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City of Maple Ridge

TO: Mayor Michael Morden
and Members of Council
FROM: Chief Administrative Officer
SUBJECT: Green Infrastructure Management Strategy Policy Review Process Report

MEETING DATE: November 12, 2019
FILE NO:
MEETING: Workshop

EXECUTIVE SUMMARY:

One of the key priorities identified in Council's 2019-2022 Strategic Plan is the preparation of a scoping report to outline policy options related to a Green Infrastructure Management Strategy (GIMS) for new development. This was also identified as a key action item from the Council Workplan Matrix.

Green infrastructure is a relatively new term that describes the integration of natural assets (i.e. streams, wetlands, soils, and forests) and human made design components (i.e. street trees, rain gardens, green streets, green roofs) in land use planning, engineering, and finance for management of urban form and function. These components vary in size and scope, but work collectively to improve the condition of our urban environments and support healthier, cost effective, more liveable and sustainable communities.

The aim of the Green Infrastructure Management Strategy Scoping Report is to identify appropriate green infrastructure options for the City and to assess their effectiveness in our urban environments. There is an increasing body of scientific evidence showing that green infrastructure can help us deal more efficiently and cost effectively with growing challenges associated with urban densification, development, and climate change impacts than traditional infrastructure and urban design options.

Therefore, the purpose of this report is to provide an introduction to Green Infrastructure and present a process to determine policy options for a Green Infrastructure Management Strategy for Council's consideration and endorsement.

RECOMMENDATION:

That the Green Infrastructure Management Strategy policy review process be endorsed.

BACKGROUND:

What Is Green Infrastructure?

Green infrastructure is a broad term that describes the adoption and/or integration of natural and semi-natural components in land use planning, engineering, and urban design. These components vary in size, scope, and function, but work collectively to improve the condition of the urban environment and support healthier, more liveable, and sustainable communities.

Green infrastructure has the potential in both its natural form and its bio-engineered form to provide “free” ecosystem services that support sustainable development and liveable communities. By investing in a green infrastructure management approach, we can continue to enjoy the environmental, economic, and social benefits that nature provides us with for free. Tangible areas where this has been successfully applied includes management of water, energy, air quality, and health in addition to added advantages of improving the look, feel, and function of our urban environments to support more economic and socially vibrant communities.

Green infrastructure projects can range in size from the street level (i.e. number of street trees, bio-swales, or rain gardens), to the site level (green roofs, landscape or pervious areas), to the neighborhood level (i.e. tree canopy cover percentage, green streets, access to green spaces) and up to the watershed or municipal wide scales (i.e. community greenway network connections, watershed health). Determining which type of green infrastructure is appropriate depends on the priorities of the decision makers, along with challenges as well as opportunities associated with the location and size of development that is occurring (i.e. costs, space available, possible incentives, land use, regulations, etc.)

How Did We Get Here?

A scoping report to outline policy options for a Green Infrastructure Management Strategy was recently identified as one of Council's strategic priorities in the City of Maple Ridge Strategic Plan 2019-2022. The topic of Green Infrastructure Management Strategy was also identified and scheduled into the 2019 Business Plan & Council Matrix.

A Green Infrastructure Management Strategy was originally identified back in 2014 as part of the municipal “Environmental Management Strategy Report 2014” (EMS) longer term implementation recommendations. These priority items were identified through the extensive public consultation process as well as the recommendations from the consultant of record. The recommendation emphasized a pro-active, measurable, and adaptive approach for smarter use of existing natural assets and green infrastructure design within our urban areas to maximize environmental services/benefits to our community.

In March 2017, the Municipal Environmental Advisory Committee (EAC) identified and unanimously selected Green Infrastructure Management Strategy as one of their short term high priority implementation and action item for Council's consideration. Although it was originally identified as a long term strategy, the EAC recognized the importance of moving forward with this initiative in a timely manner, with ongoing opportunities and challenges associated with urbanization, re-vitalization, and densification of the Town Centre and surrounding urban infill areas. The EAC recommendation was subsequently endorsed by the Council of the day on November 7, 2017.

In the Spring of 2018, a working group of the EAC was formed. The sub-committee or working group consisted of several EAC voting members in addition to several professionals from the community. The Green Infrastructure Management Strategy Sub-Committee was formed to provide feedback to the EAC and Council on how we might be able to break down the longer term objectives and scope into something short term, practical, and affordable that aligns with the current Council's priorities.

This sub-committee group provided regular updates to both the EAC and the Council Liaison whenever possible. This included an overview of their strategic objectives at the 2018 March EAC update presentation. The Chairperson, Bill Hardy also provided a preliminary presentation to the Council liaison and the alternate Council liaison on the scoping report components and deliverables to ensure the proposed work was aligned with the EAC mandate and Council's strategic priorities.

