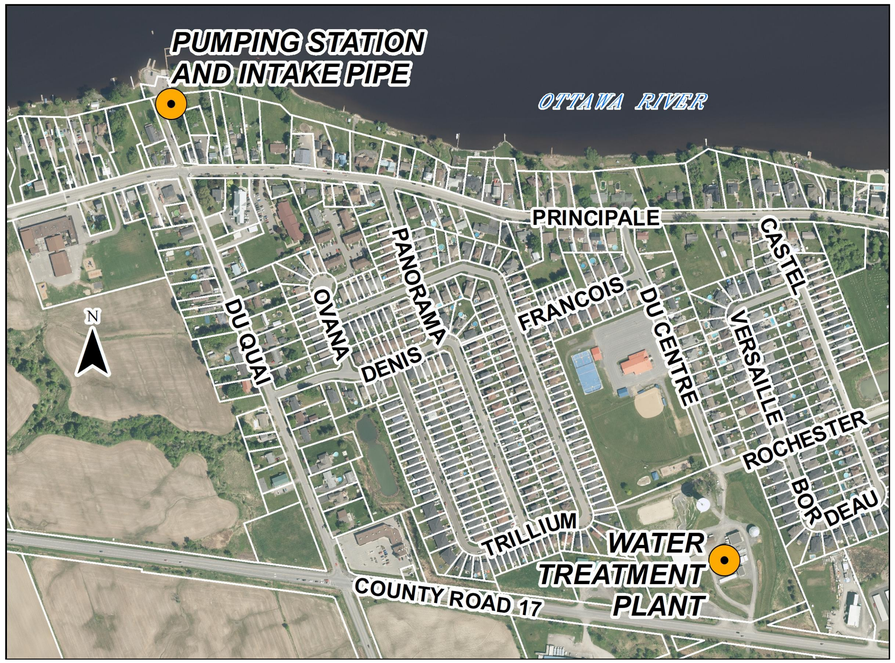
TOWNSHIP OF ALFRED AND PLANTAGENET
WENDOVER WTP, INTAKE, AND LOW-LIFT PUMPING STATION
MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

PUBLIC INFORMATION CENTRE NO. 1
SEPTEMBER 16, 2026

WELCOME!
Please sign-in

Project Overview



Existing System:

Intake Pipe and LLPS:

- 195-meter, 200 mm diameter HDPE pipe
- 3 horizontal centrifugal pumps (2 duty, 1 standby) - rated capacity of 1,806 m^3/d
- Feedermain to WTP rated for 3,960 m^3/day

