

CALGARY TREE DISASTER – RECOVERY AND RESTORATION FINAL UPDATE

EXECUTIVE SUMMARY

The 2014 September snow event damaged over 50 per cent of Calgary's urban forest. The Calgary Tree Disaster 2014 Recovery Framework (the Framework) presented to Council on 2014 November 17, provided a recovery plan with principles and key result areas that guided the recovery of the city's urban forest. On 2014 November 24, Council approved this comprehensive recovery plan that acknowledged the value and benefits of a safe and resilient urban forest. At that time, Council approved \$35.5 million for the recovery program, and Calgary Parks redirected Urban Forestry operational and capital funds to further supplement the restoration and resiliency work.

The ReTree program has been well-received; leading to significant increases in public trees planted, accelerated tree pruning schedules, as well as opportunities for public education and collaboration with local neighbourhoods and industry partners. This final report provides key learnings and a program overview (Attachment 1), and a summary of the 2015-2017 ReTree program budget as well as the 2018 workplan (Attachment 2).

The formal program is now complete; however based on key learnings, some funding will be carried forward into 2018 and directed towards supplemental watering and pruning of new trees planted during the course of the program.

ADMINISTRATION RECOMMENDATION

That the SPC on Community and Protective Services recommend that Council receive for information the Calgary Tree Disaster – Recovery and Restoration Final Update.

RECOMMENDATION OF THE SPC ON COMMUNITY AND PROTECTIVE SERVICES, DATED 2018 FEBRUARY 07:

That the Administration Recommendation contained in Report CPS2017-0105 be approved.

PREVIOUS COUNCIL DIRECTION / POLICY

On 2017 February 13 Council received report CPS2017-0102 (Calgary Tree Disaster – Recovery and Restoration Annual Update) for information and directed Administration to report back to Council through the SPC on Community Services and Protective Services no later than 2018 Q1 on the Recovery and Restoration progress.

On 2016 March 14, Council received report CPS2016-0202 (Calgary Tree Disaster – Recovery and Restoration Annual Update) for information and directed Administration to report back to Council through the SPC on Community Services and Protective Services no later than 2017 Q2 on the Recovery and Restoration phase.

On 2015 May 25, Council received report CPS2015-0418 (Calgary Tree Disaster 2014 – Response and Recovery Update) for information and directed Administration to report back to Council, through the SPC on Community Services and Protective Services no later than 2016 Q1 on the Recovery phase.

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On 2014 November 24 with respect to Recommendation 1 contained in Report C2014-0863, the Community Services & Protective Services Department: Parks Business Unit 2015-2018 Operating Budget Program 445, Net Amounts, contained on Page 346 of Attachment 1, be adopted as amended by Council as follows: *In Program 445, Calgary Tree Disaster 2014, by the addition of one-time funding of \$35.5 million over 3 years, \$11.9 million in 2015, \$11.8 million in 2016 and \$11.8 million in 2017, from the Fiscal Stability Reserve and further, that Report C2014-0888 and Attachment 3 be received for information.*

On 2014 November 17, the Administration Recommendations contained in Report C2014-0888 were adopted by Council, after amendment, as follows:

1. File Administration Recommendation 1 and receive the PowerPoint presentation and Report C2014-0888 for information; and
2. Refer Report C2014-0888 and the distributed PowerPoint presentation to the November Council budget deliberations of the 2015-2018 Action Plan.

At the 2014 November 17 Council meeting, Motion Arising, moved by Councillor Colley-Urquhart that with respect to Report C2014-0888, the following was adopted by Council: Direct Administration to report back no later than 2015 Q2 on the Recovery, Resilience and Restoration framework.

On 2014 October 6 with respect to Verbal Report VR2014-0069, the following was adopted by Council:

1. Receive this verbal update for information;
2. Direct Administration to continue with the Response plan, at an estimated incremental cost of up to \$12 million in 2014;
3. Direct Administration to advance discussions with the Province regarding assistance through the Disaster Recovery Program or other eligible funds; and
4. Direct Administration to report back to Council 2014 November 17 with a progress update on response actions, recovery plan and budget recommendations for consideration at 2015-2018 Action Plan.

BACKGROUND

The unprecedented 2014 September snow event required a coordinated emergency response to manage public safety risks and city-wide damage to trees in all communities. This phase is commonly referred to as the Response phase. The City transitioned from the Emergency Operations Centre (EOC) after nine days to a Tactical Operations Centre (TOC). The Parks TOC was established to complete the Response phase and to resource and facilitate the Recovery phase.

The City and the Province coordinated resources during the 2014 September snowstorm. The 3-1-1 call system received over 10,000 tree emergency service requests from citizens from the start of the storm on 2014 September 8 up to the end of the Response phase on 2015 January 31. This far exceeds the 2,000 emergency requests 3-1-1 receives in a typical year. Due to the joint efforts of numerous City business units as well as many partners including: Canada Taskforce 2, crews from The City of Edmonton, private contractors, and wildfire crews from Alberta Environment and Sustainable Resources Development we successfully responded to the event. Administration completed the Response phase on time on 2015 January 31, having completed an initial debris removal process from all communities and addressing over 14,000 high risk trees.

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As laid out in the Calgary Tree Disaster 2014 Recovery Framework (the Framework), the subsequent Recovery and Restoration phases were undertaken from early 2015 until the end of 2017 and the formal ReTree program is now complete. Based on key learnings, Administration will use remaining budget towards 2018 establishment watering and pruning of the newly planted trees from the program.

