

SUBMISSION TO THE  
**Impact Assessment Agency of Canada (IAAC)**  
**Re: Ontario Pumped Storage Project (OPSP)**

*Initial Project Description (IPD) — Plain Language Summary, February 24, 2026*  
Proponent: TransCanada Energy Ltd. (TC Energy) / Stantec Consulting Ltd.

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**Submitted by: Executive Committee**  
**Sunnyside Beach Cottagers' Association**

Meaford Area, Georgian Bay Shoreline, Ontario

Date: April 2026

## **PART 1: Introduction and Standing**

The Sunnyside Beach Cottagers' Association is a private road and property owners' association representing the interests of residential and recreational property owners situated along the Georgian Bay shoreline in the Municipality of Meaford, directly below and adjacent to the proposed Ontario Pumped Storage Project site on the 4th Canadian Division Training Centre (4 CDTC).

Our members are not abstract stakeholders in this project. We are the residents and property owners who will live in closest physical proximity to a 26-million-cubic-metre elevated reservoir, who draw their household water directly from Georgian Bay, and whose properties — many of which have been in families for generations — lie within the area that would be at risk in the event of any dam failure or operational incident. We are, in the most literal sense, the community below the dam.

We submit these comments in response to the IPD published by TC Energy and prepared by Stantec Consulting Ltd. dated February 24, 2026. We respectfully request that IAAC treat this submission as substantive input for inclusion in the Summary of Issues to be directed to the proponent, and that TC Energy be required to respond formally to each concern raised herein before this project is permitted to advance through the assessment process.

### **Scope of This Submission**

The concerns raised in this submission reflect the direct, specific, and geographically concentrated interests of property owners located below the proposed reservoir. They relate primarily to physical safety, water supply security, property rights and values, construction-phase impacts on a residential shoreline community, and the long-term liability implications of permanent major infrastructure above our homes. These are not speculative concerns — they are the foreseeable and documented consequences of building a large elevated reservoir above an inhabited shoreline community.

## **PART 2: Dam Safety and the Risk to Downstream Properties**

The most fundamental concern of our membership is one that the IPD addresses not at all: what happens to our community if something goes wrong with the dam.

The proposed reservoir would hold approximately 26 million cubic metres of water in a ring dam approximately 4.5 kilometres in circumference, constructed on the Niagara Escarpment at an elevation of approximately 174 metres above Georgian Bay — and above our properties. To put this in perspective, 26 million cubic metres is roughly ten times the volume of water held behind a standard agricultural pond. This is an enormous structure with enormous consequences if it fails, and yet the IPD contains no analysis whatsoever of what failure would mean for the communities below it.

### **Critical Absence**

The IPD contains no downstream inundation mapping, no dam breach or failure scenario analysis, no identification of which properties and communities fall within the inundation zone, and no emergency preparedness or evacuation planning. For a residential community located directly downstream of the proposed dam, this is not a technical omission — it is a fundamental failure to disclose information that our members have a right to know.

Specifically, the IPD fails to address:

- The dam safety classification that would apply to this structure under Ontario Dam Safety Regulation (O. Reg. 454/96) and the corresponding design and monitoring requirements;
- The identification and mapping of the downstream inundation zone in the event of partial or full dam breach, including the extent, depth, flow velocity, and estimated arrival time of floodwaters at properties below the site;
- Which specific properties, roads, and community facilities fall within the inundation zone — information our members require in order to make informed decisions about their continued investment in, and insuring of, their properties;
- The role of the active military training area in dam safety risk: the 4 CDTC conducts live-fire and explosive ordnance exercises in close proximity to the proposed dam site. The IPD makes no assessment of whether ongoing military training activities could generate ground vibrations or blast overpressure sufficient to affect dam structural integrity, nor does it identify any operational constraints that would apply to military training during project construction or operation;
- The security vulnerability of a critical civilian infrastructure asset situated within an active military base: the co-location of a large dam holding 26 million cubic metres of water with a functioning military training facility that operates heavy weapons, artillery, and explosive ordnance creates a category of risk that does not exist for dams built in civilian contexts. The IPD contains no security threat and risk assessment addressing the vulnerability of the dam structure to accidental or deliberate damage from weapons, explosives, or ordnance — whether from training accidents, equipment malfunction, or unauthorized acts — and no analysis of the consequences of a sudden, uncontrolled breach caused by a high-energy impact event rather than a gradual structural failure. Standard dam safety engineering addresses failure modes such as overtopping, seepage, and foundation instability. It does not, as a matter of course, address the structural response of a ring dam to a direct ordnance impact, an artillery round, or a proximity detonation. In a civilian context this omission would be unremarkable. In the context of a dam built on a live-fire military base, directly above a residential community, it represents a gap in the risk