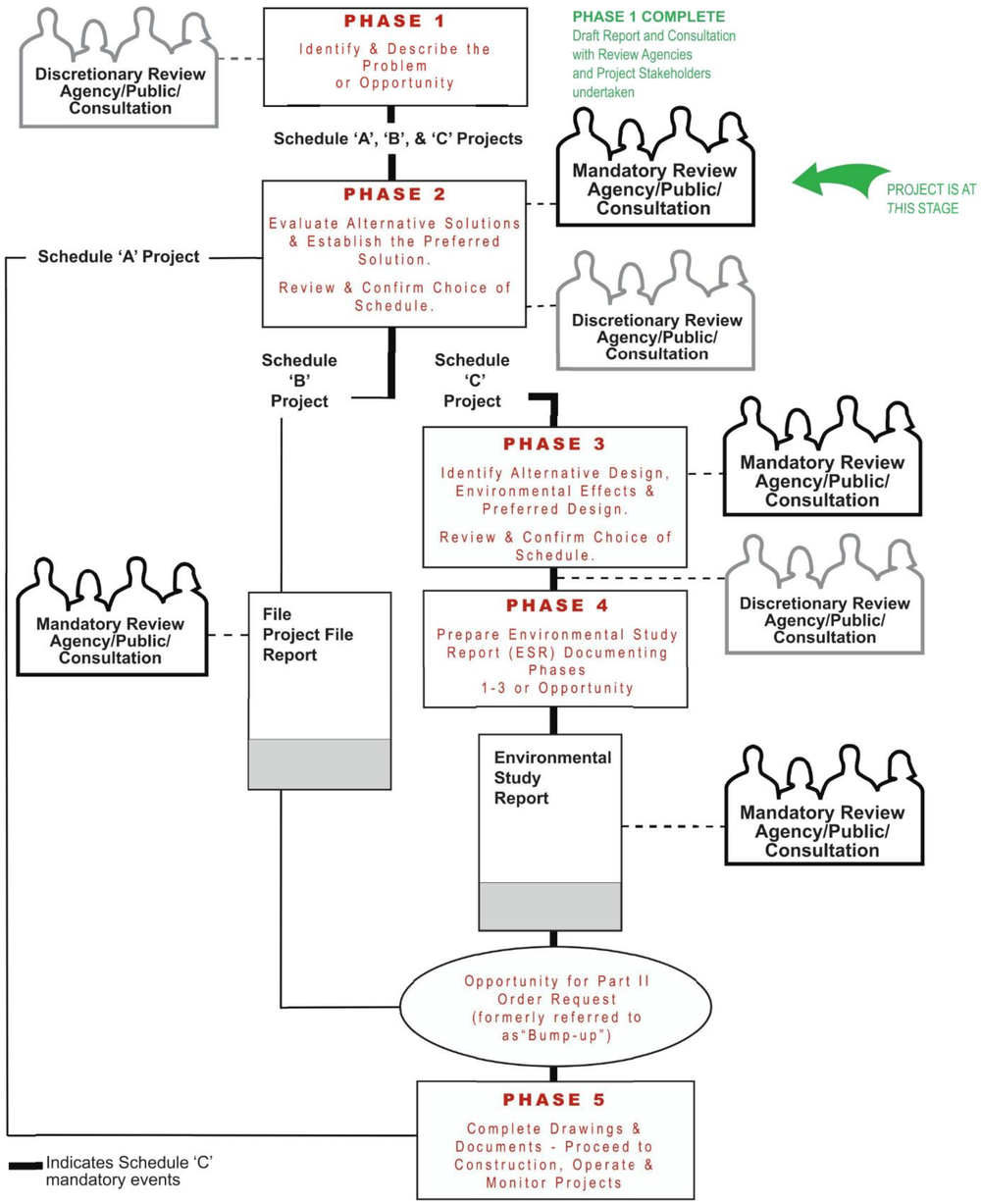
Wendover Water Treatment Plant:

- Packaged system: coagulation, flocculation, sedimentation, filtration
- pH control and chlorination
- On-site storage (200 m^3)
- 2 high lift pumps (1 duty, 1 standby) - (rated capacity of 1,685 m^3/d)
- Residuals management (Backwash and Sludge Holding Tank)

Problem and/or Opportunity Statement:

"A review of the Wendover Water Treatment Plant (WTP) indicates that the system is approaching its rated hydraulic and treatment capacity. Current maximum day demands already utilize a substantial portion of the available raw water intake and treatment capacity, and updated growth projections indicate that near-term demands may approach or exceed the capacity of both the intake, LLPS, and treatment systems within the planning horizon. As a result, the existing water treatment infrastructure may not be sufficient to reliably accommodate forecasted residential, commercial, and industrial development or to support long-term potable water servicing within the Wendover service area. The Township of Alfred and Plantagenet (the Township) is undertaking a Municipal Class Environmental Assessment (Class EA) to assess the adequacy of the existing water treatment, intake, and low-lift pumping systems and to evaluate alternative solutions to address current and future potable water supply requirements."

