

The Green Infrastructure Strategy: Towards an Interconnected Green Network

ISSUE

Saskatoon's green spaces and assets are under pressure from urban growth and increasing stress from climate-related impacts such as invasive pests, flooding, heat and drought. As Saskatoon continues to grow and change, there is an opportunity to enhance and strengthen the Green Network by improving the ecosystems' condition, partnering with the community, and nurturing relationships between people and nature. This report outlines how, by integrating green Infrastructure into the urban fabric to create a more contiguous green network, Saskatoon can better provide resilient municipal and ecosystem services and create high-quality environments to live, work, learn and play.

BACKGROUND

At its meeting held on May 28, 2018, City Council considered the Green Infrastructure Update – May 2018 report. Additional reports were received throughout 2017, 2018 and 2019. Refer to Appendix 1 - Green Infrastructure Strategy Reporting Summary for additional background.

At its meeting on March 17, 2017, the Standing Policy Committee on Environment, Utilities and Corporate Services received communication from Meewasin regarding the Meewasin Valley-wide Resource Management Plan, and resolved that the matter be referred to the Administration for a report.

CURRENT STATUS

Green Infrastructure and the Green Network

Green infrastructure is a system of natural, enhanced and engineered assets that provide municipal and ecosystem services by protecting, restoring or emulating nature. When green infrastructure is designed holistically, it becomes an interconnected Green Network that works as a system to enhance the urban environment and improve quality of life. When green infrastructure is connected, resiliency increases, and the overall benefits exceed the contributions of an individual piece.

The Executive Summary for the *Green Infrastructure Strategy* can be found in Appendix 2. The full Strategy can be found online at www.saskatoon.ca/greeninfrastructure.

Vision and Actions

The vision for the Green Infrastructure Strategy (Strategy) is that Saskatoon's green network provides sustainable habitat for people and nature. The holistic green network takes into account natural, enhanced and engineered green infrastructure, which as a system provides far more effective *services* when considered together than when apart. The Strategy outlines actions and initiatives to achieve the vision for a holistic green network. There are five themes which guide the green network, which are:

- promotes **community** by facilitating place-making, honouring culture, and inspiring community-led transformation;
- creates a **governance** model with an emphasis on partnerships and triple bottom line solutions;
- provides access to high-quality, interconnected **open space** for all Saskatoon's residents;
- supports **ecology** by conserving biodiversity, supporting high quality habitat, and increasing climate change resilience; and
- facilitates **storm water management** by managing rain where it falls and recognizing storm water as an important resource.

Through research, engagement, municipal scans and analysis of the findings, the Strategy proposes a series of 15 actions, each with tasks associated with implementation of the action. The Green Infrastructure Actions are as follows:

1. Design the green network to reflect our collective history, honour cultural diversity and create a sense of belonging for all.
2. Inspire citizen-driven transformation of the green network.
3. Increase food production in the green network.
4. Invest in the green network within the City of Saskatoon.
5. Develop a cooperative governance approach to green network provision and management.
6. Redefine the partnership with Meewasin to achieve collective goals related to conservation, education, and development of the green network.
7. Renew formal and informal green space in the green network to meet citizen needs.
8. Expand the green network by creating new publicly available green space or increasing green infrastructure.
9. Increase walkability and active transportation throughout the green network.
10. Protect and grow the urban forest.
11. Protect, restore and manage significant natural areas.
12. Connect and naturalize the green network in built-up areas.
13. Improve biodiversity and ecosystem health throughout the green network.
14. Integrate natural waterbodies and drainage courses into development using green infrastructure.
15. Increase the use of low impact development.

Prioritization of the tasks associated with the plan are included in the action summary list, and near-term tasks can be found in Appendix 3 - Green Infrastructure Strategy Initiatives by Phase.

DISCUSSION/ANALYSIS

Risks

The Green Infrastructure Strategy details and is informed by the risks identified by internal and external stakeholders through numerous engagement activities. The City of Saskatoon's (City) *Climate Projections and Possible Impacts* report and Meewasin's

Valley-wide Resource Management Plan also identifies that climate change and biodiversity loss are the two biggest risk factors to Saskatoon's Green Network. Climate change projections for the region and the resource plan, as well as engagement feedback, indicates an increased risk for external impacts on the network, such as pests, heat, and changing precipitation patterns like drought and storms, which could compromise the network's capacity to support municipal and ecosystem services. Furthermore, deterioration of the City's green network may increase the likelihood of the urban heat island effect, which can create temperatures on hard surfaces like pavement considerably hotter than the air, where shaded or moist surfaces remain close to air temperature.

Benefits

Natural areas, like the river, are the backbone of a connected, integrated green network. Nature provides ecosystem services that are more difficult and costly to replicate than to conserve. By integrating hubs for conservation and biodiversity into the urban fabric, Saskatoon will benefit from increased resilience to climate change, improved community access to nature, and more recognizable and unique environments.