framework that must be explicitly addressed. We request that IAAC require an independent security and threat assessment for the dam structure, conducted in consultation with DND and relevant federal security agencies, before any approval is granted;

- The regulatory oversight framework for dam safety in the context of a federally-owned land base: it is unclear whether Ontario's Dam Safety Regulation applies to a dam on DND land, and if not, what equivalent federal oversight exists. This question must be answered before any approval is granted.

We request that IAAC require TC Energy to provide, as a prerequisite to advancing this project: (a) a formal dam safety classification; (b) downstream inundation mapping with property-level identification of the inundation zone; and (c) a conceptual Emergency Preparedness and Response Plan for the communities below the site.

## **PART 3: Property Insurance and Property Values**

The construction of a large elevated reservoir above an inhabited shoreline community will have direct and material consequences for the ability of our members to obtain and maintain property insurance, and for the market value of their properties. Neither of these consequences is acknowledged in the IPD.

### **3.1 Property Insurance**

Insurance underwriters assess flood and structural risk based on proximity to dams, the dam's safety classification, and the availability of inundation mapping. The absence of inundation mapping in the IPD is not merely a technical gap — it is directly relevant to whether insurance companies will continue to offer, or will significantly reprice, overland flood and property damage coverage for homes below the reservoir.

Many of our members are seasonal cottage owners who carry property insurance that includes overland water coverage. Once a large dam is constructed above their properties, insurers will reassess that coverage. In markets where inundation risk is identified, some insurers withdraw coverage entirely, while others impose exclusions or substantial premium increases. The IPD contains no assessment of this foreseeable consequence.

#### **Insurance Gap in the IPD**

The IPD's Table 11-1 identifies 'potential effects to local housing market' as a construction-phase socioeconomic effect, but provides no analysis of insurance availability, insurance cost impacts, or the implications of a new dam safety risk classification for downstream property owners. This is inadequate given that insurance access directly affects both property values and residents' ability to protect their assets.

We request that IAAC require TC Energy to commission an independent assessment of the implications of this project for property insurance availability and cost for residential and recreational properties located within the downstream inundation zone.

## 3.2 Property Values

Our members have made substantial long-term investments in properties on the Georgian Bay shoreline. The construction and permanent operation of a large elevated reservoir above these properties will affect their market value through several mechanisms:

- The perceived and actual risk of dam failure or overflow will reduce the desirability of affected properties in the eyes of prospective buyers, reducing market values for properties within the inundation zone;
- The construction period of approximately six years will subject shoreline properties to sustained noise, vibration, dust, diesel emissions, and heavy traffic, materially reducing the enjoyment and rental potential of seasonal properties during that period;
- Transmission infrastructure, if routed overland, may cross or come in proximity to private properties, creating easement obligations, visual impacts, and electromagnetic field concerns that are reflected in reduced property values;
- Any deterioration in Georgian Bay water quality attributable to project operations — including changes to turbidity, temperature, or chemical composition of nearshore water — will diminish the recreational and aesthetic values that underpin Georgian Bay shoreline property prices.

The IPD's economic analysis focuses exclusively on claimed project benefits. It contains no assessment of the costs that will be borne by our members in the form of reduced property values, increased insurance costs, and diminished quality of life during a multi-year construction period. We request that IAAC require an independent property value and economic impact assessment for residential and recreational properties in the affected area.

## PART 4: Drinking Water for Unserviced Shoreline Residents

A significant proportion of our membership does not have access to municipal treated water. North of Meaford's downtown core, municipal water infrastructure does not extend along the shoreline, and residents rely entirely on private water supply systems drawing directly from Georgian Bay. These systems include water intake lines extending into the bay, shoreline water wells, and holding cisterns or storage tanks that are filled directly from bay water.

