

Introduction

On February 25, 2021, the Minister received a request to designate the Project from the Coalition for the West Credit River under section 9 of the IAA. The request expressed concerns about potential adverse project-related effects on Brook Trout and cold water fish habitat in the West Credit River, as well as cumulative effects from the project's treated effluent discharge; climate change; community population growth; and related groundwater use....

Project overview

The Project would involve the construction, operation and maintenance of a new wastewater treatment plant located southeast of the Village of Erin in Wellington County, Ontario (Figure 1). The Project would provide wastewater servicing to the Village of Erin and Hillsburgh. As proposed, treated effluent would be discharged to the West Credit River at Winston Churchill Boulevard, upstream of the community of Belfountain.

The Proponent completed a Schedule 'C' Municipal Class Environmental Assessment (Class EA) for the Project and met the requirements of Ontario's *Environmental Assessment Act*. Class EAs apply to projects that are carried out routinely and have predictable environmental effects that can be readily managed. The Proponent is expected to implement the mitigation measures and commitments set out in its Class EA project documentation.

In June 2018, the Government of Ontario received three Part II Order requests from members of the public asking that the Proponent be required to prepare an individual environmental assessment instead of a Class EA. On August 29, 2019, the Government of Ontario decided that an individual environmental assessment is not required and allowed the Proponent to proceed with the Project, subject to any other permits or approvals required.

The Project is currently in the detailed design phase. Additional provincial permits and approvals are required. Additional federal permits and approvals may be required.

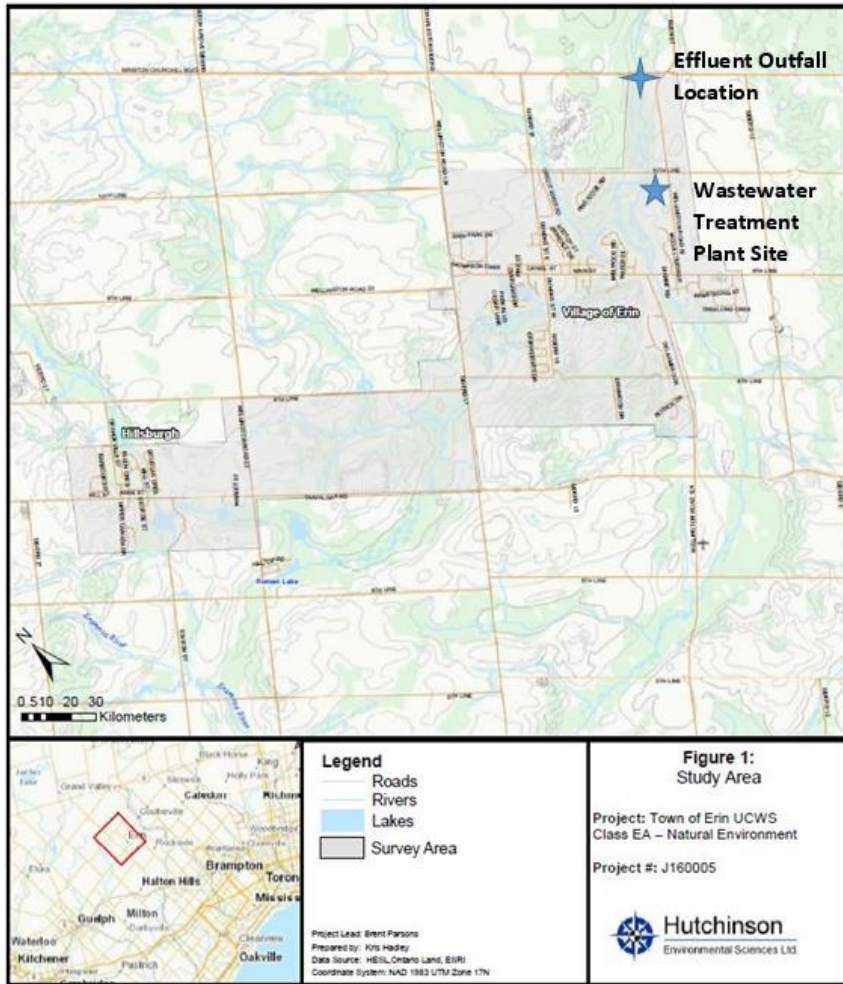
Project components and activities

The Project components include:

- a wastewater treatment plant (Figure 2) with a flow capacity of approximately seven million litres per day and an enhanced membrane treatment technology to achieve high-quality effluent;
- a treated effluent outfall (Figure 3) in the West Credit River immediately upstream of a culvert crossing Winston Churchill Boulevard, including an effluent diffuser and stairs to the river;
- a two kilometre, buried effluent pipe from the wastewater treatment plant to the effluent outfall; and
- a wastewater collection system including pumping stations and buried forcemains and gravity sewers.

