

Maberly Pines Subdivision

Critical Analysis of the Capital Charge Proposal

Prepared for: Maberly Pines Property Owners

Date: April 26, 2026

Based on: Draft Report #CAO-2026-XX (Tay Valley Township); BluMetric Hydrogeological Review (2021); Technical Critique (2023)

Executive Summary

Tay Valley Township proposes to complete the long-unfinished Maberly Pines Subdivision by undertaking road work, hydro installation, and related capital works, recovering approximately \$12,434 per property from 54 benefiting lots under the Municipal Act, 2001. While the project has genuine merit in principle, this analysis identifies significant concerns across four areas: cost estimates and financial risk; property value assumptions; long-term Township liability; and most seriously, environmental and hydrogeological constraints that the Township's report addresses in a single sentence. Property owners should exercise caution before final project approval and should demand clear answers to the questions identified herein. Further concerns apply to the immediately adjacent property; property owners and taxpayers in the adjacent subwatershed; and overall fiscal concerns are raised for the entire cohort of taxpayers in the Township.

This analysis is prepared for informational purposes for Maberly Pines property owners and owners of adjacent lands. It is not legal or financial advice. Property owners with specific concerns are encouraged to consult an independent lawyer or engineer before the project is approved at the June 2026 Council meeting

1. Cost Estimates and Financial Risk

The total project cost of \$671,461 — translating to \$12,434 per benefiting property — rests on several components of very different reliability. Property owners and taxpayers should not treat this figure as a firm commitment.

Road Work — \$475,817

This is the most reliable component. Three competitive bids were received, Crains' Construction held their price from the original February 2025 tender, and the fuel index adjustment of approximately \$8,000 is transparent and reasonable. The contingency and HST treatment are standard. This figure is relatively trustworthy.

Hydro Installation — \$170,644 (Stated) vs. \$836,157 (Actual Exposure)

This is the most financially dangerous line item in the proposal. The \$170,644 figure does not represent the cost of hydro installation — it represents only the estimated loss from 10 properties failing to connect to Hydro One within the 10-year window. The actual Hydro One expansion cost is \$836,156.54. The Township must post this full amount as a letter of credit before work begins. Hydro One returns the deposit annually as homes connect; any shortfall is permanently retained.

Connections in 10 Years	Estimated Property Owner Loss (Hydro)
49 (all lots) — best case	~\$0
39 (Township's 'conservative' case)	~\$170,644 (\$3,160/property)
25 (moderate underperformance)	~\$410,000 (\$7,600/property)
10 (poor uptake)	~\$670,000 (\$12,400/property)
0 (worst case)	\$836,157 (\$15,500/property)

Additional risk factors include easement complications, rock conditions, and the possibility that seasonal properties never connect. The Township's estimate assumes 39 connections and does not clearly state the worst-case scenario.

Miscellaneous — \$20,000

Legal and surveying costs of \$20,000 for a project of this complexity appear to be an underestimate. Cost overruns here flow directly to property owners.

The Second Charge Risk

Buried in Option #1's next steps is a provision for a second capital charge by-law after the 10-year Hydro One period, should the deposit not be fully returned. Property owners could face an additional levy in 2033–2034 based on hydro connection rates entirely outside their control. This is mentioned in passing and not prominently disclosed in the letter to property owners.

2. Property Value Claims

The Township asserts that hydro infrastructure and paved roads will increase property values, attract development, and improve livability. Some of this is plausible, but the analysis is one-sided.

- The \$12,434 capital charge itself is a cost that will be registered against each property. Any prospective buyer will factor this into their offer. The report does not acknowledge this immediate negative impact on marketability.
- The Township's ROI projection assumes four new homes per year at \$250,000 assessment each for 10 straight years. There is no demand analysis, no reference to comparable rural Ontario subdivisions, and no acknowledgment of housing market cycles.
- For the 10 already-developed properties, the primary benefit is road quality and liability removal. The hydro benefit accrues largely to undeveloped lots. Yet all 54 properties pay equally — a significant equity issue the report does not address.
- The claim that the project will 'show the Province the Township's intentions of growth and housing targets' is a Township benefit, not a property owner benefit. Yet it is property owners who fund the project entirely.

3. Long-Term Debt and Township Exposure

The report frames the Township's cost as 'staff time only.' This is misleading in several important respects.

- The \$836,157 letter of credit is a real contingent liability on the Township's books. If Hydro One calls on it, the Township must pay and then attempt recovery from property owners — creating collection risk.
- The sand dome in Maberly is described as 'mostly funded by Development Charges' with zero cost shown in the project budget. Development charges are still public funds. The full cost of the sand dome is never disclosed in the report.
- Once roads are assumed, the Township inherits perpetual maintenance obligations — winter plowing, grading, and eventual resurfacing. The ROI table footnote acknowledges these roads will need to enter the 10-year capital plan, but no estimate of that long-term cost is provided.
- The 10-year Hydro deposit monitoring creates an ongoing administrative obligation. After 10 years, a second capital charge by-law is contemplated but not prominently flagged.
- All of these risks are carried forwards to the next and subsequent Council terms to be addressed. This could represent a major budgeting challenge.

4. Environmental Considerations — The Township's Single Sentence

The 2026 staff report's entire treatment of environmental considerations consists of one sentence: 'Clustered development reduces Greenhouse gas emissions.' This is strikingly inadequate for a project involving:

- Vegetation removal along all road allowances
- Gravel application and double surface treatment (new impervious surface creation)
- Hydro pole installation across the site (with potential blasting if rock is encountered)
- Anticipated construction of 40+ new homes on largely undeveloped, forested Canadian Shield terrain
- Multiple surface water bodies — ponds, beaver swamps — within and adjacent to the subdivision

The report contains no assessment of stormwater runoff from new impervious road surfaces, no analysis of tree and vegetation clearing scope, no reference to any environmental screening, and no consideration of wetlands, wildlife corridors, or sensitive areas. The 'clustered development' framing may not apply meaningfully to a rural Ontario Shield subdivision where the alternative is simply leaving the lots undeveloped.

5. The Hydrogeological Evidence in Detail

A hydrogeological review of the Maberly Pines Subdivision was commissioned by Tay Valley Township itself and completed by BluMetric Environmental Inc. in November 2021 (Contract #2021-PD-002). This report — which the 2026 proposal does not reference or summarize — reveals significant constraints.

The Geological Setting Is Genuinely Problematic

The subdivision sits on Precambrian Shield bedrock — granite and gneiss — overlain by only a thin, discontinuous veneer of glacial till, typically just centimetres to half a metre thick on ridge tops. Bedrock outcrops are present throughout the property. The terrain includes ponds, beaver swamps, and multiple surface water bodies.

BluMetric explicitly concluded: "the site is potentially hydrogeologically sensitive" because "discontinuous thin soil coverage reduces the potential for filtration of contaminants." A low percolation rate "reduces the likelihood of filtration but rather promotes the transport of contaminants along surficial water flow pathways into surface water bodies."

Lot-by-Lot Servicing Constraints

BluMetric's lot-by-lot assessment found that numerous lots have serious servicing constraints:

- Lots 18, 19, 27, 37, and 38 require alternative (non-conventional) sewage treatment systems due to lot size, steep slopes, surface water proximity, or proximity of wells to neighbouring septic systems.
- Lots 44 and 45 have surface water bodies so close that the WESA-recommended 30-metre setback is 'not possible,' and only the minimum OBC 15-metre distance can be maintained.
- All 49 vacant lots require at minimum 'fully raised Class 4 filter beds' because soil T-times are too slow (>50 min/cm) and bedrock too shallow for in-ground septic systems.

The Township's planner declares all remaining lots 'developable.' This is technically defensible but potentially misleading. 'Developable with significant constraints and non-conventional systems' is a very different statement, with real implications for the projected 4 new homes per year.

The Downstream Watershed Risk

The subdivision lies within the watershed draining to Little Silver Lake and Rainbow Lake. BluMetric noted that the site is geographically situated between the Rideau Watershed's highest point and the Ottawa River, with groundwater flowing to the northeast. The Township's 2026 report contains no assessment of this downstream impact.

The Nitrate Assessment Assumptions

BluMetric calculated a cumulative nitrate impact of 4.98 mg/L — below the 10 mg/L provincial limit. However, this calculation assumes 80% pervious area and relies on dilution through groundwater infiltration. BluMetric itself acknowledged that the thin, low-permeability soil promotes lateral transport of contaminants along surficial flow pathways rather than downward infiltration. If effluent moves laterally to surface water rather than filtering through soil, the nitrate model may substantially underestimate actual concentrations reaching downstream water bodies.

6. The Engineer's Technical Critique of the Pumping Test

A Professional Engineer reviewed the report and submitted a formal technical critique of BluMetric's revised hydrogeological report in January 2023. The critique raises unresolved questions of fundamental importance to this project.

The Core Question: Can One 10-Hour Test Validate 50 Wells?

BluMetric's assessment of water supply viability rests substantially on a single pumping test of one test well (TW1), conducted over ten hours at 11.5 L/min. The reviewer applied the Theis equation — the standard hydrogeological model for long-term aquifer drawdown — to examine what this test actually demonstrates.