These residents have no alternative water supply. If Georgian Bay nearshore water quality is compromised — whether by construction turbidity, chemical spills, drilling fluid migration, reservoir leachate, or operational discharge from the project's Lower Inlet/Outlet Structure — they will have no access to safe drinking water and no existing mechanism for municipal water to be extended to their properties.

### **A Population the IPD Does Not Acknowledge**

The IPD acknowledges that Meaford and Thornbury draw municipal drinking water from Georgian Bay but says nothing about the substantial shoreline population that has no municipal water service and draws household water directly from the bay. This population is among the most directly and acutely vulnerable to any degradation in nearshore water quality, and its complete absence from the IPD's effects analysis is a material deficiency.

The IPD provides no analysis of:

- The location and intake depth of private water supply systems relative to the project's Lower Inlet/Outlet Structure and the zones of influence of pumping and discharge operations;
- The likely effects of construction-phase turbidity, blasting vibration, and in-water work on the quality of water drawn from private intake systems during the construction period;
- The potential for drilling fluids, reservoir lining materials, or excavated material runoff to reach private intake systems via groundwater pathways or surface runoff during extreme precipitation events;
- Any contingency plan for providing alternative water supply to unserved shoreline residents in the event that bay water quality becomes unsafe during construction or operation.

We request that IAAC require TC Energy to conduct a full inventory of private water supply systems in the affected shoreline area, to assess the potential effects of project activities on those systems, and to propose a binding contingency water supply plan that ensures affected residents are not left without safe drinking water at any point during construction or operation.

## **PART 5: Construction-Phase Impacts on a Shoreline Community**

Our membership consists substantially of seasonal cottage owners and year-round residents who have chosen to live in this area specifically for its natural quiet, clean water, and recreational character. The construction phase described in the IPD — spanning from 2029 to 2035, a period of approximately six years — will subject our community to sustained industrial-scale disruption for which the IPD provides no mitigation framework.

### **5.1 Noise, Blasting, and Vibration**

The IPD identifies the following construction activities that will generate significant noise and ground vibration: drilling, blasting, tunneling for the underground powerhouse and water conveyance structures, and construction of the ring dam. These activities will occur in close proximity to residential and recreational properties.

What makes this situation uniquely burdensome for our community is the compounding effect of military training activities already occurring at 4 CDTC. Our members already experience periodic noise and vibration from military exercises on the base. The addition of years of construction blasting — concurrent with ongoing military training — will create a sustained noise and vibration environment that is qualitatively different from what either source would produce in isolation.

The IPD contains no noise modelling for the construction phase, no vibration impact assessment for residential receptors, no assessment of the cumulative noise environment from combined military and construction activity, and no proposed operational limits or quiet hours during construction.

### **5.2 Air Quality and Diesel Emissions**

The IPD acknowledges construction-related air emissions from vehicles and equipment. Our properties are located downwind of the construction site, and the prevailing westerly winds in this area will carry diesel exhaust, construction dust, and blasting particulate towards the shoreline and over residential properties for the duration of the construction period.

For a community that values clean air and that includes members with respiratory sensitivities, a six-year exposure to elevated particulate and diesel exhaust is a significant health and quality-of-life impact. The IPD contains no air quality dispersion modelling for the construction phase, no identification of sensitive receptors, and no proposed mitigation measures.

### **5.3 Construction Traffic and Road Access**

The construction of the ring dam, the underground powerhouse, and the water conveyance structures will require the movement of enormous volumes of excavated material off-site, the delivery of construction materials including engineered aggregates and concrete, and the transportation of large-format equipment including the pump-turbine generator units. The IPD does not identify the routes by which this traffic will move through or around Meaford, nor does it assess the impact on local roads, road safety, or the character of the community during the construction period.

For seasonal residents who use local roads for recreational cycling, walking, and access to the water, years of heavy construction traffic on local roads represents a direct and concrete deterioration in their use and enjoyment of the area. This is not addressed in the IPD.

### **5.4 Workforce Influx and Community Character**

The IPD acknowledges that the construction workforce will number in the hundreds at peak periods. The Municipality of Meaford is a small community with limited accommodation infrastructure, and the arrival of a large transient workforce will create pressure on local housing, increase demand for commercial and recreational services, and alter the character of a community that our members have chosen specifically for its small-town, nature-oriented identity.

