

Calgary



Calgary Tree Disaster: Summary of Key Learnings & ReTree Program Overview

February 2018

Key Learnings

- 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
- 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
 - Urban Forestry will strive to engage another 20-25 communities each year
- 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 aerial trucks now provide extra response capabilities during storm events across the city as required
- 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

- 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
- 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
- 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
- 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

Looking Forward

- Capital business cases for future tree planting and watering have been submitted for consideration in the 2019-2022 budget cycle
- A planting matrix will be implemented to ensure lower canopy areas are being represented
- To sustain the existing tree canopy, 3,500 trees need to be planted annually
- To grow the tree canopy an additional 3,500 trees need to be planted annually

Calgary



ReTree YYC: Program achievements

Operational

357,000 
trees pruned
and assessed

 **24,560**
trees
planted

484,356 records collected and updated
in database for all city-owned

tree-assets in
YYC

25 ReTree
Community Tree
& Landscape
Vision reports
(for long-term community
specialized planting)

Educational Outreach

 **79**
ReTree
communities
engaged

ReTree
booth attended:

237 community tree
education nights,
events and festivals

 **25,000+**
citizens met in
person with
ReTree Educators and Tree Techs


3 eLearning
modules launched
Endorsed by the ISA Prairie Chapter

Materials translated to
5 most common languages in
Calgary (other than English)

Citizen Engagement

2,200,000+
impressions
through social
media "Tree Tuesday"
campaign (since
June 2016).

29,000 
likes/
comments/shares

40 
topics covered
– Heritage Trees
– Memorial Drive Trees
– Pests and Diseases
– Ask A Tree Expert
– History of YYC Trees
– eLearning launch
– Benefits of Trees

Accolades

2 Gold Quill
Awards
(international
communications award)

ESRI 
Canadian app
of the month

Geo Alberta award:

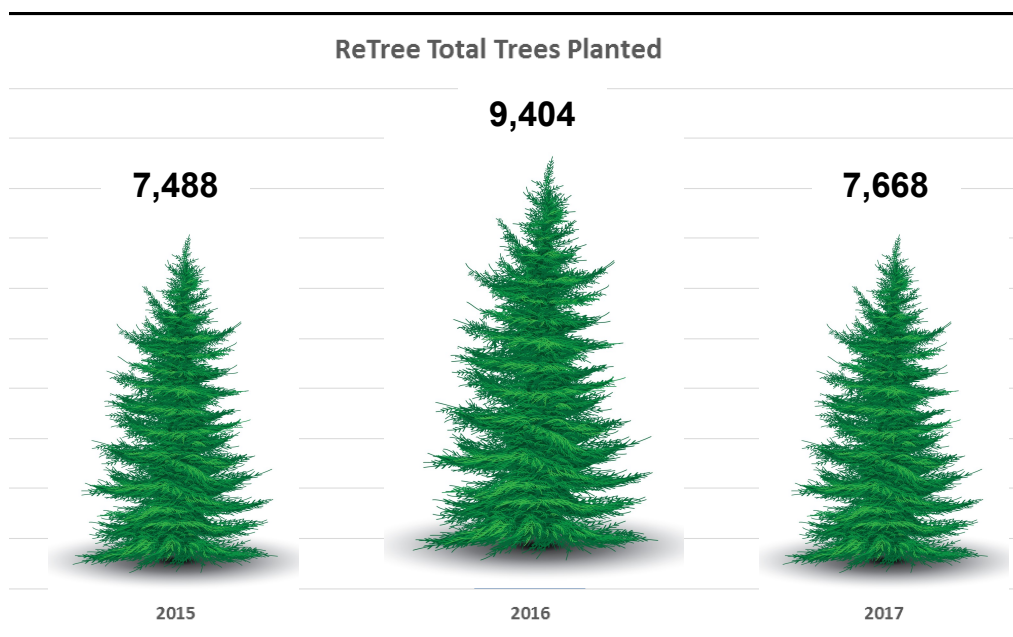
1 Place for
our interactive
online map

Featured
presenter
at over
10 conferences

Recovery and Restoration Overview

Address immediate impacts of the storm: Ensure public safety through effective asset management:			
	2015	2016	2017
Put in place an assessment and inventory process to lower liability risks and optimize future tree work and planning.	<ul style="list-style-type: none"> Created online map for citizens to track recovery work Assess and inventory trees by community 	<ul style="list-style-type: none"> Begin roll out of mobile technology Assess and inventory trees in 2016 ReTree communities 	<ul style="list-style-type: none"> Refinements to mobile technology Assess and inventory trees in 2017

