



DATE	MONDAY, MARCH 24, 2024
SUBJECT	SERVICE DELIVERY REVIEW – STORMWATER MANAGEMENT
REPORT NO.	SDR-36

RECOMMENDATION

That Council of the Municipality of Greenstone approve the following:

1. **THAT** Council support the inclusion of funds in the Capital Budgets for a Drainage Study (2026) and Drainage Master Plan (2027) for Greenstone (\$150,000 combined), including any draft policies relevant to the Municipality for best practices in drainage management.
2. **THAT** Council support the inclusion of project funds in the 2026 Capital Budget for a culvert and municipal ditch inventory to complete the storm water asset dataset, which can then be uploaded as a GIS layer (\$50,000).
3. **THAT** Council support the inclusion of project funds in the 2027 Capital Budget to engage a Contractor to develop the required Storm Water Monitoring Plan (\$30,000) as per the Municipality’s CLI-ECA requirement.
4. **THAT** Council review options on how to fund Storm Water Management with guidance from the Drainage Master Plan (to be completed in 2027).

SERVICE SUMMARY

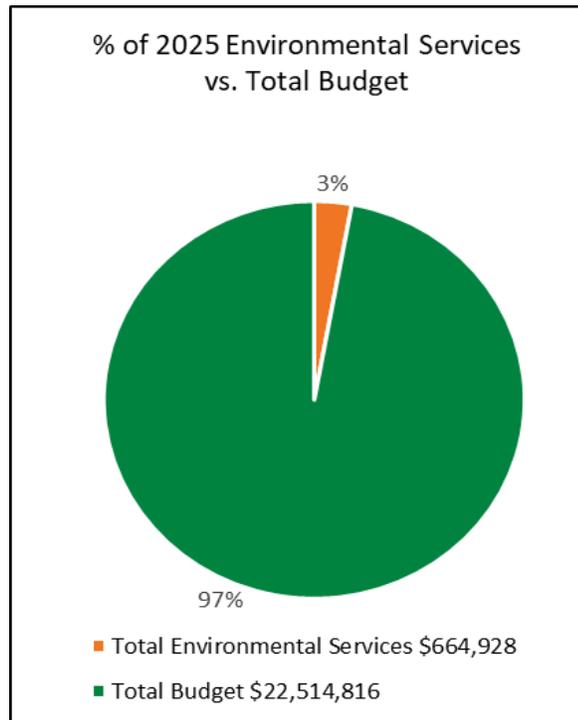
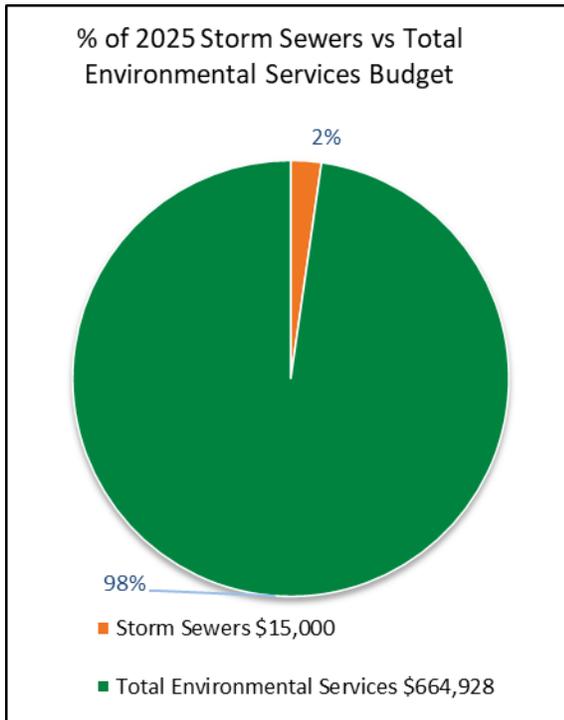
SERVICE	STORMWATER MANAGEMENT
DEPARTMENT	Public Services
SUMMARY	Collection and transmission of stormwater from all properties and roadways within the urban areas of the Municipality to a combination of ditches, lakes or waterways.
MANDATORY	Yes.
LEGISLATION	<ul style="list-style-type: none"> • Drainage Act, R.S.O. 1990, c. D.17 • Ontario Water Resources Act, R.S.O. 1990, c. O.40 • Clean Water Act, 2006, S.O. 2006, c. 22 • Environmental Protection Act, R.S.O. 1990, c. E.19 • Lakes and Rivers Improvement Act, R.S.O. 1990, c. L.3 • Canadian Navigable Waters Act (RSC, 1985, c. N-22) • Fisheries Act (RSC, 1985, c. F-14) • Water Opportunities and Water Conservation Act, 2010, S.O. 2010, c. 19 - Bill 72 • Planning Act, R.S.O. 1990, c. P.13 • Municipal Act, 2001, S.O. 2001, c. 25 • Public Utilities Act, R.S.O. 1990, c. P.52 • Provincial Offences Act, R.S.O. 1990, c. P.33
BY-LAWS	<p>Corporate Policies:</p> <ul style="list-style-type: none"> • By-Law 18-20 Water and Sewer Infrastructure Maintenance Policy • By-Law 24-35 Sewer Water Alleviation Program (SWAP) Policy <p>Pre-amalgamation By-Laws in effect:</p> <ul style="list-style-type: none"> • Township of Beardmore By-Law 426, Township of Nakina By-Law 10-76, and Town of Geraldton By-Law 75-838 regulating the use of public and private sewers and drains, private sewage disposal, the installation and connection of building sewers, and the discharge of waters and wastes into the public sewer system; and providing penalties for violations thereof • Town of Geraldton By-Law 75-859 Being a By-Law to amend By-Law 75-838 (noted above) • Town of Longlac By-Law 369 – 1971 Being a By-Law to control the discharge of sewage into the sewage system of the Municipality <p>Other Relevant By-Laws:</p> <ul style="list-style-type: none"> • By-Law 24-61 adopt updated Asset Management Plan • By-Law 22-15 adopt Official Plan
FEES/CHARGES	N/A