INVESTIGATION: ALTERNATIVE AND ANALYSIS

The ReTree program has accomplished the goals of the Calgary Tree Disaster 2014 Recovery Framework (the Framework) as a result of the additional funding. Moving forward, Calgary Parks will work to balance priorities in order to continue building the resiliency of the urban forest. Key learnings from the ReTree Program will guide this work. Key learnings and program highlights organized according to the sections of the Framework are included below:

Recovery, Restoration and Resiliency

Key Learning #1: *Strategic tree pruning, planting, and watering are all required to strengthen the resiliency of our urban forest.*

- Accelerated, prescriptive pruning during the ReTree program led to healthier trees and fewer emergency incidents even through storm events
- Improved watering methods and schedules ensure establishment and long-term health of new trees through drought and other environmental stresses

Key Learning #2: *Pre-ReTree budgets cannot sustain both the maintenance of existing trees and the growth of the urban canopy (as per Municipal Development Plan goals).*

- Pre-ReTree operating budget is only sufficient for the care of existing trees
- A capital business case for the planting and watering of new trees has been submitted for 2019-2022 budget cycle
- Alternate funding partnerships will continue to be explored

Program Highlights:

- ReTree tree work was performed with public safety and tree health at the forefront and in accordance with industry standards. The program assessed and carried out pruning on over 356,000 trees city-wide
- The goal of the planting program was to increase the urban canopy and encourage Calgarians to become involved in tree stewardship. A total of over 24,000 trees were planted in 79 communities

Develop public urban forestry stewardship

Key Learning #3: *Calgarians care about trees.*

- Positive uptake of three online learning modules and community planting outreach; 23,000 views on ReTree website between January 2015 and December 2017

Key Learning #4: *Increased citizen outreach and education leads to a healthier urban forest.*

- Public education contributes to the health of the urban forest as private trees make up three quarters of the urban canopy in Calgary

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- Urban Forestry will strive to engage another 20-25 communities each year

Program Highlights:

- ReTree program staff attended public events, hosted educational forums, and worked with industry partners to ensure easy access to information regarding tree care and build a tree-care culture
- Three eLearning modules were developed to promote tree health care (Right Tree Right Location; Your Tree, Year Round; and Storm Damage, Tree Pests)
- Developed an online map that is now the standard platform to inform citizens about planned tree work in their communities

Build organizational capacity

Key learning #5: *Continue to build cross-corporate resiliency.*

- Trees are a valued asset that Urban Forestry will manage and advise on as a corporate and community responsibility
- Identified opportunities for new tree plantings on City-owned land beyond parks and boulevards
- Urban forestry-specific emergency response plans in place and are reviewed regularly
- New small aerial trucks now provide extra response capabilities during storm events across the city as required

Program Highlights:

- In 2016, an Urban Forestry emergency response plan was developed and a table top exercise was conducted to test the plan, call out and standby processes were reviewed, and staff trained

Improve internal processes and program management

Key learning #6: *Technology is a value-added tool in the management of our urban forest.*

- Mobile applications and their targeted use improve accuracy of tree inventory and data, and allow for efficient water truck routing and tracking of water allocation
- Using tree canopy cover data, a planting matrix can be developed that highlights areas of need and opportunities for species diversification
- Communities have appreciated online workplans and tree information in a map-based format

Program Highlights:

- Continuous improvements have been made on the inventory and data collection system used to track existing tree care and plan for future tree planting
- Baseline data has been improved for tracking urban canopy coverage

Stakeholder Engagement, Research and Communication

The ReTree program team hosted or attended 237 events and spoke with over 25,000 Calgarians in-person about tree care. The Tree Tuesday social media campaign reached over 2.32 million citizens and covered 44 topics on trees and care of trees. In 2018, Administration will continue to engage and communicate with Calgarians and City employees to inform them of program progress and planned work.

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Strategic Alignment

The Calgary Tree Disaster 2014 Framework supported existing objectives and policies related to the many benefits that the urban forest provides within The City's long-range planning and policy documents. The Framework aligns with the following documents: Municipal Development Plan (2009); The 2020 Sustainability Direction; Municipal Emergency Plan; Biodiversity Strategic Plan (2015); Parks Urban Forest Strategic Plan (2007); and Action Plan 2015-2018.

Financial Capacity

Current and Future Operating Budget:

Council approved one-time operating budget from Program 445 of \$35.5 million over 3 years (2015 - \$11.9 million, 2016 - \$11.8 million, 2017 - \$11.8 million) from the Fiscal Stability Reserve (FSR) during the 2014 November budget deliberations (Action Plan 2015-2018). The remaining budget of \$1.89 million will be focused on watering and pruning trees that were planted during the course of the ReTree program. A budget summary for 2015-2017 and a summary of planned 2018 budget allocations can be found in Attachment 2.

Current and Future Capital Budget:

In light of key learnings of the ReTree program, Administration has developed capital business cases for new tree planting and establishment watering for consideration in the 2019-2022 budget. This will ensure a balance between the growth of the urban canopy and maintenance of existing trees.

Risk Assessment

The Calgary Tree Disaster 2014 Framework provided the direction for recovery, restoration and building resiliency into The City's urban forest and programs. Without this comprehensive approach The City and the urban forest would not be as prepared for future storm events and may not have met long term policies and goals. An Urban Forestry emergency response plan has been developed and training is ongoing.

REASON(S) FOR RECOMMENDATION(S):

The Calgary ReTree Program is now substantially complete with only watering newly planted trees remaining in 2018. Through the program many key lessons were learned and applied as documented in this report. The program enhanced the resiliency of Calgary's urban forest and improved many internal practices. This report summarises the program's successes over three years and provides a final update of the program to Council.

ATTACHMENT(S)

1. CPS2018-0105 Calgary Tree Disaster Recovery and Restoration Final Update – Att 1 Key Learnings + Overview
2. CPS2018-0105 Calgary Tree Disaster - Recovery and Restoration Annual Update - Att 2 Budget