



The Town of Niagara-On-The-Lake

Operations
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P.O. Box 190
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L0S 1T0

Report:	OPS-21-012	Committee Date:	April 19, 2021
		Due in Council:	March 29, 2021

Report To:	Operations Advisory Committee
Subject:	Request for a new Engineer's Report for the Four Mile Creek Municipal Drain under Section 78 and 4 of the Ontario Drainage Act, RSO 1990, c17.

1. RECOMMENDATION

It is respectfully recommended that:

- 1.1 Council authorize staff to begin the process of retaining an engineering firm under section 78 of the *Drainage Act*, R.S.O. 1990, Chapter D.17 (the *Act*) to prepare a new Engineer's Report for the Four Mile Creek Municipal Drain;
- 1.2 Council direct the Director of Operations for the Town of Niagara-on-the-Lake, in his capacity as the Town Road Authority, to sign and file the appropriate petition for the extension and improvement of the Four Mile Creek Municipal Drain, in accordance with sections 4(1) and 4(2) of the *Act*; and
- 1.3 Council direct staff to engage the Niagara Regional Municipality Road Authority to jointly file said signed petition with the Clerk of the Town of Niagara-on-the-Lake, in accordance with section 4(1) of the *Act*.

2. PURPOSE / PROPOSAL

The purpose of this report has two components as outlined below:

a.) Existing Drain and North to Lake Ontario

To seek Council's direction to begin the process of retaining a drainage engineering firm to prepare a new report under section 78 of the *Act*. The report would address extending the current Four Mile Creek Municipal Drain downstream of Line 5 Road (north) to incorporate the Virgil Ponds and Dams as part of the drainage works (refer to Appendix I - IV). Also, the report would investigate the incorporation of the creek and provide authority to remove blockages as required. (refer to Appendix I - IV).

This report will address the varying sources of water entering the drainage watershed which are causing flooding and erosion of lands. It will also identify the impacts of incorporating the Virgil Dams and any downstream blockages within the Four Mile Creek system.

b.) South of Line 9 Road into Niagara Falls

To seek Council's direction for the Town Road Authority to sign the appropriate drainage petition form and file it with the Town Clerk.

The signing and filing of a petition will allow the engineer to investigate the extension of the municipal drain upstream (south) of Line 9 Road and enable improvements of the watercourse to deal with the increased flows, sedimentation and erosion problems occurring in the upstream portion of the watercourse. (refer to Appendix I - IV).

3. BACKGROUND

Currently, the existing upstream end of the Four Mile Creek Municipal Drain begins at Line 9 Road and extends downstream to approximately 200 metres north of Line 5 Road. There are four branches to this drain which impact lands between the Airport and Harrison drainage watersheds.

The south limit of the Four Mile Creek Municipal Drain watershed currently follows along Mountain Road in Niagara Falls with the westerly limit extending west of Dorchester Road approximately halfway between Dorchester Road and Mewburn Road. The easterly limit of the watershed is immediately east of Stanley Avenue.

South of Line 9 Road into Niagara Falls

The portion of the Four Mile Creek upstream (south) of Line 9 Road is still considered a natural watercourse since it does not have status as a municipal drain under the *Act* (See Appendix I - IV).

The Town has received complaints of flooding, sedimentation and property damage and further investigation is required. Since any new development has to prove that post run-off flows do not exceed the pre-run-off flows, the duration of the flows is typically the main concern.

North of Existing Drain to Lake Ontario

The watercourse north of the point 200m north of Line 5 Road also does not have status as a municipal drain. Therefore, the Town has no responsibility or authority to maintain and repair this portion of the watercourse.

The Four Mile Creek watercourse south of Line 9 Road and the Four Mile Creek Municipal Drain north of the Lake are also considered irrigation channels. The Town has the authority under the Irrigation Act to remove obstructions and perform similar minor maintenance works to ensure the flow of irrigation water. The Town does not have the authority to improve the irrigation/drainage channel to deal with the increased flow associated with the conveyance of the irrigation water, nor does the Town have the right to enter onto properties without permission.

4. DISCUSSION / ANALYSIS

As mentioned above, there have been, and currently are ongoing land developments which affect the current, valid 1996 Engineer's Report.

Larger scale developments, such as subdivisions with more land parcels, denser housing and road allowances, contribute to a more extensive change in land use. The increase in more impermeable surfaces and landscaping features, such as lawns, also significantly intensify the rate and volume of run-off in comparison to the original property.