2024 BUDGET SUMMARY

2025 Expenditures: \$15,000

2025 Revenues: **\$0**

Net Budget: \$15,000



These costs only represent contractor and maintenance material expenses, and do not include staff time.

New (legislated) operational and reporting requirements will impose a dramatic increase to future operating budgets effective this year as the CLI-ECA operating and maintenance plans are implemented. An additional \$120,000 annually is projected, with an increase of \$30,000 annually to account for annual reporting after 2027.

The 2024 Capital Budget allocated \$100,000 for storm sewer infrastructure repairs. Materials were purchased and the balance carried over to the 2025 Capital Budget.

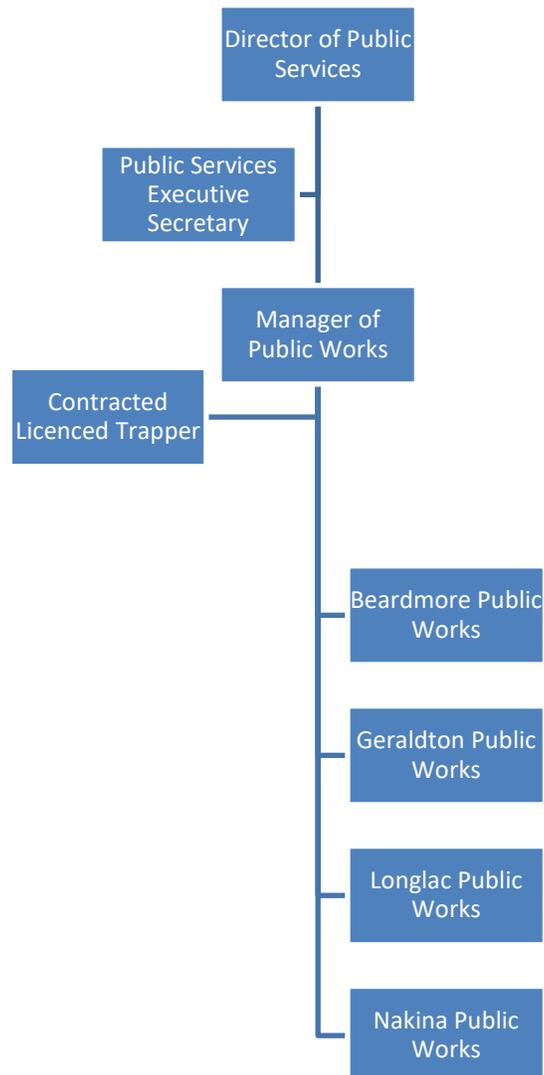
The 2025 Capital Budget allocated \$100,000 for an Infiltration and Inflow (I&I) Study, \$14,982 to support CLI-ECA compliance, and \$175,000 for infrastructure repairs.

STAFFING

	Positions	Hours Worked per Year
Full Time Positions	11	440*
Contract Positions (licensed trapper)	1	120
Student	0	

*Hours allocated by full-time Public Works staff is highly unrepresentative of the hours required under new legislated maintenance requirements.