Overview of the Schedule 'C' Class EA Process



- ✓ Notice of Study Commencement
- ✓ Phase 1 – Identification of Problem or Opportunity
- ✓ Phase 2A – Identification and Screening of Alternative Solutions
- ✓ **Public Information Centre No. 1**
- ❑ Phase 2B – Evaluation of Screened Alternative Solutions, Identification of a Preferred Solution and Review of Class EA Schedule
- ❑ Phase 3A – Identification and Screening of Alternative Designs
- ❑ Public Information Centre No. 2
- ❑ Phase 3B – Evaluation of Screened Alternative Designs, Identification of a Preferred Design and Review of Class EA Schedule
- ❑ Phase 4 – Environmental Study Report
- ❑ Place Project File Report on Public Record for 30-day Review Period
- ❑ Notice of Study Completion

Types of Class EA Applicable to This Project

Intake Pipe and Low-Lift Pumping Station (LLPS):

Schedule 'B' Class Environmental Assessment

- Location: Boat Dock at Du Quai Avenue, Wendover, ON

- ❖ Notice of Study Commencement
- ❖ Phase 1 – Identification of Problem or Opportunity
- ❖ Phase 2A – Identification and Screening of Alternative Solutions
- ❖ **Public Information Centre No. 1**
- ❖ Phase 2B – Evaluation of Screened Alternative Solutions, Identification of a Preferred Solution and Review of Class EA Schedule
- ❖ Phase 3A – Identification and Screening of Alternative Designs
- ❖ Public Information Centre No. 2
- ❖ Phase 3B – Evaluation of Screened Alternative Designs, Identification of a Preferred Design

No Phase 3 or 4

- ❖ Place Project File Report on Public Record for 30-day Review Period
- ❖ Notice of Study Completion

Wendover Water Treatment Plant (WTP):

Schedule 'C' Class Environmental Assessment

- Location: 7200 County Rd 17, Wendover, ON

- ❖ Notice of Study Commencement
- ❖ Phase 1 – Identification of Problem or Opportunity
- ❖ Phase 2A – Identification and Screening of Alternative Solutions
- ❖ **Public Information Centre No. 1**
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Existing Conditions and Performance

WTP

- Conventional surface water plant (2001); one dual-train packaged unit installed, with space reserved for a second.
- Rated for 1,806 m³/day (warm water) and 1,517 m³/day (cold water); currently uses ~55% of capacity at a max day demand of ~945 m³/day.
- Raw water is treatable but variable — stable pH, low alkalinity, seasonal turbidity spikes (up to 35.7 NTU).

Intake Pipe

- 195 m long, 200 mm HDPE pipe from the Ottawa River; originally built in the 1960s, retrofitted with coarse mesh screens in 2011 for debris protection.
- Estimated conveyance capacity of ~1,900 m³/day (22 L/s), projected to be exceeded within the near-term planning horizon.

LLPS

- Three horizontal centrifugal pumps (2 duty, 1 standby), each rated ~10.5 L/s at 21 m TDH; LLPS rated capacity of 1,806 m³/day.
- Pump-limited, not conveyance-limited — the 1,270 m feedermain can convey ~3,960 m³/day, making the LLPS the governing constraint on raw water supply.
- Also projected to exceed capacity in the near term, requiring upgrades or replacement.

Overall

- Projected demand exceeds the capacity of all three components by 2031 (~1,905 m³/day) and more than doubles WTP capacity by 2046 (~3,289 m³/day), driving the need for upgrades.

Key Considerations

- **Existing Treatment Capacity**: The Wendover WTP currently serves approximately 2,500 people and meets the drinking water demand of existing commercial and industrial users within the community. Under current conditions, about 55% of the plant's rated capacity is being used.

- **Projected Increase in Residential Water Demand:** As the Wendover community expands, residential, commercial, and industrial water demands are projected to increase. The residential service population will increase to ~3,100 by 2031; ~4,600 by 2036; and ~5,100 by 2046.

- **Projected Increase in Commercial and Industrial Water Demand:** By 2046, commercial land development is projected to increase by ~4.6 hectares, while industrial development areas will increase by ~7.6 hectares.