There has been a great deal of development within the watershed area in Niagara Falls, which has also significantly affected the assessment schedule of the current, valid 1996 Engineer's Report. The magnitude of the subdivision and land use changes has rendered the existing assessment schedule inadequate for levying maintenance and repair costs to the lands within the City of Niagara Falls or the Town of Niagara-on-the-Lake.

The Municipal Drain cannot be extended upstream without a valid petition from landowners or the Town Road Authority. The method to extend the Municipal Drain to the most southerly Township boundary within the watershed is to prepare an Engineer's Report under Section 4 of the *Act* .

The Engineer's Report prepared under section 78 will also enable the Municipal Drain to be extended downstream as required for a sufficient outlet. This Engineer's report will also include an updated assessment schedule which will recognize the land developments and land use changes within the watershed and assess the properties accordingly.

The Niagara Regional Municipality has also expressed an interest in assisting where possible. Requesting that the Regional Municipality of Niagara's Road Authority sign a petition jointly or individually for improved drainage works could allow the Municipal Drain to be extended further upstream into the City of Niagara Falls. This option will be further pursued if the Town Road Authority is directed to sign the drainage petition. A signature from the Niagara Region could also allow works to be conducted in a location more appropriate and effective within the Four Mile Creek system.

Without a new Engineer's Report to improve and extend the Four Mile Creek Municipal Drain **upstream**, the watercourse cannot be improved to deal with the increased flows and sedimentation problems it is currently subjected to, and flooding and property damage may continue.

Without a new Engineer's Report to improve and extend the Four Mile Creek Municipal Drain **downstream**, the portion of the watercourse between Line 5 Road and the Virgil Ponds cannot be improved or repaired and the ponds and dams cannot be considered as part of the drainage works.

5. Strategic Plan

- Protect Distinctive Community Assets**
- Deliver Smart Balanced Growth**

- Update and create master and secondary plans
- Develop smart balanced growth criteria
- Identify smart balanced growth priorities
- Other

- Create a Culture of Customer Service Excellence**
- Excel in a Positive Workplace**
- Strengthen 2-Way Communications**
- Not Applicable**

6. OPTIONS

- 6.1 Appoint a qualified drainage engineer to update the existing engineer's report, direct the Town Road Authority to sign and file the petition, and engage the Niagara Region's Road Authority in the process. *(As recommended)*
- 6.2 Maintain the Status Quo: The status quo should not continue. A “do nothing” option is not viable. Without a new Engineer’s Report to deal with the assessment issue created by the subdivision developments, all costs incurred maintaining and repairing the current Four Mile Creek Municipal Drain will have to be borne by the Town since they cannot be fairly or legally distributed to the lands in the watershed. *(the Status Quo is not recommended)*

7. FINANCIAL IMPLICATIONS

The Town will be required to pay the costs of this project initially, until the project is completed. Then, these costs can be recovered through assessments on lands within the watershed. The Town may be assessed some costs as the Road Authority. This can be funded from the Roads Budget for drainage costs.

There are grants available for agricultural lands within the watershed which the Town may qualify for under Section 85 of the *Drainage Act* , and OMAFRA’s ADIP policies up to 1/3 of the assessed costs.

The magnitude of this type of project exceeds the current Town staffing levels and will require the assistance of Contract Staff to manage this project internally. Funds associated with this project are not included in the 2021 Operating Budget; however, these costs can be recovered through assessments on lands within the watershed once the project is complete.

It is anticipated that costs to retain an engineer for this project will be approximately \$300,000.00. Staff are preparing a tender document to meet the procurement policies as set out in the Procurement By-law No. 4701A-18.

8. COMMUNICATIONS

The Niagara Peninsula Conservation Authority (NPCA) has been notified of the proposed appointment of an engineer as required under Section 78(2) of the *Act* . This will allow time for the NPCA to decide if an environmental appraisal is required under Section 6(1) of the *Act*.

The City of Niagara Falls as well as the Regional Municipality of Niagara will be informed of the appointment and the petition since the watershed includes lands under their jurisdiction.

The Niagara Peninsula Conservation Authority and other agencies will also be kept informed of the procedures at the appropriate time. Private landowners will be informed once the Engineer is appointed and the date and location of a site meeting has been determined. All communications to landowners, agencies, utilities and affected municipalities will be in accordance with the requirements of the *Act*.