ORGANIZATIONAL CHART

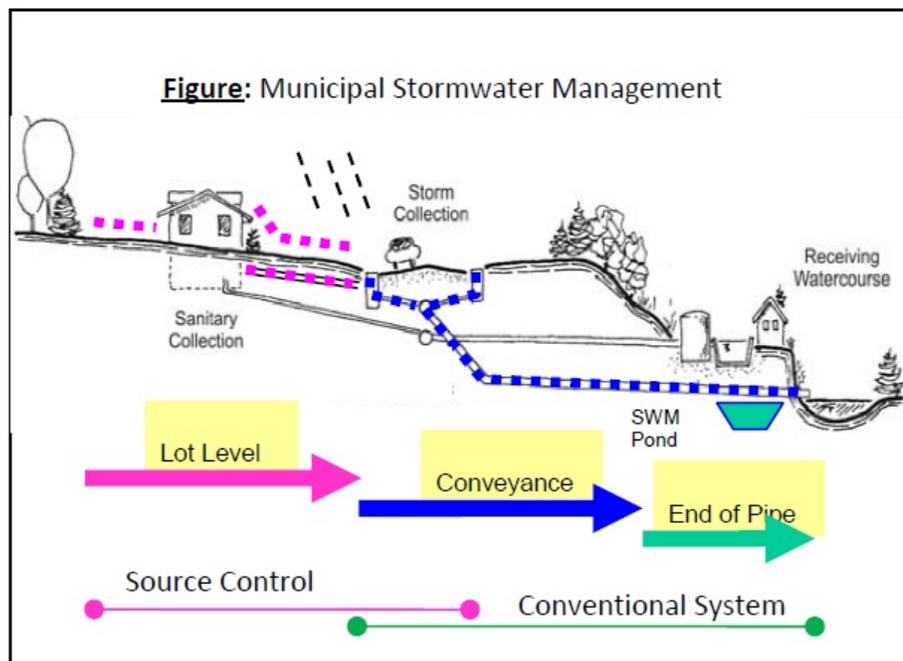


INTRODUCTION TO STORM WATER MANAGEMENT

Stormwater is rainwater, snowmelt, or other form of precipitation that has contacted the ground or any surface. Upon such contact, stormwater follows the principles of the water cycle, which include infiltration, evapotranspiration (the process by which water is transferred from the land to the atmosphere), run-off, storage in water bodies, and precipitation. Climate (and climate change) is intricately linked to the water cycle, in particular precipitation and evapotranspiration.

Stormwater management is complex. In Ontario, municipalities are responsible for municipal stormwater management (e.g. planning, design, establishment, operation and maintenance). Municipal stormwater management deals with the component of the urban surface run-off that is or would be collected by means of separate municipal storm sewers. Many ministries and agencies provide oversight for stormwater management and surface drainage. Municipal stormwater management complexity is partly due to the multi-functional purpose of the infrastructure system and the many different agencies involved. Climate change also has implications for storm water management. Climate change is another consideration in storm water management planning.

Municipal stormwater management includes the conventional stormwater management systems that are managed by municipalities and source control facilities and practices. Some source control facilities are managed by municipalities, such as those located on road rights of way, while other source control facilities may be located on private properties. The emphasis of the current Ministry of the Environment (MOE) Stormwater Management Planning and Design Manual, 2003 (SWM Manual) is guidance on conventional stormwater management systems.



Conventional stormwater management systems refer to conveyance facilities (such as vegetated filter strips, roadside ditches, storm sewers and perforated pipe conveyance systems) and end-of-pipe facilities (e.g. ponds, oil grit separators, constructed wetlands).

Source control (pollution prevention) refers to managing stormwater at the lot level (private properties) or nearby in the neighbourhood, typically on the road right of way. Source control facilities use infiltration, reuse and evapotranspiration methods, as well as storage and treatment. Source control recognizes the importance of water conservation by reusing stormwater. Green Infrastructure (GI) or Low Impact Development (LID) place more emphasis on landscape or vegetation-based methods (infiltration, evapotranspiration). Examples of lot level facilities include rain barrels, permeable pavement, soak-away pits, rooftop gardens, rainwater harvesting and reuse and infiltration.