The proponent's own public engagement summary (Section 9.2 of the IPD) identifies workforce accommodation and community character as a concern raised by local residents. Yet the IPD contains no assessment of these effects and no proposed measures to manage workforce integration with the host community.

## **PART 6: Georgian Bay Water Quality, Fish, and the Open-Loop Problem**

Georgian Bay is the defining feature of our community. Our members live on its shores, draw their drinking water from it, swim in it, fish in it, and have built their recreational and personal lives around it. The ecological health and water quality of Georgian Bay nearshore waters adjacent to the project site are therefore not abstract environmental concerns for our membership — they are the foundation of everything our community values about this place.

## 6.1 The Closest Real-World Precedent — and What TC Energy Has Not Disclosed

The OPSP is proposed as an open-loop pumped storage facility using Georgian Bay as its lower reservoir. This is not a novel configuration — open-loop pumped storage facilities operating on natural water bodies have a fifty-year operating history in North America. That history is well documented, directly relevant, and conspicuously absent from the IPD.

The most directly comparable facility to the OPSP is the Ludington Pumped Storage Plant on Lake Michigan, completed in 1973. At approximately 2,172 MW, it is the world's third largest pumped storage facility, and it uses Lake Michigan directly as its lower reservoir — the same open-loop configuration proposed for Georgian Bay, on the same Great Lakes system. Its environmental record is extensively documented and should be required reading for any assessment of this project.

### What Ludington's Record Shows

When first commissioned, the Ludington facility killed an estimated 150 million fish per year through entrainment — fish drawn into the turbines during pumping operations. This triggered a twelve-year legal battle by environmental groups, the National Wildlife Federation, and state and federal agencies against the plant's co-owners, ultimately settled in 1994. The settlement required the installation of a one-mile seasonal barrier net maintained by a permanent crew of divers, and a contribution of \$100 million to a Great Lakes Fishery Trust Fund over the life of the original licence. Despite this investment, the net achieves only 80 to 86 percent effectiveness — meaning between 14 and 20 percent of fish entrainment continues to this day. Fish and aquatic resources remain the single most resource-intensive study area in Ludington's ongoing relicensing process.

A US federal appeals court case — *National Wildlife Federation v. Consumers Power Company*, 862 F.2d 580 (6th Cir. 1988) — specifically addressed whether fish entrained and killed by the Ludington facility constituted a discharge of pollutants under the Clean Water Act. The court acknowledged that entrained fish are 'an unfortunate aspect of the Ludington facility's generation of electricity.' Construction of the facility also eliminated approximately 3.3 miles of stream habitat for trout in Back Creek and 2 miles in Little Back Creek, with ongoing water temperature and dissolved oxygen changes identified as continuing risks to water quality.

The second most relevant comparator is the Bath County Pumped Storage Station in Virginia — at 3,003 MW, the world's largest pumped storage facility — which also uses natural streams as its lower reservoir. Construction inundated approximately 820 acres of forested land, eliminated 5.3 miles of trout stream habitat, and the facility faces ongoing entrainment and water quality management requirements at every licence renewal.

A 2020 peer-reviewed study by the US Department of Energy's Pacific Northwest National Laboratory concluded explicitly that open-loop pumped storage has more widespread and longer-lasting impacts on fish and aquatic ecology than closed-loop systems, because of their ongoing effects on the naturally flowing water body to which they are connected. This finding is particularly significant given that enhanced awareness of open-loop impacts is now cited as a primary driver of a shift toward closed-loop designs for newly proposed pumped storage projects in the United States.

### **TC Energy Visited Ludington — Then Said Nothing About It**

TC Energy's own engagement documentation records that it took Saugeen Ojibway Nation leaders and technical staff on a site visit to the Ludington facility in December 2023. TC Energy is therefore directly and personally aware of Ludington's fifty-year record of fish mortality, its twelve-year litigation history, its \$100 million mitigation settlement, and the fact that significant fish entrainment continues despite those expenditures. None of this is disclosed or acknowledged anywhere in the IPD. The omission of the closest operating analogue to this project — from an IPD that claims to address fish entrainment risk — is not an oversight. It is a material failure of disclosure that IAAC must address.