9. CONCLUSION

It is in the best interest of the Town for Council to direct Staff to begin the process to retain a drainage engineering firm and direct the Town of Niagara-on-the-Lake's Road Authority to sign and file the petition.

Respectfully submitted,



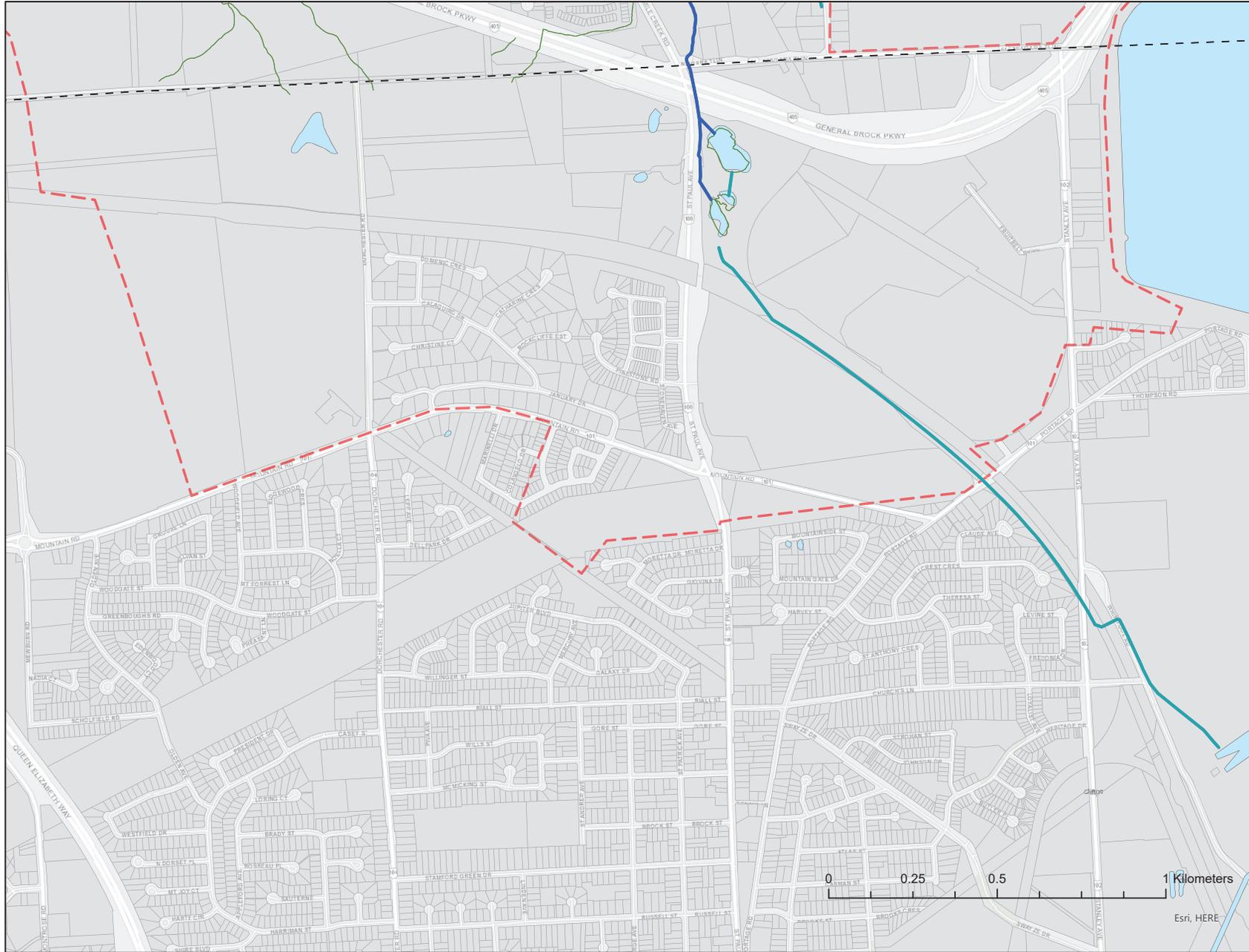
Brett Ruck
Irrigation & Drainage Superintendent



