



Administration and Operations Committee Report

To: The Chair and Members of the Administration and Operations Committee
From: Greg Demers CRS-S, Director of Roads
Date: December 5, 2023
Report #: RPT-0479-23
Subject: Municipal Drain Progress Update
Purpose: For Approval

Recommendation

Whereas the County of Brant hired R.J. Burnside as Drainage Superintendent in April 2021 and staff reported on the progress of this program in 2022 as outlined in Attachment five (5) to this report;

And whereas there have been numerous requests for Municipal Drain maintenance throughout the County since the last Committee update;

And whereas this report is intended to report the progress being made on the Drain Maintenance program;

And whereas there are completed maintenance projects to be billed out to the residents;

Be it resolved that RPT-0479-23 be received as information and that the attached By-Law be raised to bill out completed drain maintenance costs to all affected properties.

Executive Summary

This report provides the County of Brant's (the County's) elected officials an overview of the completed tasks and updates to ongoing activities regarding municipal drainage infrastructure maintenance and improvements under the *Drainage Act, R.S.O., 1990* (the Act).

This report will also review the proposed proactive approach that will be phased in once request volume decreases and the existing maintenance backlog is completed.

This report covers the period of August 2022, to October 2023.

Strategic Plan Priority

Strategic Priority 4 - Reliable Infrastructure

Impacts and Mitigation

Social Impacts

Maintaining municipal drainage infrastructure to its engineered design ensures agricultural landowners are able to maintain optimal soil moisture levels for optimal crop production.

Environmental Impacts

Regular maintenance of municipal drainage infrastructure, particularly open systems, can improve sensitive fish species habitat by removing debris, blockages, and accumulated silt that can cover cobble substrate used by sensitive species during spawning.

Reinstating free flow to open systems with low gradients through the removal of blockages and sediment improves water quality in the system overall.

Economic Impacts

When open systems are left to naturalize, tree removal becomes more expensive as the diameter of the tree increases. Sediment removal also becomes more expensive as a larger corridor is required to spread the spoil to its prescribed maximum depths. Increased channel meandering, and resulting bank failures, deviating from the engineered design becomes more prevalent and costly to repair when open drain maintenance is neglected.

Proactive maintenance of municipal drainage infrastructure reduces the average cost per meter to maintain a drain and, in turn, the overall costs of a project.

All costs associated with maintenance works on Municipal Drains are assessable under the provisions of *the Act*.

Properties with farm property class tax rate are eligible for a one third (1/3) grant through the Agricultural Drainage Infrastructure Program (ADIP) with the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA).

Costs to employ a Drainage Superintendent have been mitigated through the use of County staff for preparing/mailling notices as required under *the Act*, scanning, and uploading drain information to the County server, online mapping tool (CANOE) maintenance and updates, as well as student involvement for site investigations and assessment schedule updates, maintenance package preparations, and onsite meeting paperwork preparation.

Report

Background

Importance of Municipal Drains in Brant County

Municipal drainage infrastructure provides an important outlet to agricultural lands and rural settlements. The successful growth of crops depends on a suitable soil environment for germination, root anchorage, and plant growth. Lands that are subject to excess soil moisture and overland flooding require adequate outfalls for private drainage systems to achieve a successful standard of agriculture. Approximately 200km²+ of property in Brant County is affected by one (1) or more Municipal Drainage watersheds. There are approximately 276km

of municipal drains constructed under *the Drainage Act* and 48km of privately managed drains (Mutual Agreement or Requisition/Award). The County has completed approximately 49km of drain cleanouts since fall 2021. There are approximately 45km of municipal drains scheduled to be cleaned out between July 2024 and March 2025.

Mutual Agreement and Requisition/Award Drains

Mutual agreement (agreement) and requisition/award (award) drains are privately managed drains that are maintained by the respective owners in such proportion as provided for in the original or subsequent agreement or award. Agreement drains are only enforceable on future owners (not original parties to the agreement) if they are registered on title. Award drains constructed under the *Ditches and Watercourses Act* (predecessor of the Drainage Act) have legal status under *the Act*; however, no new award drains can be constructed today. Agreement and award drains can only be enforced through a court order. Municipalities do not have the authority to enter onto private land to perform maintenance works on the above noted drains and have no means to recover costs. See attached Factsheet for more information.

Species at Risk Mitigation Plan

Operation staff identified a requirement under *the Act* to obtain all necessary permits and approvals under Provincial and Federal legislation in the fall of 2021. In order to satisfy the requirements under the Environmental Services Act (ESA), a mitigation plan for each threatened or endangered species listed in the Species at Risk in Ontario (SARO) list with regards to works completed under *section 74 of the Act* must be prepared and registered with the Ministry of the Environment, Conservation and Parks (MECP). At its June 28, 2022, meeting, County of Brant Council resolved that R. J. Burnside and Associates Limited (Burnside) would be authorized to proceed with a Species at Risk Mitigation Plan for Drainage Works. Burnside staff have worked diligently to complete site visits and sampling within the County's drainage works during the appropriate seasons for each species. A draft report will be completed for Council's consideration in early 2024.