IAAC should require TC Energy to provide a detailed comparative analysis of the OPSP against the Ludington facility, including: (a) a quantitative estimate of anticipated fish entrainment rates at the OPSP's Lower Inlet/Outlet Structure modelled on Ludington's documented operating experience; (b) an assessment of whether the mitigation measures proposed for the OPSP — screens and unspecified flow dispersion measures — are adequate relative to what a comparable facility required after fifty years of documented harm; and (c) an explanation of why an open-loop design was selected given the documented environmental record of open-loop facilities on the Great Lakes system.

## **6.2 Nearshore Water Quality and Our Community**

Every day of the OPSP's operation, the facility will withdraw large volumes of water from Georgian Bay, pump it up to the elevated reservoir, and release it back. This cycle will occur continuously for decades. The cumulative effects of this daily large-volume water movement on nearshore conditions — turbidity, temperature stratification, winter ice formation patterns, surface evaporation, dissolved oxygen levels, and sediment transport patterns — are not analyzed in the IPD.

Georgian Bay's notably clean, cold, and clear water is what makes it exceptional among the Great Lakes and what makes our shoreline properties both valuable and deeply cherished by our members. Any permanent alteration to those characteristics — of the kind documented at Ludington over fifty years of operation — is a direct and lasting impact on everything our community values about this place. We are entitled to a rigorous and honest assessment of that risk, grounded in the actual operating record of comparable facilities.

## **6.3 Boulder Substrate Habitat and the Recreational Fishery**

The nearshore areas around the project site include boulder substrate habitats that are well known to our members as prime spawning and nursery areas for Smallmouth Bass and other species central to the Georgian Bay recreational fishery. Our members have decades of direct observational knowledge of these habitats and the fishery they support.

The IPD acknowledges that the potential marine access area — an in-water construction structure to facilitate delivery of equipment and materials — would be located in Georgian Bay. Our members are specifically concerned that this structure and the associated in-water construction activities will directly disturb and potentially destroy irreplaceable boulder substrate habitat in areas of the highest ecological and recreational fishing value. The IPD contains no

site-specific assessment of the habitat value of the marine access area or the surrounding nearshore zone, and no mitigation commitments specific to boulder substrate habitat.

## **PART 7: Decommissioning — Liability Our Community Cannot Accept**

The IPD describes the project as designed to operate 'for the foreseeable future,' with decommissioning methods to be determined 'through engagement' with relevant parties at some unspecified future time. For our community, which will live below this dam for that entire foreseeable future, this approach to decommissioning is deeply inadequate.

Our concern is straightforward: if TC Energy is acquired, restructured, or becomes insolvent at some point in the future, who is responsible for maintaining the dam above our homes? And if the dam must ultimately be decommissioned, who pays for it, and who ensures it is done in a way that eliminates rather than perpetuates the risk to our community?

### **The Orphaned Infrastructure Risk**

Major infrastructure projects have historically been built with decommissioning obligations that were not matched by adequate financial assurance. The result, in many cases, has been orphaned infrastructure left in place because decommissioning costs exceeded the responsible party's means or willingness to pay. A 4.5-kilometre ring dam above a populated shoreline community is not infrastructure that can be safely left in place if it is no longer maintained to operating standards.

We request that IAAC require TC Energy to provide, as a condition of any project approval:

- A conceptual decommissioning plan addressing the fate of the ring dam, the reservoir, and the in-water structures upon project end-of-life — including specifically what 'decommissioning' would mean for the ring dam and whether its removal is physically and financially realistic;
- A financial assurance mechanism — in the form of a trust fund, security bond, or equivalent instrument — sufficient to cover the full cost of decommissioning, established before construction commences, held independently of TC Energy's corporate assets, and not subject to dilution through corporate restructuring or insolvency;
- Clarity on the legal framework governing decommissioning liability given that the project is proposed on federally-owned DND land — including specifically whether the federal Crown has any residual liability for dam maintenance or decommissioning after project end-of-life.