- **Need for Additional Treatment Capacity:** current maximum-day demand at the Wendover WTP is ~996 m^3/day but is projected to reach ~1,900 m^3/day by 2031; ~3,000 m^3/day by 2036; and ~3,300 m^3/day by 2046.

- **Solving the Issue of Increased Demand:** For the Wendover WTP to meet these projected demands, upgrades to the treatment system are needed. In addition, the WTP needs to be fed with larger raw water volumes to allow more water to be treated and distributed to consumers. This requires upgrading both the existing intake and pumping infrastructure upstream of the WTP.

- **Specialized Studies:** Various studies are being undertaken to determine constraints and provide additional information in evaluating the alternative solutions including Environmental, Cultural and Archaeological Assessments, and Geotechnical Investigation.

Growth and Water Demand Projections

- Growth projections and potential development determined in consultation with Township:

GROWTH PROJECTIONS

Table 1: Projected Residential Land Development Area, Housing Units, and Population

Design Horizon	New Residential Development Area (ha)	Housing Units		Population	
		New	Total	New	Total
2026 (Existing)	---	0	935	---	2,500
2031	1.2	206	1,141	583	3,083
2036	14	570	1,711	1,539	4,622
2046	11.1	183	1,894	494	5,116

Table 2: Projected Institutional, Commercial, and Industrial Land Development Hectares

Design Horizon	Institutional Commercial Development Area (ha)		Industrial Development Area (ha)	
	New	Total	New	Total
2026 (Existing)	0	0	0	0
2031	4.65	4.65	4.05	4.05
2036	0	4.65	3.5	7.55
2046	0	4.65	0	7.55

- Projected water demand determined based on potential residential and industrial, commercial and institutional development

WATER TREATMENT PLANT DESIGN FLOW

Table 3: Wendover WTP Projected Treated Water Demands (2026 - 2046)

Design Horizon	Population	Average Daily Demand (m^3/day)			Maximum Daily Demand (m^3/day)		
		Residential	ICI	Total	Residential	ICI	Total
2026 (Existing)	2,500	558	0	558	996	0	996
2031	3,056	713	272	985	1,427	479	1905
2036	4,595	1,144	394	1,539	2,289	724	3,012
2046	5,089	1,283	394	1,677	2,565	724	3,289

Screened Alternative Solutions, Wendover WTP and Intake Pipe

Wendover WTP
Option 1: Do Nothing
Involves no improvements to the Wendover WTP. The existing system would remain unable to meet future water demands, limiting community growth. As it does not address the problem/opportunity, it is retained only as a baseline for comparison.
Option 2: Increase Treatment Capacity within Existing Building
Expand the Wendover WTP by installing a second treatment train within the space reserved for future expansion. This increases treatment capacity and supports projected community growth while minimizing site disturbance. Key considerations include available space, construction within an operating facility, and upgrading supporting plant infrastructure (e.g., high lift pumps) to accommodate the added capacity.
Option 3: Increase Treatment Capacity by Expanding the Existing Building
Expand the WTP building to accommodate a second treatment train. This option increases treatment capacity and provides flexibility for equipment layout and upgrades to supporting infrastructure. However, it requires building expansion. It addresses existing capacity constraints and supports future growth. Similar to Option 2, upgrading supporting plant infrastructure (e.g., high lift pumps) would be required to accommodate the added capacity.
Intake Pipe
Option 1: Do Nothing
Involves no improvements to the intake. The existing intake would continue to operate under current constraints and may not reliably convey sufficient raw water to meet future demands. This option is retained as a baseline for comparison.
Option 3: Install a New Intake Pipe/Remove Existing
Install a new larger-diameter intake pipe and remove the existing intake to meet projected raw water demands. This option addresses capacity constraints and supports future growth but requires maintaining continuous raw water supply during construction through staged works and commissioning. Following implementation, the system would rely on a single intake with no redundancy.
Option 4: Install a New Intake Pipe/Upgrade Existing
Install a new intake pipe and rehabilitate the existing intake so both operate in parallel to meet future raw water demands. This option allows most work to occur while maintaining service, provides redundancy during peak demand and emergencies, and addresses existing capacity constraints to support future community growth.