DISCUSSION:

Green infrastructure strategies, approaches, and applications have been widely utilized and studied. They can provide cities with a multitude of valuable economic, social, and environmental benefits and services. They are effective at dealing with a wide range of challenges associated with urban densification, community health, and impacts associated with development pressures. There are also significant cost savings associated with a green infrastructure approach, especially in the long term.

Prior to identifying policy options it is necessary to prepare a study to identify important components of Green Infrastructure and opportunities that can potentially be applied towards new development. Emphasis will be on examples of green infrastructure that have been used to support economic and social benefits including costs savings, risk management, community health, and socio/economic vibrancy in addition to environmental benefits. The gap analysis will also focus on identification of potential advantages, challenges, information gaps, as well as opportunities for the City with respect to next steps, including implementation and policy options.

COMPONENTS:

This study is proposed to include three (3) components to help identify appropriate policy options for Council's consideration:

1. **A municipal comparative scan** of what other municipalities have learned and are doing to apply green infrastructure to help meet their own economic, social and environmental strategic objectives. This will include a literature review of what other communities have learned abroad and within the region. Also determine which of these strategies and/or options might be relevant for our community to help us promote Council's strategic objectives with respect to economic vibrancy, liveability, risk management, and ecological health;
2. **Completion of a Gap Analysis** that will help us understand what kind of issues, advantages, challenges/gaps, resources and opportunities the City is facing with respect to embarking on a green infrastructure management approach for urban areas.

This in turn will help to identify appropriate options, tools, and strategic initiatives that Council can consider in its efforts to reduce costs, and more effectively utilize benefits and services associated with the application of a green infrastructure in the future.

This analysis will identify what kinds of natural assets we currently have to work with and what kind of measurable services and benefits they provide to our community. This component will help us determine whether we have sufficient information to identify, measure and manage existing natural assets and the ecological services they provide us with.

3. **Options and Recommendations.** The last part of the study and report will provide a synthesis of key findings along with potential options, opportunities, and recommendations on next steps for Council's consideration and endorsement.

TIMING AND PROCESS:

Each of the three components of this Green Infrastructure Management Strategy approach can be potentially completed within a six month period.

The following table is intended to provide Council with timelines and steps relating to this project.

STEPS

1. Council Endorse Scoping Report process <ul style="list-style-type: none">• Council to direct staff to proceed with the Green Infrastructure Management Strategy review;	Nov 2019
2. Award Contract and Initiate Project –	Jan. 2020
3. Municipal Scan – consultation with local governments and literature review. Report and presentation on lessons learned, comparative review, and appropriate management options for consideration	March 2020
4. Update to Council	April 2020
5. Gap Analysis of Advantages, Challenges, Gaps and Opportunities	May 2020
6. Update to Council	June
7. Report with Options and Recommendations – provide Council with synthesis of key findings, options, and recommendations for consideration with respect to policy and implementation options for green infrastructure in the City.	June 2020

INTERDEPARTMENTAL CONSIDERATIONS:

Staff from Planning, Parks, Building, Engineering, Finance, Operations and Emergency Services will be included in the review and consultation process.

Resources Required

For efficiency reasons, to prevent ongoing interruptions on limited available staff time, and to assist with an independent opinion on the subject matter it is recommended that an independent qualified professional be utilized to carry out this work. The consultant will assist with research, analysis, and presentations to Council on a regular basis.

It is estimated the cost for completion of this work will be approximately \$25,000. This will also include regular updates with Council on findings and recommendations about next steps for Council's consideration and potential endorsement. This amount will be accommodated in the existing Planning Department budget.

Alternative recommendation:

That the Green Infrastructure Strategy review not commence at this time.

CONCLUSION:

Green infrastructure is being successfully utilized as an alternative to traditional urban design and infrastructure management methods worldwide. There is significant cost savings and efficiencies associated with Green Infrastructure in meeting economic, social, and environmental strategic objectives by all levels of government. With today's increasing challenges associated with urban development, population growth and climate change impact; it strengthens the need for intelligent, pro-active, adaptive, and cost effective solutions.

Evidence increasingly demonstrates that Green Infrastructure is both effective and efficient at addressing both current future needs. Maple Ridge is well situated to utilize existing natural assets coupled with a new green infrastructure to effectively meet ongoing challenges and fulfill Council's priorities and strategic objectives identified in the 2019-2022 Strategic Plan.

Therefore, it is recommended that Council endorse the proposed process for the Green Infrastructure Management Strategy.

"Original signed by Rod Stott"

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