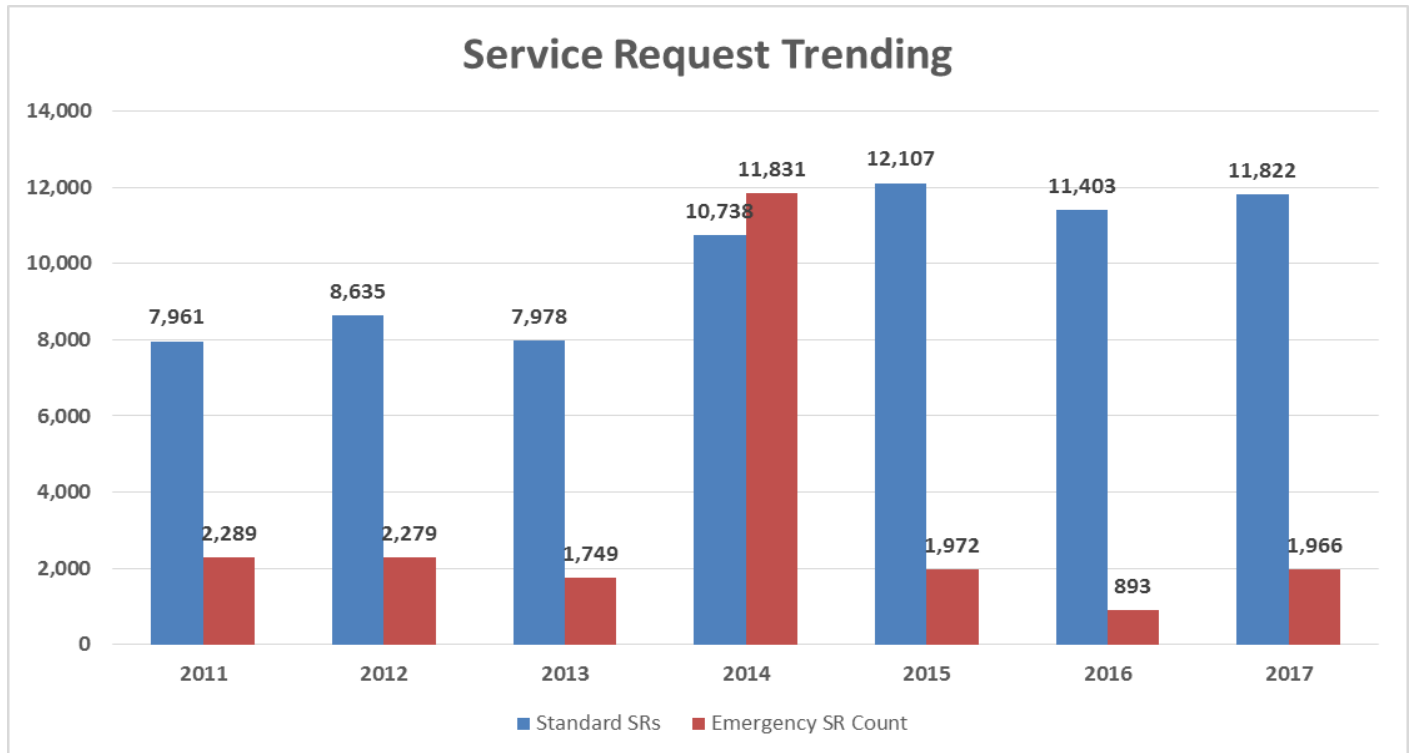
Address remaining storm impacts: Prune and/or remove all impacted public trees from 2014 storm, and replant all public trees which were removed due to the storm event. Plant additional trees in communities to offset canopy cover loss				
	2015	2016	2017	Totals
Trees assessed and pruned	128,000	129,000	100,000	357,000
Trees planted on streets or parks	7,488	9,404	7,668	24,520
ReTree community trees planted	29	25	25	79
ReTree Community Programs and Events	n/a	71	51	122