To protect health and the environment, the scope of stormwater management must include the quality of water discharged to the environment. Contact with surfaces such as roads, landscape and buildings introduce contaminants into stormwater. In particular, the first flush of stormwater is considered potentially more contaminated. Some contaminants such as phosphorus, E. coli bacteria and other pathogens from municipal stormwater are discharged along with the sediment and can be a concern where storm water discharges directly into waterbodies. Reducing the suspended solids level removes those contaminants that exist in a solid form or adsorbed to the sediment particles. However, some fine suspended solids and dissolved matter are not treated by suspended solids removal. Sediment loadings during storm events, particularly high intensity storms, can damage fish and wildlife habitat. Guidance for managing suspended solids contamination is provided under the SWM Manual. Other concerns with stormwater quality include the presence of road salt or other de-icing agents in runoff and the warm temperature of stormwater pond discharges which can have impacts on the natural environment.

The urbanization of an area alters the local water balance, with potential alteration of the subsurface groundwater level and flow. Stormwater management requires sufficient understanding of the groundwater and surface water linkages prior to finalizing development. While there may not be immediate uses for the groundwater under some urban areas, the groundwater may be an important source of water downstream for drinking or other uses. As well, groundwater supports wetlands or stream baseflow, and their ecological functions.

BACKGROUND FOR GREENSTONE

Stormwater can contribute to excessive inflow and infiltration into separate sanitary sewers which may contribute to sewage treatment plant by-pass events. The Municipality has conducted infiltration studies in the past for Geraldton and Longlac as action items of the respective Pollution Prevention and Control Plans (2013) prepared by Order of the MECP, primarily to reduce and eliminate bypassing. The 2025 Capital Budget includes \$100,000 for a new Infiltration and Inflow Study to assess current areas of concern for

continuous improvement in preventing system infiltration.

Maintenance of storm water systems within Greenstone is the responsibility of the Public Works Department. It is not a shared responsibility with Ontario Clean Water Agency, although storm water flows can impact operations at sewage treatment facilities.

Maintenance of storm water infrastructure has typically involved steaming catch basins and on some occasions culverts to alleviate road flooding in spring. The Municipality engages a licensed trapper with Term Agent Authorization from the Ministry of Natural Resources & Forestry (MNRF) to remove nuisance beavers impacting municipal infrastructure. The Municipality also obtains an annual permit from MNRF for the destruction of beaver dams (with conditions).

Much of the storm sewer infrastructure in Greenstone is aging and deteriorating, as shown in the photos below. New legislation now increases accountability for this type of infrastructure and will require an infrastructure replacement strategy and a capital investment plan.



1 Broken culvert.



2. Catch basin with failing brickwork.

Official Plan

The Municipality's current Official Plan addresses stormwater management under section 5.- Infrastructure and Public Service Facilities. The Goal Statement under this section is "To provide infrastructure to meet service level needs for Settlement Areas and the Rural Area of the Municipality."

5.4.1. The systems distribution for water and treatment, wastewater collection and treatment, and stormwater collection and release will be designed, built and operated in a manner which protects public health and safety, minimizes negative impacts on the natural environment, meets the requirements of the approval authority and meets current and projected needs to support development in accordance with the Community Development policies of this Plan (see Section 4).

5.4.2. All development applications will be evaluated to determine whether the Municipality water, wastewater and stormwater services have adequate servicing capacity including reserve sewage system capacity and reserve water system capacity to support the proposed development within the Settlement Areas of Greenstone. Proponents will be required to undertake an assessment of the reserve capacity for municipal sewage and/or water services as part of the evaluation. Development will not be approved where the servicing capacity is insufficient.

5.4.5 Stormwater facilities will be designed and constructed using best management practices including the prevention of increased contaminant loads, minimizing changes in water balance and erosion, maximizing the use of vegetation, stormwater attenuation and re-use and by not increasing risks to human health and safety and property damage.

The *Drainage Act* provides a procedure whereby the Municipality may, with a valid petition of landowners in the "area requiring drainage", provide a legal outlet for surface and subsurface waters not attainable under common law. In return, the landowners within the defined drainage watershed pay for the privilege of the drainage outlet. Under the *Drainage Act*, the municipality is responsible for maintaining the drainage works after construction, however it is still the landowners who must frequently notice functional changes in the drainage works. Landowners should inspect the drainage works and bring any concerns to the attention of the municipality.

The municipality may appoint a drainage superintendent to supervise maintenance work on all municipal drains within the municipality. When the drainage report is "current", maintenance work can be undertaken without preparing a new drainage report. The drainage superintendent is responsible to the municipality and the landowners for inspecting the drain or local problems on the drain, discussing necessary maintenance with landowners, and supervising the maintenance work. The costs for maintenance are distributed amongst the landowners in the watershed according to the maintenance clauses contained in the current report.

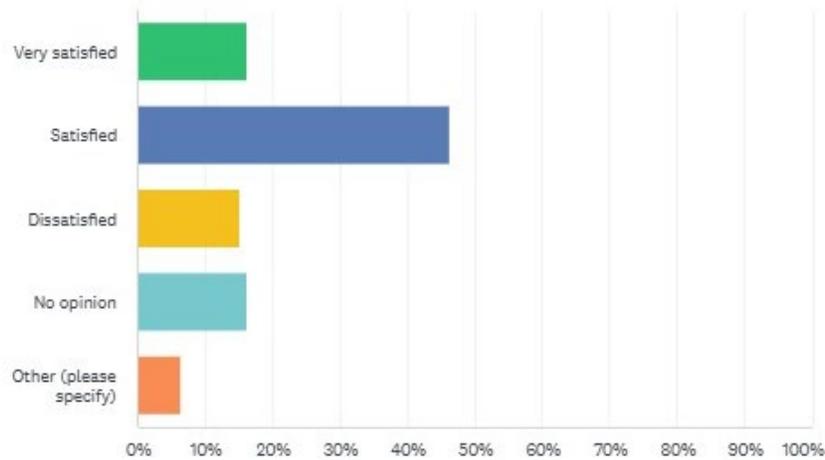
Landowners involved in a drainage works proposal are urged to participate in the procedures of *The Drainage Act* so the end result will be an outlet drainage system which is adequate, of reasonable cost and maintenance free.

PUBLIC ENGAGEMENT SURVEY RESULTS

Based on the survey results, public opinion indicates largely positive feedback for service delivery relating to stormwater management at this time.

How satisfied are you with the performance of the storm sewer system in your area during a heavy rain?

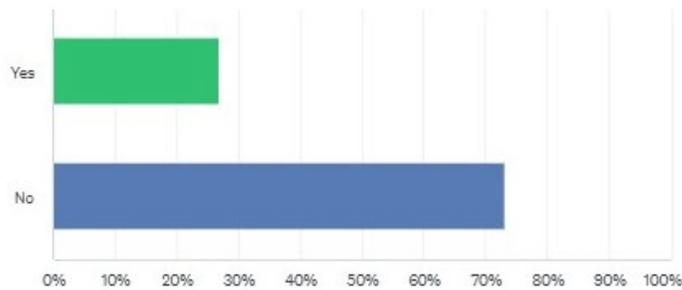
Answered: 93 Skipped: 9



ANSWER CHOICES	RESPONSES
▼ Very satisfied	16.13% 16
▼ Satisfied	46.24% 43
▼ Dissatisfied	15.05% 14
▼ No opinion	16.13% 16
▼ Other (please specify)	Responses 6.45% 6
TOTAL	93

Have you ever experienced flooding in your neighbourhood due to storm sewer issues?

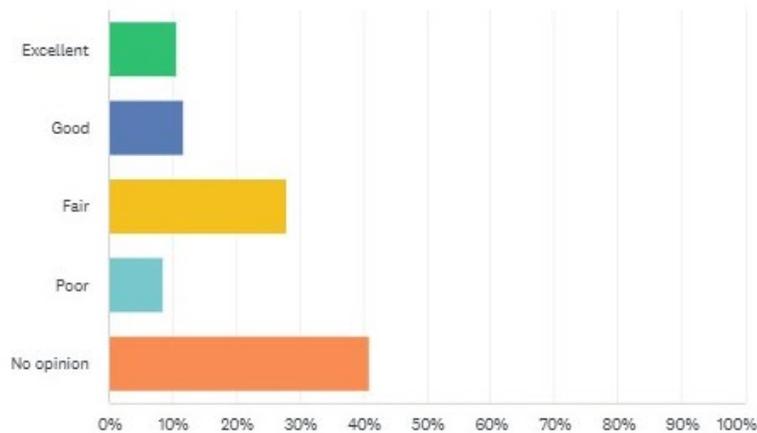
Answered: 93 Skipped: 9



ANSWER CHOICES	RESPONSES
Yes	26.88% 26
No	73.12% 68
TOTAL	93

How would you rate the responsiveness of the Municipality in handling storm sewer problems when they occur.

