



State Of Urban Forest

Date	November 17, 2021
To	Operations and Community Services Committee
From	City Planning & Community Development
Service Area	Parks, Recreation & Cultural Services
Item No.	OCS21-34

RECOMMENDATION

The Operations and Community Services Committee recommends that City Council:

1. Consider increasing the Tree Replacement budget from \$91,000 per annum to \$125,000 per annum through the 2022 budget process, with a further increase of \$25,000 per year for the next 5 years.
2. Approve the tree donation program which allows residents to plant trees on public lands on application to the City, as further described in this report.
3. Declare the first Wednesday of June each year, beginning June 1, 2022 as Arbor Day Regina and donate 1000 tree seedlings to Regina residents.
4. Instruct the City Solicitor to prepare the following amendments to bylaw 2002-48, *The Forestry Bylaw*, as further described in this report, to be brought forward to a meeting of City Council following approval of the recommendations in this report:
 - a. authorize the Director to permit residents to plant public trees as part of the tree donation program;
 - b. make housekeeping amendments related to outdated position titles; and
 - c. increase the minimum removal fee for requests to remove established trees to \$500 per tree.
5. Approve these recommendations at its meeting on November 24, 2021.

ISSUE

The Official Community Plan (OCP) was approved by Council in 2013. Within the environment section of the OCP, Council approved a policy direction of increasing the volume of publicly owned trees in its urban forest, with a target of one publicly owned tree per resident. Administration is now sharing information to update Council on where Regina is at with meeting this target, as well as sharing information on tree planting programs, potential sources of funding, and a plan to minimize long-term risk to Regina's urban forest.

IMPACTS

Policy Impacts

Within the environment section of Regina's Official Community Plan there is a specific section which tasks the community to ***Protect, promote and expand Regina's urban forest and street tree canopy***. There are then six objectives to meet this goal:

- Increasing the urban forest to one tree per person in public spaces.
- Requiring appropriate street tree plantings and landscaping in all development and other infrastructure projects.
- Requiring drought- and/or flood-tolerant shrubs and trees with low water requirements in landscape design where appropriate.
- Requiring tree conservation strategies for construction of new development, redevelopment and intensification projects.
- Encouraging and developing forest strategies in commercial and industrial areas
- Encourage private tree planting on residential lots.

Responsibilities for these objectives are then governed from a public tree versus private tree perspective. The assignment of responsibility for the protection and promotion of publicly owned trees is mandated through the *Regina Forestry Bylaw 2002*. Correspondingly, the *Regina Zoning Bylaw, 2019* mandates minimum requirements of privately planted trees on multi-dwelling residential units and commercial properties.

In 2000, Regina City Council also approved the Regina Urban Forest Management Strategy. The document provides guidance, outlining responsibility within Administration. Illustratively, it provides direction in diversification and tree protection strategies.

Financial Impacts

While Regina has currently achieved its one tree per resident target, there is a risk of loss every year due to conditions such as weather and disease. Through the 2021 budget process, Council approved \$91,000 for the Street, Buffers and Parks Tree Replacement program. While the cost to plant a tree in the city varies by size, it is estimated that this budget allows Administration to plant approximately 182 trees per year, at an average cost of \$500 per tree. Once installed, all new trees receive watering for a minimum of three years. Watering costs on average are \$100 per tree per

year. This watering cost is jointly supported through plant establishment and operations funding.

In addition to the above budget for replacement trees, Council also regularly approves project specific funding towards tree planting. As an example, for 2021, one such project is the Pacers Park Tree Planting Project. This project is being completed at a total cost of \$123,070. This cost includes purchase, installation, plus two years watering to ensure warranty. Upon completion, 173 trees will be planted at an average price of \$722 per tree. In addition there were 370 seedlings planted at the new dog park in Mount Pleasant Sports Park capital project.

Drought is having a financial impact on the tree planting success rate. 2020 was the fourth driest year on record. Overall, during the 2020 season, there was a net loss of 356 trees. The tree loss through drought is continuing into 2021, as of the end of end of September, 519 trees have been removed.

Most of the tree planting occurs in the fall of each year. At the time this report was written, approximately 550 caliper sized trees are planned to be installed, of these 532 are complete. This includes all trees planted by the Parks, Recreation & Cultural Services Department through the tree replacement program and on capital projects. It should be noted, the number of new trees being turned over to the City from the development community has not yet been calculated.