To align with the City's sustainability priorities, the Triple Bottom Line Decision Making Tool was used to conduct a high level evaluation of the Strategy. Overall, the results of the review indicate that the Strategy aligns with the City's environmental, social, economic, and governance priorities. Benefits are highest in the Environmental Health and Integrity, and Good Governance principles, followed by Social Equity and Cultural Wellbeing, then Economic Prosperity and Fiscal Responsibility.

Significant benefits of the Strategy are that it:

- supports carbon sequestration and climate change adaptation;
- places value on natural assets and defines the services they provide;
- supports partnerships and community-led change;
- strives for increased equity and inclusion of community members in green space design and management;
- seeks to improve policies and practices; and
- recognizes that opportunities for additional positive impacts can continue throughout implementation.

Supporting a Governance Framework

Language supporting the importance of green infrastructure is included in the Strategic Plan (2018-2021), Triple Bottom Line Policy, and the Official Community Plan. The Strategy provides an opportunity for a coordinated approach to prioritizing and coordinating new green infrastructure initiatives; informing cross-disciplinary processes and standards; collaboration; and reporting.

The Strategy is intended to provide guidance to the Administration for future work planning and budget forecasting. Implementation pieces will be brought forward to City Council for deliberation on an on-going basis ensuring City Council has opportunities to direct priorities and resources.

Coordination with the Meewasin Valley Authority

The City has historically looked to the Meewasin Valley Authority (Meewasin) and *The Meewasin Valley Project: 100 Year Conceptual Master Plan* as the central tenet for green infrastructure planning along the South Saskatchewan River. Meewasin's *Valley-wide Resource Management Plan* (Resource Management Plan) was developed to guide the renewal and development of site specific management plans and to help Meewasin fulfill its mandate to enhance and maintain the river valley in a balanced way. Work done through the Green Infrastructure Strategy has found that many of these same risks threaten Saskatoon's overall Green Network.

As the community grows, the City needs an integrated approach to managing all of its green infrastructure assets to ensure that areas outside of the Meewasin jurisdiction are coordinated and cohesive with those within Meewasin areas along the central river valley corridor. To promote coordination between the *Green Infrastructure Strategy* and Meewasin's *Valley-wide Resource Management Plan*, Meewasin staff participated on the *Green Infrastructure Strategy* project team. This partnership has facilitated knowledge and expertise sharing to ensure that actions in the Strategy are complimentary to the *Resource Management Plan* without creating duplication.

IMPLICATIONS

There are no financial, legal, social or environmental implications directly triggered by this information report.

City Council has approved funding to begin implementation of the *Green Infrastructure Strategy* in the 2020-2021 budget cycle. Funding from the Reserve for Capital Expenditure in the amount of \$150,000 will be available each year. The funds will be used to provide dedicated resources to coordinate work and act as a corporate resource for the Strategy, as well as lead the implementation of preliminary initiatives that have been identified in the Strategy.

ENGAGEMENT

From 2017 through 2019, feedback from over 600 community members, technical experts, and the Indigenous Technical Advisory Group informed the development of the Guiding Principles and Vision for the Green Network. The Guiding Principles were endorsed by City Council in May of 2018.

The draft Strategy was presented at a public come-and-go event November 21, 2019. Feedback was positive and supported the actions and areas of interest. There were concerns that the Strategy would be optional and that Administration would not be required to follow it. Refer to Appendix 4 – Green Infrastructure Strategy Engagement Summary. To ensure the Strategy is used by Administration, the dedicated resource will promote the Strategy across the corporation and advise on how work can be aligned.

NEXT STEPS

Green Infrastructure work led by Sustainability in 2020, and 2021, will focus on the development of a Green Infrastructure Program, including:

- education materials about the green network, including promotion of biodiversity and urban agriculture;
- collaboration opportunities with Meewasin's educational and public outreach programming to increase conservation, ecology, and natural and cultural resource awareness;
- a program to support green infrastructure projects through community and commercial grants or incentives;
- enhanced collaboration with the University of Saskatchewan, the school divisions and other stakeholders around green space management; and
- prioritizing sites, assessing risk, and developing management plans or restoration work.

Further exploration of external funding opportunities will be carried out which, if successful, may provide opportunities to expand the scope of the work proposed or the partnerships with stakeholders for this first phase.

Work which progresses and strengthens the green network is also being carried out across the Corporation, including the Natural Area Standards and the Urban Forest Management Plan. Other work groups are also proceeding with initiatives that align with the Strategy such as creating a tree protection bylaw, implementing the Flood Control Strategy, and developing a Centre Median Strategy.

APPENDICES

1. Green Infrastructure Strategy Reporting Summary
2. Green Infrastructure Strategy Executive Summary
3. Green Infrastructure Strategy Initiatives by Phase
4. Green Infrastructure Strategy Engagement Summary

REPORT APPROVAL

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