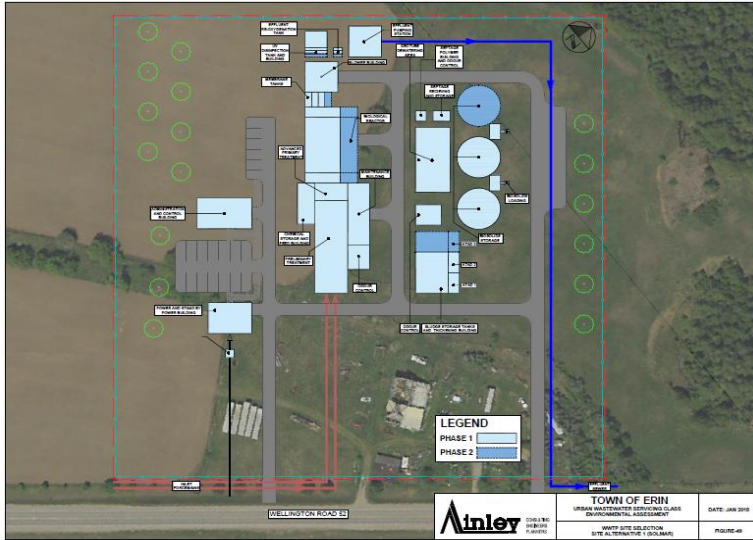
Project operations are anticipated in perpetuity; decommissioning and abandonment are not anticipated.

Figure 1: Project Location



Source: Modified from the Town of Erin, Urban Centre Wastewater Servicing Class Environmental Assessment, Environmental Study Report, 2019

Figure 2: Proposed Wastewater Treatment Plant Conceptual Design



Source: Town of Erin, Urban Centre Wastewater Servicing Class Environmental Assessment, Environmental Study Report, 2019

Figure 3: Proposed Effluent Outfall Location at the West Credit River



Source: Town of Erin, Urban Centre Wastewater Servicing Class Environmental Assessment, Environmental Study Report, 20

Adverse Effect or Public Concern in Relation to Subsection 9(1) of the IAA	Effects and Mitigation Proposed by the Proponent and the Agency's Findings	Relevant Legislative and Regulatory Mechanisms
<p>A change to fish and fish habitat, as defined in subsection 2(1) of the <i>Fisheries Act</i> (related to wastewater effluent)</p>	<ul style="list-style-type: none"> Brook Trout are sensitive and require cold, clean water with groundwater discharge. Wastewater effluent can be warm and contain contaminants, and has the potential to cause a change to fish and fish habitat. During the Class EA, the Proponent considered the potential effects of effluent on Brook Trout and other fish in the West Credit River, with input from the Ministry of Environment, Conservation and Parks, Ministry of Natural Resources and Forestry, Credit Valley Conservation, and the public. The Proponent would mitigate the potential effects of effluent through project design and standard measures including: <ul style="list-style-type: none"> an enhanced membrane treatment technology to remove contaminants at a higher rate than conventional processes, and achieve higher quality effluent; measures to minimize heating of wastewater at the treatment plant such as buried storage tanks and reflective coatings; a buried, two-kilometre long effluent discharge pipe that will enable some cooling of effluent before it enters the river; a commitment to adhere to a recommended upper temperature limit of 19°C in effluent discharge; and location of outfall immediately upstream of a long culvert with degraded habitat, that purposefully avoids known spawning habitats further upstream (as documented by Credit Valley Conservation staff during spawning surveys). Concerns were raised about dissolved oxygen, un-ionized ammonia, chloride levels and water temperature. Proponent modelling predicts that: <ul style="list-style-type: none"> dissolved oxygen levels will remain above the Provincial Water Quality Objectives in the river at the outfall location; un-ionized ammonia concentrations will meet Provincial Water Quality Objectives in the river within 153 metres of the outfall location; <u>and</u> <u>chloride concentrations in the treated effluent will comply with the federal <i>Wastewater Systems Effluent Regulations</i> for acute toxicity; and</u> effects on water temperature would be localized during the sensitive periods for Brook Trout spawning (October) and egg development (November through March). The Ministry of Environment, Conservation and Parks is satisfied that the Proponent's proposed effluent limits meet ministry 	<ul style="list-style-type: none"> Environmental Compliance Approval for sewage works, issued by the Ministry of the Environment, Conservation and Parks, pursuant to the <i>Ontario Water Resources Act</i>. The approval would set limits for dissolved oxygen and un-ionized ammonia, but not chloride and temperature. All treatment plants are required to monitor dissolved oxygen, un-ionized ammonia, chloride and temperature as a condition of the Environmental Compliance Approval. Compliance with section 36(3) of the <i>Fisheries Act</i>, which prohibits the deposit of deleterious substances (including water of harmful temperature) into waters frequented by fish, and t <u>Compliance with subsection 36(3) of the <i>Fisheries Act</i> and t</u> The <u>associated corresponding</u> Wastewater Systems Effluent Regulations that require operators to ensure effluent discharges meet specific conditions at the final outfall point. Environment and Climate Change Canada does not have an authorization to issue in relation to the Project. <u>Subsection 36(3) of the <i>Fisheries Act</i> and</u>

Commented [AK1]: The WSER does not set effluent quality limits for chlorides.