Restoration and Resiliency: Restore lost canopy, educate public on tree care, and create a more resilient forest and organization for future events.			
	2015	2016	2017
Develop public Urban Forestry stewardship: Develop and foster public tree stewardship through activities such as social marketing, educational programming, volunteering, and tree sponsorship opportunities.	<ul style="list-style-type: none"> • Increase from 10 to 29 NeighbourWoods Communities • ReTree Public Events • Create online Educational Resources 	<ul style="list-style-type: none"> • 71 ReTree Community Programs and 52 Events • Development of interactive online education modules • Industry forums for ReTree partners 	<ul style="list-style-type: none"> • 51 ReTree Community Programs and 18 Events • 50 participants at the Industry forum • 3 online interactive eLearning modules
Improve Calgary Parks services and processes: Organizational structure, tools/equipment, training, create benchmark for canopy cover, and create management plan.	<ul style="list-style-type: none"> • Identify pre Flood 2013 canopy cover, pre September 2014 snow storm and post storm • Realign organization to be more responsive 	<ul style="list-style-type: none"> • Use canopy analysis to focus work • Use mobile technologies to inventory and plan work 	<ul style="list-style-type: none"> • Created a risk based matrix for preventive tree pruning • Planting matrix using canopy cover analysis to drive new planting opportunities
Build organizational capacity: Increase preparedness for future disaster events, create plan, put in place partnerships and agreements with municipalities and utilities.	<ul style="list-style-type: none"> • Creation of an Urban Forestry Crisis Plan • Purchase of City aerial units to increase response time and preparedness 	<ul style="list-style-type: none"> • Trained staff on emergency response plans • Continue to explore partnerships with industry to respond to future storms 	<ul style="list-style-type: none"> • Updated emergency response plan • Revised the call out process during an emergency
Program management: Manage and report on program progress ensuring transparency and fiscal responsibility.	<ul style="list-style-type: none"> • Ongoing reports to Council, ALT, Calgary Parks management • Monthly ReTree Steering Committee 	<ul style="list-style-type: none"> • Ongoing reports to Council, Calgary Parks management • Quarterly meetings with ReTree Steering Committee 	<ul style="list-style-type: none"> • Ongoing reports to Council, Calgary Parks management • Quarterly meetings with ReTree Steering committee

Service Request Trending

- Overall service request trending is down overall
- In 2017, there were five major wind events that reflect a 53% increase of the emergency service requests received in 2017 from 2016
- There was an increase in watering inquiries due to the extreme dry summer in 2017



Communications and Events in 2017

The goal of 2017 communications was to engage, educate, and empower citizens to be aware of, care for and advocate for Calgary's urban forest. This strategy is focused on citizen empowerment; Calgarians learning tree-care tips and skills through the use of City learning and reference materials. The IPSOS-REID survey results from 2015 and 2016 were used as a baseline, as well as past ReTree metrics. The current economic climate of Calgary was also included in developing the approach. A number of project objectives supported these goals:

- Create a culture of tree pride in Calgarians
- Enable Calgarians to care for the urban forest
- Provide opportunities to create a sustainable urban forest

Audience	Objectives
Property Owners	Increase awareness tree benefits Inspire residents to assess trees for damage and health Encourage tree care knowledge to ensure future well-being of trees on private property
Renters/Condo/Apt. Dwellers/Citizens in general	Increase awareness of the benefits that trees provide Inspire all citizens to care for and prevent damage to public trees Become advocates for a well-treed city
25 ReTree Communities	Increase awareness of tree benefits Inspire residents to assess trees for damage and health Encourage tree care knowledge to ensure future well-being of trees on private property Become advocates for a well-treed city
Industry partners	Establish relationships with industry experts to leverage their knowledge and credibility and expand our message reach
Mayor and Council	Maintain support for project through ongoing updates and conversations
City Employees	Equip employees with ReTree messages to share with neighbours, friends and family

Communications Tactics

- Tree Tuesday social media campaign: One of the most successful tactics from 2016 continued into 2017, with streamlined programming:
 - * ReTree posts on relevant seasonal topics (diseases and pests, holiday lights, pruning etc)
 - * Canada 150 - 12 "Showcase Tree Species" to support planting diversity within Calgary (posted in both English and French)
- Micro targeted marketing in ReTree 2017 Communities for Education Night programming allowed us to spend less, accomplish more, and respond quickly based on need. Bold-signs, community newsletters and social media targeting create awareness as needed
- General ReTree 2017 marketing for engagement, education and empowerment of citizens; highlights include: Transit, Reports to Calgarians and Tim Horton's TV. All tactics were cost-effective, measurable and have high success rates of engagement/impressions
- ReTree booth attended 110 events throughout the City in 2017 including:
 - * Calgary Home and Garden Show, March 2, 2017
 - * Calgary Horticultural Society Garden Show, April 29, 2017
 - * International Migratory Bird Day
 - Lilac Festival
 - Parks Fest
 - Inglewood Sunfest



Calgary Tree Disaster Recovery and Restoration Final Update February 2018