Analysis

Amount Spent August 2022 to October 2023 – Maintenance

- eleven (11) new requests for maintenance on various municipal drains within the County;
- thirty-two (32) projects have been completed,
- three (3) active projects remain open.
- twenty-two (22) projects that require approvals/meetings prior to tendering out the maintenance works.

Approximately \$360,000 (incl. tax) has been spent between August 2022 and October 2023 maintaining and repairing municipal drainage infrastructure. Approximately \$264,000 has been applied for grant and can be collected now (see attached bylaw). The remaining \$96,000 was completed after the January 2023 deadline and cannot be applied for grant until April 2024.

Once the grant has been applied for and OMAFRA has reviewed our files, County Staff will create a bylaw to collect these costs with Council approval (as well as any other costs incurred on projects that will be completed by the January 2024 deadline) in Q2 2024.

Maintenance Activities – Completed and Upcoming

Maintenance activities that were completed between August 2, 2022, to October 13, 2023, included the following:

- sixteen (16) ditch cleanouts including brushing/mulching activities,
- ten (10) tile repair/investigations,
- five (5) beaver control projects (including dam removal),
- one (1) culvert replacement.

Maintenance activities/requests to be completed between fall 2023 and early spring 2024 currently include the following proposed work include three (3) full ditch cleanouts.

Maintenance activities/requests for works to be completed in the summer 2024 and early spring 2025 include the following:

- nine (9) full cleanouts. Drainage Act and Section 28 Regulations Team (DART) review by regulatory authorities is required for all of the cleanouts and three (3) onsite meetings will need to be completed.
- there are an additional thirteen (13) drains that need to be investigated prior to holding onsite meetings and applying for a DART review.

Maintenance requests, activities, detailed notes, and invoices are tracked in a spreadsheet for future reference; this spreadsheet is updated on a frequent basis. Finance also tracks all monies spent on municipal drains (capital and maintenance); both sheets are used for grant application and billing purposes. This streamlines the Municipal Drain process so staff can continuously track progress and respond to questions surrounding historical works.

Capital Works

Currently, the County has nine (9) active drainage reports being prepared by the three (3) engineering firms used by the County.

Two (2) of the Engineering reports are due to be submitted to the County by the end of 2023 for consideration by Council in early 2024.

The County added a condition of severance in 2022 that will keep drainage assessment schedules up to date and fair for future maintenance cost assessments associated with new development lots. The condition of severance will require the applicant to have any drainage reports affected by the severance reapportioned for future maintenance under section 65 of *the Act*.

Asset Management

There is a possibility of including municipal drainage infrastructure into asset management in the 2025/2026 cycle. Each drain would need to be evaluated and an up-to-date cost estimate prepared to accurately assess the value of the drainage scheme.

Summary and Recommendations

Customer Service

Each inquiry has been followed up with a response; response times are within 24-48 hours. Each request for maintenance has been followed up with a site visit(s) and a subsequent onsite meeting as part of the newly implemented protocol (see attached protocol for more information).

Existing requests for drainage have been organized and are currently being addressed. New requests for maintenance have been received as landowners notice completed works on neighbouring properties. The current list of requests has waned in 2023. As requests for maintenance are received, information on the drainage scheme including applicable bylaws, reports, drawings, maintenance history, field measurements and photos are collected and recorded. A proactive approach to drainage should likely begin in 2025, after current requests are addressed.

Proactive Approach

Beginning in 2025, the Drainage Superintendent will start the following activities:

- Create up to date inventory of municipal drain infrastructure in the county
- Reviewing existing drainage files within county boundaries and surrounding municipalities
- Establish an updated list of current drains – update existing digital repository of plans, profiles, reports, bylaws
- Provide new/updated information to County GIS staff to update Canoe
- Work with County staff to enhance existing mapping – attach drawings/report/bylaw to GIS linework
- Complete a conditions assessment on the municipal drainage network within the County using Fulcrum App and reporting software
- As drains are inspected, use Fulcrum software. Reports can be generated as needed.
- Incorporate existing information from investigations in 2021-2024
- Review the existing infrastructure to develop a strategy to inspect and report on the condition of all the drains within the County
- Provide a schedule for future maintenance of the county's drains, including proposed years to complete cleanouts and brushing, frequency of recurring maintenance, and a recommended preventative inspection rotation
- Evaluate aspects of drain (grade, surrounding land use, soil type, vegetation, previous cleanout history)

Attachments

1. County of Brant Map – Municipal Drains
2. Mutual Agreement Drains - Factsheet
3. Draft Bylaw to collect 2022 maintenance costs
4. Municipal Drain Maintenance Protocol
5. Municipal Drain Progress Update 2022 – RPT-0276-22

Reviewed By

R. Walton, General Manager of Operations

Copied To

H. Mifflin, Director of Finance, Treasurer
S. Tweedle, Drainage Superintendent

By-law and/or Agreement

By-law Required	Yes
Agreement(s) or other documents to be signed by Mayor and /or Clerk	No