Sheldon Randall
Director of Operations



Marnie Cluckie, MS.LOD, B.ARCH, B.ES
Chief Administrative Officer



Four Mile Creek Municipal Drainage Area in Niagara Falls

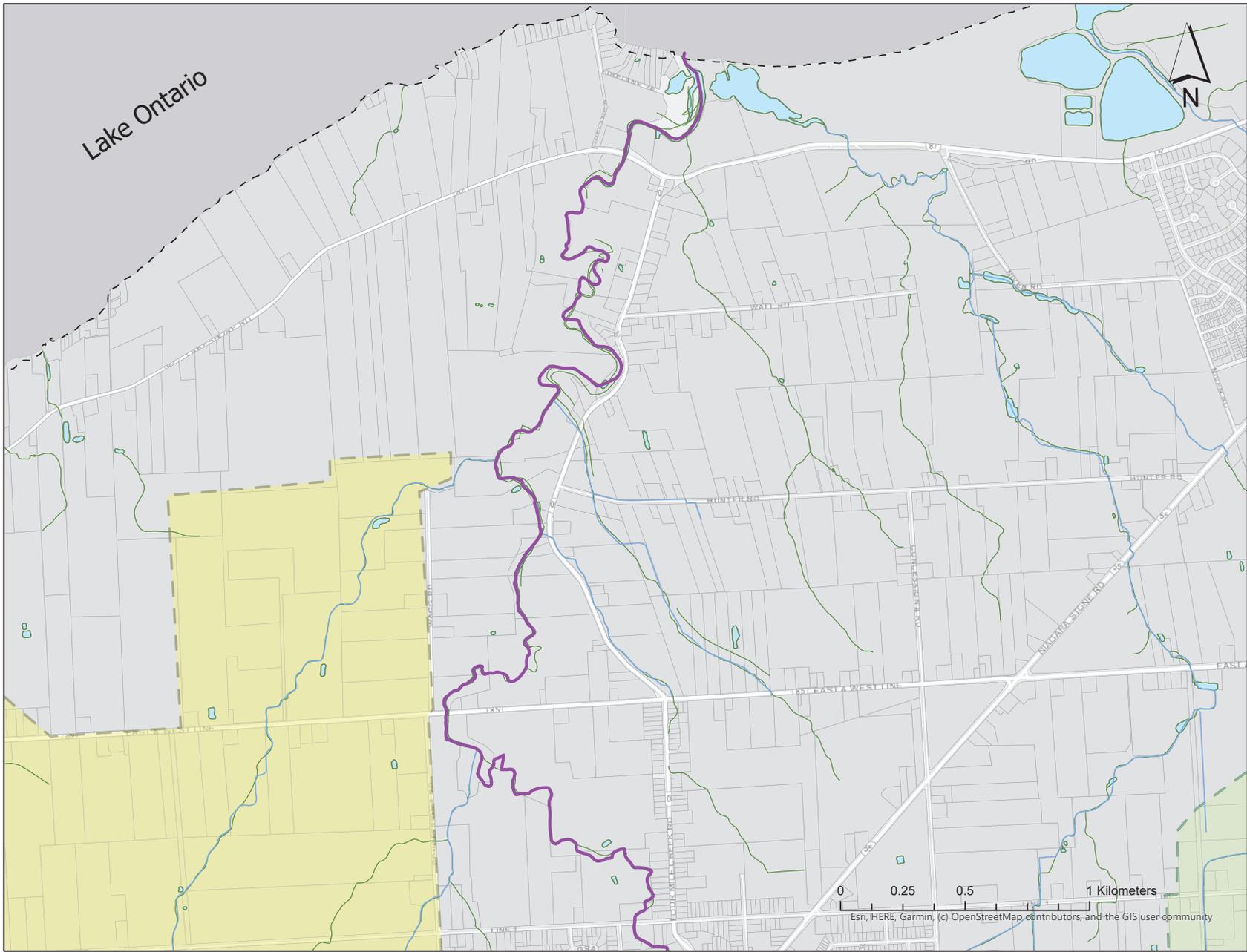
Legend

- - - Four Mile Creek Municipal Irrigation Area
- Four Mile Creek Irrigation Channel
- Irrigation Supply Line
- Natural Watercourse
- NOTL Boundary
- Lakes and Rivers
- Parcels



Notes:





Four Mile Creek Drain and Surrounding Irrigation Areas

Legend

Municipal Irrigation Areas Name

- Airport, Bright, and Lavigne
- Harrison

Four Mile Creek Drain

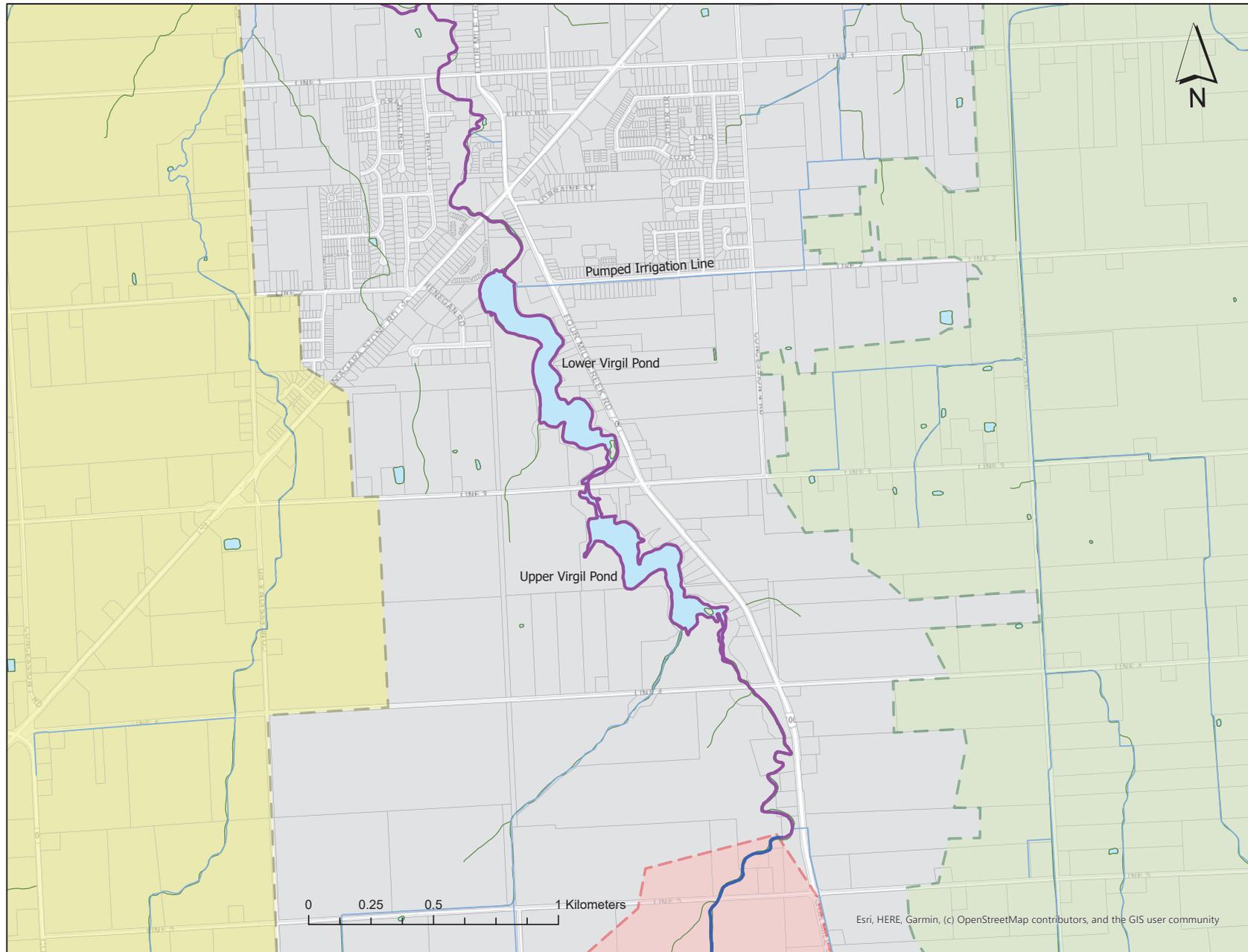
- Drain Type
- Irrigation/Natural Watercourse

- Drains
- Natural Watercourse
- NOTL Boundary
- Lakes and Rivers
- Parcels

Notes:

Map 2 / 2 of Four Mile Creek and Surrounding Irrigation Areas





Four Mile Creek Drain and Surrounding Irrigation Areas

Legend

Municipal Irrigation Areas

Name

- Airport, Bright, and Lavigne
- Four Mile Creek
- Harrison

Four Mile Creek Drain

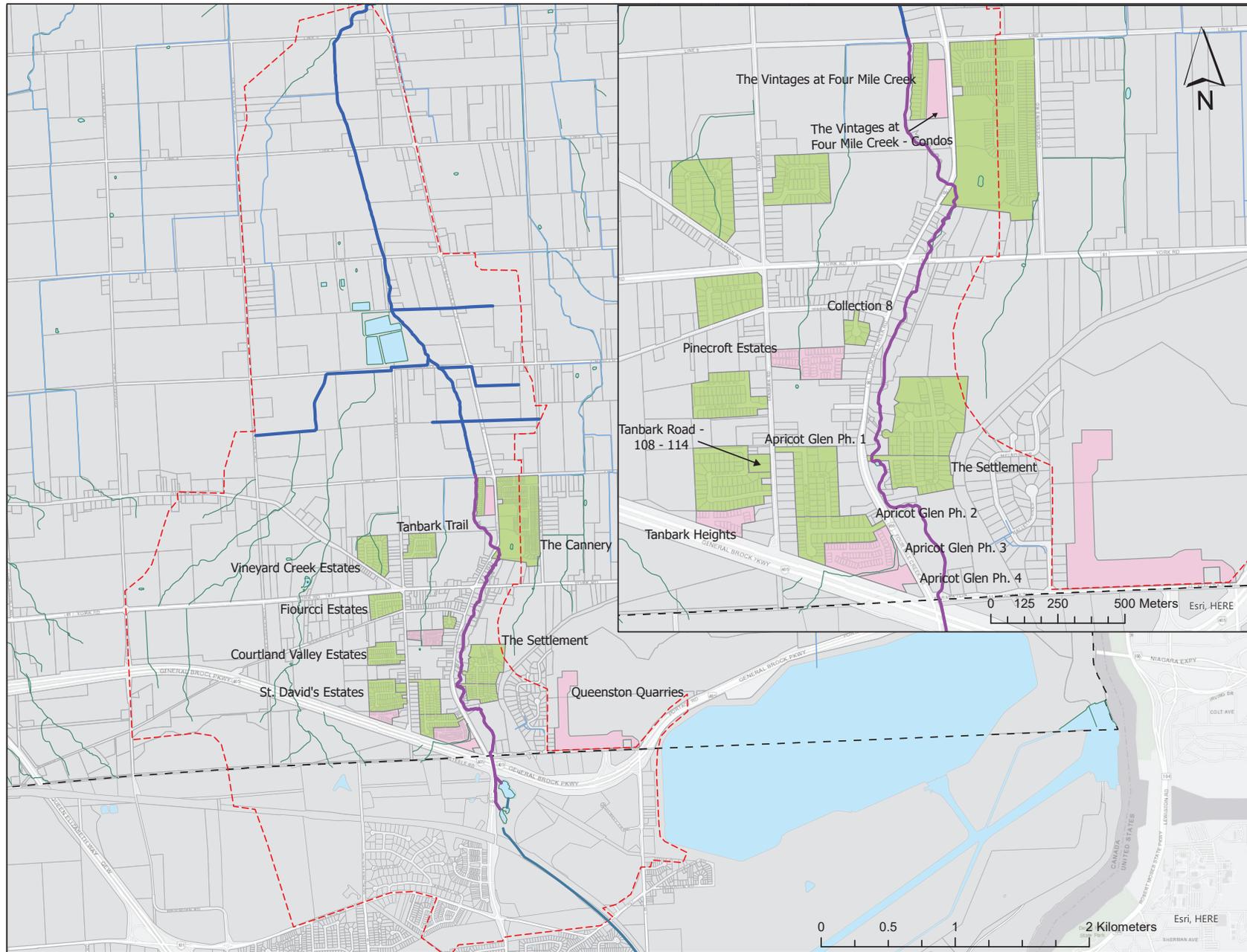
Drain Type

- Irrigation/Natural Watercourse
- Mun. Drain and Irr. Channel
- Drains
- Natural Watercourse
- NOTL Boundary
- Lakes and Rivers
- Parcels

Notes:

Map 1 / 2 of Four Mile Creek and Surrounding Irrigation Areas





NOTL Subdivisions by Ownership in the Four Mile Creek Watershed

Legend

- Subdivisions**
 Developments Not Included in Eng. Reports
 PRIVATE (pink)
 TOWN (green)
- Four Mile Creek Drain**
 Drain Type
 Irrigation Channel (purple)
 Mun. Drain and Irr. Channel (blue)
 Irrigation Supply Line (dark blue)
- Drains (light blue)
 Natural Watercourse (light green)
 Four Mile Creek Municipal Drainage Area (dashed red line)
 NOTL Boundary (dashed black line)
 Lakes and Rivers (light blue)
 Parcels (grey)

Notes:

