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10-Year Stormwater Financial Plan Staff Report to Council

Report Number: 2020-78

Department(s): Financial Services

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Meeting Date: October 19, 2020

Recommendations

1. That the report entitled Stormwater 10-Year Financial Plan Options dated October 19, 2020 be received; and,
2. That Council provide direction on which option to pursue; and,
3. That the chosen option be used as the basis for an update of the Stormwater Financial Plan; and,
4. That Staff be authorized and directed to do all things necessary to give effect to this resolution.

Purpose

The purpose of this report is to determine which option to use to update the financial plan for the stormwater service. This financial plan is used to monitor the overall financial health of the service and ensure a sustainable funding model.

Background

The Town provides stormwater management services to protect the community and environment from stormwater runoff. Stormwater runoff is water that flows off properties mostly due to rain and snow events. The first financial plan was introduced in 2017 and covered the 2018 to 2023 planning period.

The Town is responsible for 284 kilometres of sewer, 10,851 catch basins and maintenance holes, 37 oil grit separators as well as 65 wet ponds, dry ponds, and LID features. Collectively these assets would cost over \$500 million to replace in today's dollars. This network is comparable in size to the Town's water and wastewater networks.

Stormwater management has seen several accomplishments. Many developments have been converted from ditch-based drainage to curb and sewer drainage. LID features have been successfully implemented. Staff continue to deliver a wide range of services related to the inspection, cleaning, maintenance, and storm response for ponds, catch basins, sewers, ditches, creeks, and roadways.

Stormwater management is a rapidly evolving service. It appears to be gaining greater attention, as we understand the how the service can help protect the environment, reduce risk and create attractive public spaces.

Discussion

This report will discuss the cost drivers the stormwater service is facing. It will present three options on how to address these drivers and provide clarity to the level of service that Council would be adopting.

Cost Drivers

Improving Environmental Protection

Stormwater carries nutrients, like phosphorus with it, as it runs off of properties. When stormwater runoff is untreated, it carries the nutrient rich water into our streams and rivers. The nutrient rich water causes algae blooms. As the algae eventually decomposes, it consumes the oxygen in the water. This lack of oxygen causes fish to suffocate.

Due to the importance of stormwater management in protecting the environment, there are several pieces of legislation directly tied to stormwater management systems. Notably, there is the Ontario Water Resources Act, with the associated Environmental Compliance Approvals (ECAs) that are granted for our stormwater facilities.

Currently different stormwater facilities need to meet different regulatory requirements. Stormwater management ponds are typically grandfathered in to the regulatory requirements in place at the time of development. The Ministry of Environment, Conservation, and Parks (MECP) is working to transition to a standardized regulatory framework where all ponds need to meet the same higher standard. The MECP has published the proposed changes to the Environmental Registry of Ontario for comments, indicating these changes could occur in the relatively near future.

For inspections and minor maintenance, the Town already operates using a best practices approach, treating all ponds as if they have the more stringent requirements. This will help ease the transition when the new system is enforced. Where the Town needs improvement is with the sediment removals.

Based on past surveys, it is estimated 11 ponds are past due for sediment cleanouts. These ponds are at risk of polluting the water entering the receiving watercourses and ultimately Lake Simcoe. There are an additional 6 ponds expected to require a sediment cleanout by 2025. The current service level of completing 2 sediment cleanouts a year will leave the Town forever playing catch-up. The Town may face fines if environmental requirements are not met in time.

Improving Asset Management

Staff have done a detailed review of both future operating and capital requirements. The overall findings were that our current funding level is sufficient in the short term but that there are challenges that can build up over time.

Storm sewers are not proactively inspected. It is a best practice that sewers be inspected for blockages and deterioration. This is already done for wastewater sewers. The risk of not inspecting sewers is that sewers could collapse, back up, or flood without warning. Repairs will be reactive and sewers will not reach their expected service life.

Since there is a lack of reliable data on asset condition, there likely is insufficient budget to perform the necessary regular maintenance on the pipes. Regular maintenance reduces pipe failures and helps ensure the pipes reach their intended lifespan. If sewers are not repaired, deterioration will get worse, a backlog will be created, and more staff time will be spent responding to failures.

As the system ages, the cost of replacing assets is rising. As all assets were constructed in a similar time period (1980-2000), a “wave” of replacement costs will occur in approximately 30 years. Current funding levels are not sufficient to prepare for this replacement wave. This risk is not addressed by the 10-year financial plan due to its timescale. Long term risks will be addressed by the Town’s Fiscal Strategy and Asset Management Plans.

Community Building and Leading in Low Impact Development

The Town is growing and with that comes with the need to expand stormwater management services. The Town will assume 14 ponds and will also build a minimum of \$5 million in stormwater assets in the next 10 years. While the capital costs of these assets will be covered by the development industry, the Town will be responsible for the ongoing maintenance and eventual replacement. Sufficient funding will be needed to accommodate these additional assets to maintain service levels.

“Continue to implement programs that make Newmarket a leader in the implementation of Low Impact Development (LID)” is one of the strategic priorities of Council. Under this strategic priority, the Action Item is to “Implement LID capital projects where appropriate”. The ability to continue advancing this strategic priority is severely hindered by continuing with the status quo funding option.

LID’s provide many benefits to the Town, residents, and our downstream neighbours in the watershed. They allow more stormwater to soak into the ground where it falls, rather than being transported to a stormwater pond, or released directly into a natural watercourse. By reducing the amount of stormwater reaching the end of the pipe, the Town becomes more resilient to the impacts of increased severe storms influenced by climate change, and we reduce the amount of sediment reaching our stormwater ponds thereby decreasing the cleanout frequency. In addition, LID’s improve the quality of the stormwater being released to the natural watercourses, assists to prevent floods and erosion, improves water balance, and protects marine life.

Options

This section provides options for how much Council would like to increase funding for stormwater management and explains the corresponding service level that it supports.

Option 1: Status Quo

This option maintains the status quo level of service, but does not address increasing risks.

This option assumes the financial impact of the evolving environmental standards will be minimal. If the costs are more significant, the financial plan will have to be updated to accommodate these costs.

This option does not allow for the implementation of additional best practices for inspections and preventative maintenance to protect our assets, homes and businesses.

This option only allows for new capital projects funded through development charges and support additional maintenance costs related to the Town’s new assets. However, the opportunities to implement LID projects are limited.

This option has the lowest rates over the 10-year period. See Table 1 for the projected rates over the planning period.

Table 1: Financial Consideration for Option 1

| | 2021 | 2022 | 2023 | 2024 | 2025 |
|--------------------------|-----------|-------------|-------------|-------------|-------------|
| Increase | 10% | 10% | 9% | 7% | 5% |
| Revenues and Collections | 2,855,000 | 3,091,000 | 3,324,000 | 3,522,000 | 3,673,000 |
| Reserve Balance | 257,000 | - 2,381,000 | - 2,511,000 | - 2,099,000 | - 3,048,000 |
| Median Low Charge | 9.73 | 10.71 | 11.67 | 12.49 | 13.11 |
| Median Medium Charge | 46.29 | 50.92 | 55.50 | 59.39 | 62.36 |
| Median High Charge | 111.73 | 122.91 | 133.97 | 143.35 | 150.51 |

| | 2026 | 2027 | 2028 | 2029 | 2030 |
|--------------------------|-------------|-------------|-------------|-------------|-----------|
| Increase | 5% | 5% | 5% | 5% | 5% |
| Revenues and Collections | 3,831,000 | 3,998,000 | 4,173,000 | 4,356,000 | 4,549,000 |
| Reserve Balance | - 3,920,000 | - 4,926,000 | - 4,103,000 | - 2,255,000 | 120,000 |
| Median Low Charge | 13.77 | 14.46 | 15.18 | 15.94 | 16.73 |
| Median Medium Charge* | 65.47 | 68.75 | 72.18 | 75.79 | 79.58 |
| Median High Charge | 158.04 | 165.94 | 174.24 | 182.95 | 192.10 |

*typical annual residential charge

Option 2: Incremental Improvements

This option helps the Town build a stronger foundation to reduce risks with our stormwater management service while maintaining service levels.

This option assumes the financial impact of the evolving environmental standards will be minimal. If the costs are more significant, the financial plan will have to accommodate these costs.

This option allows for the implementation of additional best practices for inspections and preventative maintenance to protect our assets, homes and businesses. The collection of sewer condition data will help determine our needs for proper asset management. This option does not allocate additional funding for maintenance. It assumes that our current staffing resources will be more efficient in providing services with a better understanding of our infrastructure.

This option only allows for new capital projects funded through development charges and support additional maintenance costs related to the Town's new assets. However, the opportunities to implement LID projects are limited.

See Table 2 for the projected rates over the planning period.

Table 2: Financial Consideration for Option 2

| | 2021 | 2022 | 2023 | 2024 | 2025 |
|-----------------------|-----------|-------------|-------------|-------------|-------------|
| Increase | 10% | 10% | 9% | 9% | 9% |
| Revenues | 2,855,000 | 3,091,000 | 3,324,000 | 3,578,000 | 3,855,000 |
| Reserve Balance | 50,000 | - 2,816,000 | - 3,199,000 | - 2,994,000 | - 4,035,000 |
| Median Low Charge | 9.73 | 10.71 | 11.67 | 12.72 | 13.87 |
| Median Medium Charge* | 46.29 | 50.92 | 55.50 | 60.50 | 65.94 |
| Median High Charge | 111.73 | 122.91 | 133.97 | 146.03 | 159.17 |

| | 2026 | 2027 | 2028 | 2029 | 2030 |
|-----------------------|-------------|-------------|-------------|-------------|-----------|
| Increase | 8% | 8% | 7% | 6% | 5% |
| Revenues | 4,124,000 | 4,413,000 | 4,687,000 | 4,939,000 | 5,161,000 |
| Reserve Balance | - 4,905,000 | - 5,799,000 | - 4,769,000 | - 2,632,000 | 82,000 |
| Median Low Charge | 14.97 | 16.17 | 17.30 | 18.34 | 19.26 |
| Median Medium Charge* | 71.22 | 76.91 | 82.30 | 87.24 | 91.60 |
| Median High Charge | 171.90 | 185.65 | 198.65 | 210.57 | 221.10 |

*typical annual residential charge

Option 3: Extraordinary Improvements

This option helps the Town to build a stronger foundation to reduce risks with our stormwater management service.

This option will likely be sufficient to address the evolving environmental standards. If the costs are more significant, priorities within the plan can be shifted or the financial plan will have to be updated to accommodate these costs.

Like option 2, this option allows for the implementation of additional best practices for inspections and preventative maintenance to protect our assets, homes and businesses. However, unlike option 2, this option allocates additional funding for maintenance to provide a higher level of service.

This option also allows for an additional \$11 million worth of new capital projects funded through the stormwater rates. This is in addition to the \$5 million amount funded by development charges and additional maintenance costs related to the Town's new assets. The opportunities for LID developments are significant.

Table 3: Financial Consideration for Option 3

| | 2021 | 2022 | 2023 | 2024 | 2025 |
|-----------------------|-----------|------------|------------|------------|------------|
| Increase | 55% | 10% | 9% | 5% | 5% |
| Revenues | 3,819,000 | 4,151,000 | 4,479,000 | 4,678,000 | 4,887,000 |
| Reserve Balance | 490,000 | -3,000,000 | -3,815,000 | -4,288,000 | -5,590,000 |
| Median Low Charge | 13.71 | 15.09 | 16.44 | 17.27 | 18.13 |
| Median Medium Charge* | 65.23 | 71.75 | 78.21 | 82.12 | 86.22 |
| Median High Charge | 157.44 | 173.19 | 188.77 | 198.21 | 208.12 |

| | 2026 | 2027 | 2028 | 2029 | 2030 |
|-----------------------|-------------|-------------|-------------|-------------|-----------|
| Increase | 5% | 5% | 5% | 5% | 5% |
| Revenues | 5,106,000 | 5,337,000 | 5,579,000 | 5,832,000 | 6,099,000 |
| Reserve Balance | - 5,595,000 | - 7,316,000 | - 6,083,000 | - 3,139,000 | 291,000 |
| Median Low Charge | 19.04 | 19.99 | 20.99 | 22.04 | 23.14 |
| Median Medium Charge* | 90.53 | 95.06 | 99.81 | 104.80 | 110.04 |
| Median High Charge | 218.53 | 229.45 | 240.93 | 252.97 | 265.62 |

*typical annual residential charge

Conclusion

This report outlines the cost drivers for the stormwater management service. They include improving environmental protection; improving asset management; and community building and leading in low impact development. This report outlines three options to establish the financial strategy for the service.

The chosen option will be used as the basis for an update to the Stormwater Financial Plan in 2021 and will establish the Stormwater rate for 2021 that will be brought forward to Committee of the Whole on December 7, 2020.

Business Plan and Strategic Plan Linkages

Newmarket's vision of a community "Well Beyond the Ordinary" is one that provides efficient, effective and environmentally sound services to an appropriate level that achieves Council and/or Provincially mandated services levels, which meet public health and safety requirements and enhances quality of life while ensuring that system capital assets retain their value and are managed and funded according to sustainable, lifecycle based principles and practices.

This service acquisition aligns with Council's 2018-2022 Strategic Priorities of Long-term Financial Sustainability and Environmental Stewardship as the financial plan will help us provide stormwater management services.

Consideration has been given to the recommendations of the Fiscal Strategy:

- A comprehensive rate-setting study that covers stormwater rates
- Ensure that the rate-setting study considers long-term asset management funding needs, inter-generational equity, the cost of climate change adaptation, increased costs due to intensification, and a contingency factor for yet-to-be identified costs such as regulatory changes
- Develop a detailed financial plan that includes an analysis and forecast of capital and operating costs and incorporates the results of the rate-setting study
- Extend the time horizon of the financial plans to ten years
- Develop a financial plan for stormwater comparable to the plans for water and wastewater

Consultation

Financial Services, Asset Management, Engineering Services and Public Works Services have been consulted on this report.

Human Resource Considerations

Not applicable to this report.

Budget Impact

This is dependent upon the option chosen and will be further detailed in the 10-Year Financial Plan.

Attachments

None.

Approval

Mike Mayes, Director of Financial Services/Treasurer
CPA, CGA, DPA

Peter Noehammer
Commissioner of Development & Infrastructure Services

Contact

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