Answered: 93 Skipped: 9



ANSWER CHOICES	RESPONSES
Excellent	10.75% 10
Good	11.83% 11
Fair	27.96% 26
Poor	8.60% 8
No opinion	40.86% 38
TOTAL	93

NEW LEGISLATIVE REQUIREMENTS FOR STORM WATER SYSTEMS

The municipal Consolidated Linear Infrastructure Environmental Compliance Approval (CLI-ECA) replaces the numerous pipe-by-pipe Environmental Compliance Approvals (ECAs) that were previously issued for components of municipal sewage collection systems and municipal stormwater management systems.

A CLI ECA typically does not apply to:

- municipal sewage treatment plants
- privately owned, industrial and commercial sewage collection
- privately owned, industrial and commercial stormwater management systems

A municipal CLI-ECA is a single environmental permission for all the sewage works components of a municipal sewage collection system or a municipal stormwater management system. They include conditions that authorize these municipalities and prescribed persons (such as developers) to make changes to the system when requirements in the CLI ECA are met.

CLI ECAs are issued under the *Environmental Protection Act* (EPA) to fulfill requirements in section 53 of the *Ontario Water Resources Act* (OWRA). Prescribed persons are defined under Ontario Regulation 208/19, Environmental Compliance Approval in Respect of Sewage Works. They are identified as having an agreement with a municipality under the *Planning Act* or the *Development Charges Act*.

In 2024, the Ministry of Environment, Conservation and Parks (MECP) issued the CLI-ECA's to the Municipality of Greenstone. The Municipality has been working with a consultant and engineering firm to address the initial requirements of the CLI-ECA.

GRANT PROGRAM

The Municipality currently has a Sewer Water Alleviation Program to provide financial assistance to residents that are installing backflow prevention valves or disconnecting their weeping tiles from the sanitary sewer system.

KEY PERFORMANCE INDICATORS

1. Are we meeting the recommended investment target as per AMP
2. Have any flooding incidents occurred during the year and where an incident involved municipal fault, have mitigation measures been addressed to prevent further incidents in the area?
3. Are municipal operations in compliance with the Storm Water O&M Manual.

ASSET USE

The Greenstone Stormwater Management System involves 5 Wards and consists of the following assets:

- 16.4 km storm sewer pipes
- 369 catch basins
- 167 maintenance holes (manholes)
- 26+ outlets
- ditches, swales and culverts (no inventory available)

Currently there are no stormwater management facilities (e.g. storm ponds, oil grit separators etc.)

Equipment specifically used to maintain the storm sewer distribution network includes four (4) steamer units and a vac truck.

ANALYSIS

OPTIONS:

1. Do nothing.

This option is non-compliant with CLI-ECA legislation.

2. Complete operating and maintenance compliance requirements using in-house staff. (RECOMMENDED)

This option is preferred to keep infrastructure knowledge within the Corporation however, a staffing resolution is required to address the workforce necessary to meet service delivery expectations of the Public Works Department.

3. Complete operating and maintenance compliance requirements using a contractor.

This option is not preferred due to the complexities of the contract needed for this type of work. Contract terms with hourly rates for services are difficult to budget appropriately. Negotiations would be involved with cost-plus work, and coordination of activities with Public Works could pose some challenges. Overall, this option can be expected to be more expensive than contracting out services that can be performed for a fixed contract price (such as waste collection).

IMPROVING IN-HOUSE PROCESS AND PERFORMANCE:

Asset Data

The Municipality does not have an inventory of culverts or municipal ditches. This information is required in order to establish an operational maintenance program and reporting structure.

Recommendation: THAT Council support the inclusion of project funds in the 2026 Capital Budget for a culvert and municipal ditch inventory to complete the storm water asset dataset, which can then be uploaded as a GIS layer (\$50,000).

System Performance

The purpose of a Stormwater Monitoring Plan is to confirm stormwater infrastructure is functioning as designed to reduce environmental impacts. Monitoring data is used to improve system operation. The CLI-ECA directs that the Municipality must develop and implement a Stormwater Monitoring Plan within 24 months of the MECP publishing of the monitoring guidance document. The guidance document is pending and will possibly be released late 2025.

Recommendation: THAT Council support the inclusion of project funds in the 2027 Capital Budget to engage a Contractor to develop the required Storm Water Monitoring Plan (\$30,000) as per the Municipality's CLI-ECA requirement.

Community Development Practices

Municipalities often develop their bylaws or regulations in conformance with provincial acts to manage local stormwater effectively. Considering the potential impact on local water sources, continued assessment and updating of stormwater management policies is essential for sustainable community development.