When considered against community population growth, if this trend continues, Administration will begin to lose ground on the OCP goal of having one tree per resident. For this reason, Administration is currently requesting and recommending an increase to the replacement tree planting budget. The proposal for 2022, is to increase the budget to \$125,000 in for tree replacement funding. Then for the next four budget cycles, the capital ask would be to increase this budget by \$25,000 for each additional year. The annual budget would be \$225,000 by 2026. By then, it would be expected that the multiyear drought experienced is over and the tree planting vs mortality gap can be closed.

Environmental Impacts

City Council set a community goal for the City of Regina of achieving net zero emissions and sourcing of net zero renewable energy by 2050. In support of this goal, City Council asked Administration to provide energy and greenhouse gas implications of recommendations so that Council can evaluate the climate impacts of its decisions. The recommendations in this report have limited direct impacts on energy consumption but can have significant impact on removal of greenhouse gasses in the atmosphere.

The urban forest is an important asset for the City and provides several environmental benefits to the community. Trees clean pollutants from the air, are important for removing carbon from the atmosphere, and reduce heating and cooling requirements in buildings by blocking the wind and providing shade. In 2020 it was estimated that the current urban forest has permanently

stored 63,300 tonnes of carbon from the atmosphere. This is the equivalent of removing almost 17,000 cars from the road in a single year.

OTHER OPTIONS

A second option is to accelerate funding of the tree replacement program by increasing funding to \$175,000 per annum starting in 2022. This is more aggressive than the incremental approach offered. It does increase the Forestry work unit's ability to replace trees immediately. It does not increase regular funding beyond 2024. At an approximate cost of \$500 per tree, including establishment watering, this budget would enable Administration to plan to regularly replace 350 trees per annum.

COMMUNICATIONS

If the recommendations in this report are approved, the Parks, Recreation & Cultural Services Department will work with Communications and Engagement staff to declare Regina Arbor Day in the spring of 2022 to promote the programs outlined in this report.

DISCUSSION

In follow-up to a report approved by Council on landscape regulations in 2018, Administration is sharing information with Council on the state of the urban forest, proposed tree planting programs and threats to the urban forest.

State of the Urban Forest

On an annual basis, Administration prepares a report that details the *State of the Urban Forest* (SUF). The 2020 version of this report is included in Appendix A. The report reveals that when taking into account all public trees – including those in Wascana Park and at the City-owned golf courses - the goal of one tree per person is currently being met at 103 per cent. However, based on the tree mortalities and replacements in 2020 and 2021, there is a risk that the City may fall behind without an increase to current budgets.

Per the SUF Report, most tree removals in 2020 were due to poor tree condition and in most cases is thought to be caused by a continuing multi year drought. This has continued to be the case in 2021. For this reason, the Parks, Recreation & Cultural Services Department will be seeking a gradual increase in tree planting budgets over the next five years.

Overall Urban Forest Health and Long-term Threats

Currently, the real threats to Regina's urban forest include climate change (drought and storms) and invasive pests. As mentioned earlier in the report, tree mortality is at an all time high due to climate change, which has caused long-term drought in this region and increased storm damage to trees that has to be managed annually. In 2020 alone, 663 trees had to be repaired. This is a challenging threat to deal with, as in many cases with drought it is hard to determine if a tree is stressed from

lack of water until it is too late and storm damage is extremely unpredictable. The most effective manner to deal with these effects is to ensure when trees are lost to drought that budgets are in place to ensure trees are replaced in a timely manner.

While climate change poses a risk to tree mortality through drought, it can also provide an opportunity to expanding species diversity. Administration is always looking for drought tolerant species that will survive in an extreme northern prairie environment. Illustratively administration has trialed new trees not typically known to be grown in this region. Two test trees of honey locust (*Gleditsia sp.*) are currently maturing nicely in the Heritage Area. For 2020, forestry expanded this species to incorporate twelve additional plantings in Ripplinger and Norseman Parks. Results on success are still to be determined.

As a result of historical decisions, the Regina urban forest is also largely monocultured urban forest. Elm (*Ulmus*) and Ash (*Fraxinus*) trees comprise nearly 70 per cent of total tree inventory. Monocultures by their nature are highly susceptible to disease and or insect predation.

Dutch Elm Disease (DED) is now considered endemic to the current urban forest. Regina was the first community in Saskatchewan to have a case of DED occur (1981). Over the forty years since then, Regina has only lost one hundred forty-nine trees (149) out of an estimated count of 77,000 public and privately-owned elm trees. This is due to the current monitoring and sanitation program that is jointly administered through pest control and forestry work units.

Emerald Ash Borer (EAB) is likely to be a bigger threat to Regina's urban forest. The insect arrived in North America through global trade in the early 2000s. Since its arrival, the insect has destroyed millions of trees in Ontario communities. Most communities have lost their complete ash inventory in a 10-year period. Most recently EAB was confirmed to be in Winnipeg during 2017. The trend is that the EAB is moving west posing a risk to Regina.