"The capacity to supply one dwelling for ten hours was demonstrated. Does it confirm that development of 50 dwellings in this location is sustainable?" "The assumed thickness of the aquifer is 100m. The online model suggests that a long-term draw-down over ten years from one well will be about 60m. Is this correct? And what will be the effect of 48 such wells, should all the lots be developed?" — Engineer's review., January 2023

Inconsistent Transmissivity Values

This review identified a significant internal discrepancy in BluMetric's own data. The transmissivity value cited in the report text (4 m²/day) differs from the value in the accompanying data table (0.74 m²/day). An independent least-squares fitting of the observed drawdown data produced a third value (approximately 0.32 m²/day). These inconsistencies suggest the aquifer parameters are poorly constrained by the available test data.

The Fractured Bedrock Problem

The Precambrian fractured bedrock aquifer is inherently heterogeneous. Well yields depend on whether a drilled hole intersects fracture networks, and can vary dramatically over distances of 100 metres or less. The transmissivity values derived from a single test well may not be representative of the aquifer beneath other lots. BluMetric itself acknowledged that 'a small percentage of future wells may not intersect fracture networks that will provide sufficient yield for normal residential use.' An examination of well records from the adjacent subdivisions demonstrates the wide range of well parameters encountered.

7. What the Township's 2026 Report Conceals by Omission

Reading the Township's report carefully alongside the hydrogeological evidence, a property owner would have no way of knowing the following:

The site was found hydrogeologically sensitive

A formal hydrogeological review commissioned by the Township itself found the site 'potentially hydrogeologically sensitive' with thin, fractured Shield terrain unsuitable for conventional septic systems on multiple lots. The 2026 report does not reference this finding.

Water supply adequacy for full build-out is unproven

An independent professional engineer raised unresolved technical questions about whether a single 10-hour pumping test is sufficient to establish aquifer viability for 50+ simultaneous dwellings. These questions have received no public response from the Township or BluMetric.

Downstream lakes are directly affected

The Little Silver and Rainbow Lakes Property Owners Association identified their lakes and aquifer as being within the subdivision's immediate watershed. The Township's 2026 report contains no assessment of downstream impacts.

Multiple lots have physical constraints that complicate development

BluMetric found several lots unable to meet standard well-septic setbacks; others require alternative sewage systems; some cannot achieve the recommended 30-metre setback from surface water. The Township's planner simply states all lots are 'developable.'

The subdivision was originally approved as seasonal recreational

The original 1979 approval described the development as a 'seasonal recreational' subdivision. The current proposal and ROI projections assume permanent four-bedroom residences. This change in character affects everything from water demand projections to septic system loading.

A second capital charge is possible after 2027

If hydro connections fall short over the 10-year window, a second by-law imposing an additional capital charge is explicitly contemplated in Option #1's next steps. This is not disclosed prominently in the letter to property owners.

The Township's primary motivation includes provincial housing targets

The report explicitly states the project will 'show the Province the Township's intentions of growth and housing targets.' This institutional benefit accrues to the Township, not to property owners who fund the project.

8. Summary and Recommended Questions for Property Owners

The Maberly Pines Subdivision Completion Project has genuine merit in principle. Completing a 45-year-old unfinished subdivision, assuming the roads, and enabling hydro access are reasonable goals. The road work pricing appears competitive and fair. The Township's coordination with Hydro One does produce real savings versus individual connections.

However, the proposal as presented has significant gaps and optimistic assumptions that property owners — who bear all the financial risk — are entitled to have addressed before any approval is granted.

Financial Questions

- What is the maximum possible charge per property under a reasonable worst-case scenario for Hydro One connection rates? Please provide a specific dollar figure, with calculations and reasoning.
- Will the Township commit to a cost cap per property, or will the final charge be open-ended until 2027–2028?
- What is the full cost of the sand dome, and why is it excluded from the project budget?
- Under what circumstances could a second capital charge be levied, and what is its potential magnitude?

Environmental and Hydrogeological Questions

- Has the hydrogeological adequacy of the bedrock aquifer for full subdivision build-out (50+ dwellings) been formally accepted by MVCA and RVCA?
- Has the Township responded formally to the independent engineer's technical questions about the BluMetric pumping test?
- Has a downstream watershed impact assessment been completed for Little Silver Lake and Rainbow Lake?
- What environmental screening or review has been conducted for the road clearing and hydro pole installation?
- Has the change in character from the original 1979 'seasonal recreational' approval to permanent four-bedroom residences been addressed with the Conservation Authorities?

Project Governance Questions

- Will the Township commit to notifying property owners if project costs are tracking to exceed the current estimate by more than 10%?
- What recourse do property owners have if the final capital charge materially exceeds the \$12,434 estimate?
- How will the Township handle collection from property owners who cannot or will not pay the capital charge?

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