The Municipality has a lack of adequate information to support the engineering works for community development projects. A Drainage Study is an assessment of drainage patterns and is used to identify areas where drainage solutions may be needed. It typically focuses on a specific issue, area, or problem within the drainage system, and is aimed at understanding specific problems such as flooding in a localized area, erosion, or specific water quality issues. A Drainage Study provides detailed hydrological analysis of specific issues and may include modeling of stormwater runoff and its impacts. There are some suspected drainage issues that the Municipality could plan to mitigate; a Drainage Study provides specific engineering solutions or mitigation strategies.

A Drainage Master Plan includes comprehensive data collection and thematic mapping. It encompasses broader hydrological and hydraulic modeling, considering various land use scenarios. A Drainage Master Plan develops policies and standards for future developments and drainage system improvements. As with all Master Plans, a Drainage

Master Plan is a long-term strategic document that considers future growth and policy changes. This plan would benefit the Municipality to guide the phased implementation of infrastructure over many years or decades.

Recommendation: THAT Council support the inclusion of funds in the Capital Budgets for a Drainage Study (2026) and Drainage Master Plan (2027) for Greenstone (\$150,000 combined), including any draft policies relevant to the Municipality for best practices in drainage management.

Procurement Practices

The Procurement process needs to ensure that tenders related to sewer works must lay out all CLI-ECA requirements.

ADJUSTING SERVICE LEVELS:

The introduction of the CLI-ECA legislation (referred to earlier under the Service Background section) demands a major increase in day-to-day activities needed to comply with prescribed inspection and maintenance program. Storm sewer activities must be conducted as prescribed by the Operating and Maintenance Manual for the Greenstone Storm Water System (approved by the province), and all activities documented and annually reported.

Ongoing work is required to address the following requirements:

CLI-ECA Requirement	Details	Deadlines
Operations and Maintenance (O&M Manual)	<p>Manual must be created and made available</p> <p>Must include or reference, but is not necessarily limited to the following:</p> <ul style="list-style-type: none"> • Procedures for routine operations • Inspection programs • Maintenance and repair programs • O&M requirements to protect sources of drinking water • Procedures for monitoring equipment • Emergency response, spill reporting and contingency plans • Complaint procedure(s) 	
Annual Report	Stormwater System Report	Due to MECP April 30 th , Posted to Municipal Website by June 1 st .
Storm Water Monitoring Plan		Must develop and implement a Plan within 24 months of Ministry publishing monitoring guidance document. (Guidance document is pending, possibly late 2025)
Storm Sewer Catchment Inventory	Required to map catchment areas and categorize by level of treatment	

The Operations & Maintenance Manual will be a substantial document that prescribes commitments and timelines for storm sewer maintenance activities. It is expected that performing the work as prescribed will require a full-time work crew to carry out inspections and corrective actions across Greenstone, and that this crew would be continuously assigned to these duties year-round, on a revolving basis. Thorough documentation of all maintenance procedures is required to demonstrate accountability in infrastructure maintenance.

COST AVOIDANCE: OPERATING COSTS AND CAPITAL INVESTMENTS:

Consequences of Failure

The Operating and Maintenance (O&M) Manual and the Annual Reporting requirements of the CLI-ECA directs the accurate documentation of prescribed activities. The Municipality is required to comply with all required actions stated in the O&M Manual and the CLI-ECA itself. Financial consequences are highly probable where non-compliance is determined. Failure to follow the O&M Manual will leave the Municipality open to litigation when flooding causes damage to private property. The Municipality's insurance deductible is currently \$100,000 per event; when applied, these costs are drawn from the tax levy.

Flooding and sewer backups are the Municipality's most common types of claims. While there have not been any claims since 2022, over a 12-year period (2010-2022) the Municipality received 24 sewer backup insurance claims. Of these claims, 11 had zero incurred costs. The balance of claims averaged a cost of \$20,000 each. Averaging 2 claims per year for future budgets, annual insurance deductible costs paid for from levied taxes would be \$40,000. An increase in claims will likely increase insurance premiums, even if all claims are under the deductible amount and therefore paid directly by the Municipality.

Consistent adherence to the O&M Manual is important to reduce insurance risks to the Municipality.

ENHANCING AND EXPANDING SERVICE LEVELS:

The Municipality is currently proceeding with two projects to address areas with significant storm water drainage problems.

1) Centennial Drive in Longlac

The 2025 Capital Budget includes funds to install an additional storm sewer line on Centennial Drive to address drainage issues prior to reconstruction of the road. The current design is ineffective to manage storm water. This is a multi-year project that is in progress.