To manage this risk, Administration has created an Emerald Ash Borer Response Plan (Appendix B). This plan outlines the following:

- **Improves Internal and External Communication** by educating the residents, Council, other external stakeholders and administration about the EAB through public awareness.
- **Increases the Understanding of the Cost of Services** regarding how EAB will impact the Urban Forest as both an asset and Forestry and Pest Control Operations.
- **Delivers a Reliable Service** by outlining a monitoring program and response operations for when to prepare for EAB as early as possible.
- **Improves Decision Making** by outlining options regarding current insecticide technology as part of options as for a control program.

Proposed Tree Planting Programs

At this time Administration is recommending that two programs be implemented within current budgets to encourage public participation in tree planting.

1. ***Tree Donation Program***

The program will allow a Regina resident to apply to plant a tree on a specific site on City public land provided it is adjacent to the resident's private property. The City would inspect then either approve or disallow the proposed site. The City would also work collaboratively with the applicant to select the species, based on suitability to the location and tree diversity for the area. The City will provide information on how to plant the tree and the basic care required for the tree to survive. The resident would then be responsible to maintain and water the tree for the first three years, until it is established and then the City of Regina would take over the care, maintenance, and future replacement into their program.

Amendments to *The Forestry Bylaw* are required as planting trees on public lands is currently prohibited. The amendment will allow the Director to authorize the planting of public trees by residents. Housekeeping amendments will also be made to *The Forestry Bylaw* to update outdated position titles referenced in that Bylaw.

Along with these amendments to *The Forestry Bylaw*, the Administration is also recommending that the minimum fee to remove an established City tree be increased from \$300 to \$500. Residents may request that a City tree be removed for a number of reasons, typically related to development. Administration makes a determination as to whether removal is appropriate, and if approved, a fee is charged which reflects the actual cost of removal as well as the loss of the tree from the urban forest and is tied to the estimated replacement cost. The \$300 minimum was established in 2002 and is required to be updated to reflect actual costs.

2. ***Tree Day Program***

Administration is recommending that the City declare the first Wednesday in June as "Arbor Day Regina". For next year this would be Wednesday June 1, 2022. On this day each year, the City would distribute through an event, 1,000 free seedlings, maximum one per person, on a first-come, first-served basis. Then on "National Tree Day" every late September, the City would repeat this exercise with another 1,000 free seedlings. Total cost of both days together would be about \$10,000 and can be absorbed providing the 2022 budget is set at \$125,000.

Potential Sources of Funding

Regina as a community, primarily funds its own tree planting programs. While Administration has been successful in applying for grants in recent years, the grant programs are on an ad hoc basis and funding cannot be planned on until well into the current fiscal year. Since 2017, Tree Canada and CN Railway have provided funds each year to plant nearly 500 trees in Regina.

Administration has also requested matching funds through the federally funded 2 Billion Trees program for 2022. This is, at minimum, a two-stage application with only the first stage being completed at this point, as the federal government has not yet opened stage two of the program. It should be noted that all details on the program are still not clear and the quantity/size of tree may not suit this community's immediate needs.

Future Work

In addition to the above recommendations, Administration recognizes a need to update the Regina Urban Forest Management Strategy (RUFMS), in an effort to help provide a more detailed level of policy and direction than that of the OCP.

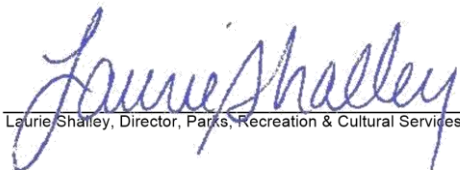
Scoping of this plan could be done in 2022 with a request through the 2023 budget to fund the plan development, which would involve a consultation process with key stakeholders, including the development community. Administration has had some preliminary conversations with developers regarding tree planting in green field development, through engagement on the Parks Master Plan, Administration will be continuing these discussions, to determine if there are ways to work collaboratively to potentially increase plantings in new developments.

DECISION HISTORY

At its meeting on December 17, 2018, City Council considered item CR18-123 *Regina Planning Commission: Landscape Regulations* and directed Administration to prepare a report on creating a program that supports tree planting, identifies potential sources of funding, and minimizes long-term risk to Regina's urban forest.

Respectfully Submitted,

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10/29/2021



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11/10/2021

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ATTACHMENTS

Appendix A - 2020 State of Urban Forest

Appendix B - Emerald AshBorer Response Plan - rev 2021