## **PART 8: Transmission Infrastructure and Private Property**

The IPD identifies a high-voltage transmission connection (230 kV or 500 kV) as a required project component but explicitly states that no preferred connection point or route has been determined. This means that our members cannot assess whether transmission infrastructure will cross or come in proximity to their properties — yet this information is directly relevant to the impact assessment.

An overland high-voltage transmission corridor through the Meaford shoreline area would have consequences for affected landowners including potential expropriation or easement requirements, visual impacts on properties for which scenic and natural character is a primary value, electromagnetic field exposures for residents in proximity to the corridor, and property value impacts along the corridor route.

We request that IAAC require TC Energy to identify the range of candidate transmission routes under consideration — including both overland and sub-lake options — and to provide a preliminary assessment of the implications of each route for affected landowners, before the project advances to the next stage of the assessment process. The transmission connection is a major project component that cannot be treated as undefined at the IPD stage.

## **PART 9: Specific Requests to IAAC**

The Sunnyside Beach Cottagers' Association respectfully requests that IAAC take the following specific actions in response to this submission:

1. **Dam safety disclosure:** Require TC Energy to provide a preliminary dam safety classification, downstream inundation mapping identifying affected properties, and a conceptual Emergency Preparedness and Response Plan before any designation decision is made.
2. **Property insurance impact assessment:** Require TC Energy to commission an independent assessment of the implications of this project for property insurance availability and cost for residential and recreational properties within the downstream inundation zone.
3. **Property value impact assessment:** Require TC Energy to commission an independent property value impact assessment for residential and recreational properties in the affected area, covering both the construction and operations phases.
4. **Private water supply inventory and protection plan:** Require TC Energy to conduct a full inventory of private water supply systems drawing from Georgian Bay in the affected shoreline area, assess potential effects on those systems, and develop a binding contingency water supply plan.
5. **Construction noise, vibration, and air quality assessment:** Require TC Energy to provide construction-phase noise modelling, vibration impact assessment, and air quality dispersion modelling for residential and recreational receptors in proximity to the site, including cumulative assessment with existing military training activity.
6. **Ludington comparative analysis:** Require TC Energy to provide a detailed comparative analysis of the OPSP against the Ludington Pumped Storage Plant on Lake Michigan — the closest open-loop analogue on the Great Lakes system — including a quantitative estimate of anticipated fish entrainment rates, an assessment of proposed mitigation adequacy relative to Ludington's documented experience, and an explanation of why an open-loop design was selected given that facility's fifty-year environmental record.
7. **Marine access and fish habitat assessment:** Require TC Energy to provide a specific assessment of the impacts of marine access construction on boulder substrate fish habitat in the nearshore area, including identification of affected habitat and proposed mitigation measures.

8. **Transmission route options assessment:** Require TC Energy to identify all candidate transmission routes under consideration and to assess the implications of each route for affected landowners before this project advances.
9. **Decommissioning financial assurance:** Require a binding, independently-held financial assurance mechanism for full project decommissioning as a condition of any project approval.

## **PART 10: Closing Statement**

The Sunnyside Beach Cottagers' Association does not take lightly the act of submitting formal concerns about a major infrastructure project. Our members understand that Ontario needs energy storage and that difficult siting decisions must be made. But the decision to place a 26-million-cubic-metre elevated reservoir above an inhabited shoreline community — without providing that community with inundation mapping, without assessing insurance implications, without addressing private water supply vulnerabilities, and without a credible decommissioning plan — is not a decision that our members can accept on the basis of the information currently before IAAC.

The Impact Assessment Act exists, in part, to ensure that the people most directly affected by major projects are fully informed of the risks and have a meaningful opportunity to have those risks addressed. Our members are the people most directly affected by this project. The IPD does not meet the standard of disclosure they are owed.

We ask that this submission be entered in its entirety into the public record, that each concern raised herein be included in the Summary of Issues directed to the proponent, and that TC Energy be required to provide substantive and evidence-based responses to each point before this project is permitted to advance.

Respectfully submitted on behalf of the membership,

### **Executive Committee**

#### **Sunnyside Beach Cottagers' Association**

Meaford Area, Georgian Bay Shoreline, Ontario

April 2026

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**Note on Submission Format:** This submission may be submitted via the Canadian Impact Assessment Registry online commenting tool or by email to the IAAC project contact. All information is intended for the public record.