2) Main Street in Geraldton

The design plan to reconstruct Main Street includes the replacement of underlying infrastructure including storm sewer networks, culverts, and in-ground drainage (needed to address ground saturation in areas of naturally poor drainage). The culvert under Main Street through which Hard Rock Creek flows (at the Esso station) will require a larger sized structure appropriately sized to accommodate high water flows.

This SDR recommends supporting a project budget for the development of a Master Drainage Plan to assess the Municipality's current drainage flows impacting municipal and private infrastructure and to prepare proper drainage solutions to correct problem areas and allow for proper community development.

NEW REVENUES:

Available Storm Water Management funding options include:

- 1) Status quo practice (obtain funds from the property tax levy)
This is a consistent source of funds, though correcting the infrastructure gap has the potential to increase property taxes. It may be difficult to separate the true operating cost of the storm sewer system when managed financially in this manner.
- 2) Storm Sewer Fee
While separating costs from property taxes via a dedicated fee facilitates transparency in true operating and capital costs, it is an unpopular option among constituents of municipalities.
- 3) Provincial/Federal Funding
This option generally only supports Capital Projects, is unreliable in that funding is not guaranteed or often available. Furthermore, depending on the program, this may necessitate the Municipality not applying for funding for another needed project.

It is difficult to understand future costs without the information and guidance from a Drainage Master Plan and actual operating costs under the new operational maintenance program. For this reason, decision-making on storm water management funding option would best be postponed by a few years.

Recommendation: THAT Council review options on how to fund Storm Water Management with guidance from the Drainage Master Plan (to be completed in 2027).

ALTERNATIVE SERVICE DELIVERY INCLUDING SHARED SERVICES OR CONTRACTING OUT:

Contracting out inspections and maintenance is an option however this is not recommended due to the potential for high cost-plus charges. Tendering for a contract could only include a general scope of work by which the Contractor would be tasked with the delivery of a scheduled maintenance program. This presents a challenge because time for the work cannot be quantified due to the varying degree of cleaning necessary and, where infrastructure repairs are encountered, additional work would involve extra (realistically high) costs.

SERVICE STRUCTURE AND STAFFING REALIGNMENT:

The SDR for Waste Management provided the following recommendation (approved via RES 25-56:

“THAT Council direct staff to compare curbside waste collection costs with options to contract-out collection services and report back to Council by October 14, 2025.”

Road, waterworks, and waste management service delivery involves year-round operational commitments. Staff advise that waste management would be the service most feasible to contract out as the scope of work is definitive and waste management contractors are available. The Municipality is faced with a continuing staff shortage and increased work responsibilities. The Service Delivery Review for Public Works recommended:

“THAT once all service levels are set for Public Services/Public Works related services through the Service Delivery Review (SDR) process, a full review of the Public Services staffing model be completed to ensure adequate staff to deliver service levels identified by the SDR’s.”

DISCONTINUING THE SERVICE (IF APPLICABLE):

Not applicable due to legislated requirements.

FINANCIAL IMPACT

Staff for Storm Water Management Operations

Recommendation #4 of the SDR for Waste Management states:

“The cost to implement a contracted residential waste collection program are undetermined at this time. The recommendation requires that staff seek quotes for this potential contracted service and report back to Council with a cost benefit analysis including a comparison of the costs to perform these services in-house vs. the cost to contract out. The report will provide a recommendation for Council’s consideration.”

The cost-benefit analysis for waste management activities will then need to be compared against the estimated cost of contracting storm water inspection and maintenance. The most cost-effective solution needs to take into account the realities of staff recruitment and retention.

The overall financial impact of implementing the CLI-ECA operational framework for both the sewer and stormwater systems is estimated at \$400,000 annually, beginning this year. Approximately 30% (\$120,000) of this cost can be attributed to the stormwater system. This does not include Capital costs for infrastructure repairs or improvements.

An annual monitoring plan is a requirement of the CLI-ECA. This additional annual cost is projected to be upwards of \$30,000, beginning in 2027.

Approximately \$200,000 is needed to complete the Drainage Study, Drainage Master Plan, and the asset inventory of ditches and culverts. This work will be a multi-year project scheduled for 2026/2027.

The 2025 Capital Budget includes \$100,000 for a new Infiltration and Inflow Study.

Based on current expenditures, the storm water management system is significantly underfunded. The asset management plan provides further details on funds needed to address storm water infrastructure replacement needs over time. However, infrastructure is only one aspect of storm water management, which includes community planning and other infrastructure (e.g. roads) design needs to manage drainage and mitigate flooding.