Screened Alternative Solutions, Low-Lift Pumping Station

LLPS
Option 1: Do Nothing
Involves no improvements to the LLPS. The existing facility would continue to operate under current constraints and may not reliably meet future raw water demands. This option does not address the problem/opportunity and is retained as a baseline for comparison.
Option 2: Upgrade within Existing Building
Upgrade the existing LLPS within the current building footprint through pump, piping, mechanical, electrical, and controls upgrades. This option improves pumping capacity and reliability but is constrained by available space and requires staged construction to maintain operation. This option can address existing capacity constraints and can support future community growth.
Option 3: Upgrade with Building Expansion
Expand the LLPS building to accommodate additional or higher-capacity pumping equipment, piping, and supporting systems. This option provides greater capacity and layout flexibility but requires building expansion, structural investigation, and staged construction to maintain operation. This option can address existing capacity constraints and can support future community growth.
Option 4: New Building on Same Site
Construct a new LLPS on the existing site to replace the current facility. The new station would be designed to meet long-term demand and constructed while the existing facility remains operational, requiring staged tie-ins and commissioning. This option can address capacity constraints and can support future growth but would have higher capital cost, would not benefit from existing infrastructure and may impact the available property space.

Preliminary List and Evaluation of Potential Alternative Solutions

- Initial list of alternative solutions for the **Wendover WTP, Intake Pipe, and LLPS** (**preliminary preferred options highlighted in light green**):

Wendover WTP	
Option No.	**Description**
1	Do Nothing
2	Increase Treatment Capacity within Existing Building
3	Increase Treatment Capacity by Expanding the Existing Building
4	New WTP on the Existing Site

LLPS	
Option No.	**Description**
1	Do Nothing
2	Upgrade within Existing Building
3	Upgrade with Building Expansion
4	New Building on Same Site

Intake Pipe	
Option No.	**Description**
1	Do Nothing
2	Rehabilitation of Existing Intake Pipe
3	Install a New Intake Pipe/Remove Existing
4	Install a New Intake Pipe/Upgrade Existing

- The options were pre-screened, and the following options were **not carried forward** for further evaluation:

Wendover WTP		
Option No.	**Description**	**Reasoning**
4	New WTP on the Existing Site	• High and unfeasible capital cost; • Existing plant designed to accommodate additional treatment train.

Intake Pipe		
Option No.	**Description**	**Reasoning**
2	Rehabilitation of Existing Intake Pipe **Only**	• Does not increase overall conveyance of raw water.

Evaluation Method of Alternative Solutions

- A total of 15 evaluation criteria within 4 different major categories are proposed.

MAJOR	MINOR	DESCRIPTION	WEIGHT (0-4)
Natural Environment and Archaeology	Effect on Terrestrial and/or Aquatic Threatened or Endangered species	Assess potential for impacts to threatened or endangered species under the Species Conservation Act, 2025 and Species at Risk Act, 2002	3
	Effect on Archeological Resources	Assess potential for impacts to known or potential archaeological, cultural, or natural heritage features.	2
Engineering and Technical Considerations, and Construction	Ability to Meet Projected Treated Water Demands	Assess the ability of the water system to meet projected treated water demands, including during cold weather (December-April).	4
	Resiliency to Source Water Variability	Assess the ability of the water system to respond to changes in flow and raw water, and to climate change-induced extreme weather events	2
	System Redundancy	Assess the ability to provide full system redundancy during planned or unplanned maintenance or disruptions.	2
	Opportunities for Phased Implementation	Assess the ease with which the water system installation can be completed in phases.	1
	Constructability	Assess the potential for challenges and constraints during construction.	3
	Maintenance Requirements	Assess the potential for maintenance-related challenges and constraints.	2
	Ease of Operation & Operational Flexibility	Assess the ease of operation and operational flexibility of the water system.	2
	Opportunities for Future Expansion	Assess the ease with which the water system capacity can be expanded to accommodate an increase in projected demand.	1
Social / Community Well Being	Air Quality and Noise	Assess potential impacts to long-term ambient air quality and noise.	1
	Construction Impacts	Assess potential impacts of construction to the public and neighboring properties.	1
	Impact on First Nations Communities	Assess the actual or perceived impact on First Nations communities.	3
Financial Considerations	Capital Costs	Assess the impact due to the estimated capital costs.	4
	Operation and Maintenance Costs	Assess the impact to the Township's operation and maintenance costs.	4

Evaluation Method of Alternative Solutions

- Following PIC No. 1, all screened alternative solutions will be evaluated based on their impact level on the evaluation criteria.
- The option with the highest score will be carried forward as the preferred solution.

Evaluation Impact Level	Score
Potential for High Positive Impact	4
Potential for Moderate Positive Impact	3
No Anticipated Impact	2
Potential for Moderate Negative Impact	1
Potential for High Negative Impact	0

High-level Cost Estimate of Preliminary Preferred Alternatives

- The preferred solution of each component of the Class EA is shown below with an associated cost estimate.

Class EA Component		Anticipated Cost ($ CAD)	
WTP	**Option 1:** Do Nothing	No cost	X
	Option 2: Increase Treatment Capacity within Existing Building	**> Option 1**	✓
	Option 3: Expand Facility Footprint to Accommodate Installation of New Treatment System	> Option 2	X
Intake	**Option 1:** Do Nothing	No cost	X
	Option 3: Install a New Intake Pipe/Remove Existing	1.5 – 1.8 million	X
	Option 4: Install a New Intake Pipe/Upgrade Existing	**1.8 – 2.1 million**	✓
LLPS	**Option 1:** Do Nothing	No cost	X
	Option 2: Upgrade LLPS within Existing Building	**800 thousand – 1.2 million**	✓
	Option 3: Upgrade LLPS and Building Expansion	1.2 – 1.6 million	X
	Option 4: Design and Construct a New LLPS/Decommission Existing	2.8 – 3.3 million	X

All costs noted above are order of magnitude estimate ranges which are +/- 30% accurate. It should be noted that per the Schedule 'C' Class EA for the WTP, costing at the current phase of the evaluation is limited to a qualitative assessment only, as detailed costs are still being quantified. Costs associated with Options 2 and 3 for the WTP will be presented at PIC No. 2.

Next Steps: Schedule C – Wendover WTP

- ❑ Phase 2B – Evaluation of Screened Alternative Solutions, Identification of a Preferred Solution and Review of Class EA Schedule
- ❑ Phase 3A – Identification and Screening of Alternative Designs
- ❑ Public Information Centre No. 2
- ❑ Phase 3B – Evaluation of Screened Alternative Designs, Identification of a Preferred Design
- ❑ Phase 4 – Environmental Study Report
- ❑ Place Project File Report on Public Record for 30-day Review Period
- ❑ Notice of Study Completion

Next Steps: Schedule B – Intake Pipe and LLPS

- ❑ Phase 2B – Evaluation of Screened Alternative Solutions, Identification of a Preferred Solution and Review of Class EA Schedule
- ❑ Place Project File Report on Public Record for 30-day Review Period
- ❑ Notice of Study Completion

THANK YOU

Your Comments Are Important to Us

Please complete a comment sheet and place it in the box provided or e-mail it to us at the noted addresses by September 30, 2026.

YOUR COMMENTS WILL BE CONSIDERED IN THE FINAL ASSESSMENT AND EVALUATION OF THE PREFERRED SOLUTION

Ongoing information about this project can be found at www.alfred-plantagenet.com

Email Addresses for Comments: **jmorrissette@jlrichards.ca and jgendron@alfred-plantagenet.com**