The Regulations authorise the release of carbonaceous biochemical oxygen demanding matter (CBOD), suspended solids, chlorine, and un-ionized ammonia in the effluents if they meet the effluent standard in the regulations. The effluent must also not be acutely lethal.

Adverse Effect or Public Concern in Relation to Subsection 9(1) of the IAA	Effects and Mitigation Proposed by the Proponent and the Agency's Findings	Relevant Legislative and Regulatory Mechanisms
	<p>requirements for wastewater treatment operations discharging to surface waters. The Ministry noted that the proposed outfall is not expected to cause any adverse effects on the survival, growth, and reproduction of Brook Trout.</p> <ul style="list-style-type: none"> Section 36(3) of the <i>Fisheries Act</i> prohibits the deposit of deleterious substances into waters frequented by fish, unless authorized by federal regulations such as the <i>Wastewater Systems Effluent Regulations</i>. Any substance with a potentially harmful chemical, physical (such as temperature) or biological effect on fish or fish habitat, including interference with spawning or respiration, for example, would be deleterious. Environment and Climate Change Canada noted that in designing and operating the treatment plant, the proponent can take into account Canada's <i>Guidance Document: Environmental Effects Assessment of Freshwater Thermal Discharge</i> (available at http://publications.gc.ca/site/eng/9.867894/publication.html), and the Canadian Water Quality Guideline for temperature for the protection of aquatic life. A concern was raised about the potential for endocrine disruptors to exist in effluent. The Ministry of Conservation and Parks is satisfied that the advanced wastewater treatment process proposed can generally achieve high removal rates of endocrine disruptors, compared with conventional wastewater treatment processes, and is satisfied that the Proponent considered measures to reduce impacts. 	

Authorization	Description
<p>Compliance with subsection 36(3) of the <i>Fisheries Act</i> and the associated <i>Wastewater Systems Effluent Regulations</i>.</p>	<ul style="list-style-type: none"> Prohibits the deposit of deleterious substances (substance with a potentially harmful physical effect, including water temperature) into waters frequented by fish. <i>Wastewater Systems Effluent Regulations</i> require operators to ensure effluent discharges meet specific <u>conditions, including effluent quality standards</u> at the final outfall discharge point. Operators <u>must</u> provide routine reports to Environment and Climate Change Canada to demonstrate <u>compliance with effluent quality limits (based on system volumes)</u> and wastewater effluent is not acutely lethal.
<p>Subsection 36(3) of the <i>Fisheries Act</i> and the associated</p>	<ul style="list-style-type: none"> Prohibits the deposit of deleterious substances (substance with a potentially harmful physical effect, including water temperature) into waters frequented by fish unless authorized by a regulation such as the <i>Wastewater Systems Effluent Regulations</i> Any releases of deleterious substances that are not authorized under the Regulations could be subject to the subsection 36(3) prohibition of the <i>Fisheries Act</i>. Subsection 36(3) prohibits the discharge of deleterious substances in water frequented by fish. A deleterious substance means: <ul style="list-style-type: none"> (a) any substance that, if added to any water, would degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water, or (b) any water that contains a substance in such quantity or concentration, or that has been so treated, processed or changed, by heat or other means, from a natural state that it would, if added to any other water, degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water.

Authorization	Description
<p>Environmental Compliance Approval for sewage works, issued by the Ministry of the Environment, Conservation and Parks, pursuant to the <i>Ontario Water Resources Act</i>.</p>	<ul style="list-style-type: none"> • This Environmental Compliance Approval would include conditions for strict compliance with effluent limits to be protective of the natural environment, including the West Credit River, and would: <ul style="list-style-type: none"> ◦ outline the effluent quality criteria and objectives to which the sewage works should be operated and maintained; ◦ include legally enforceable rules of the operation for the Project, designed to protect the environment from emissions of contaminants, discharges and wastes produced; and ◦ include requirements to complete routine sampling and monitoring, as well as preparing regular reports. • The Ministry of Environment, Conservation and Parks determined that the Proponent has done sufficient consultation for the Class EA, which is required prior to issuing an Environmental Compliance Approval for the Project.