State of the Urban Forest 2021

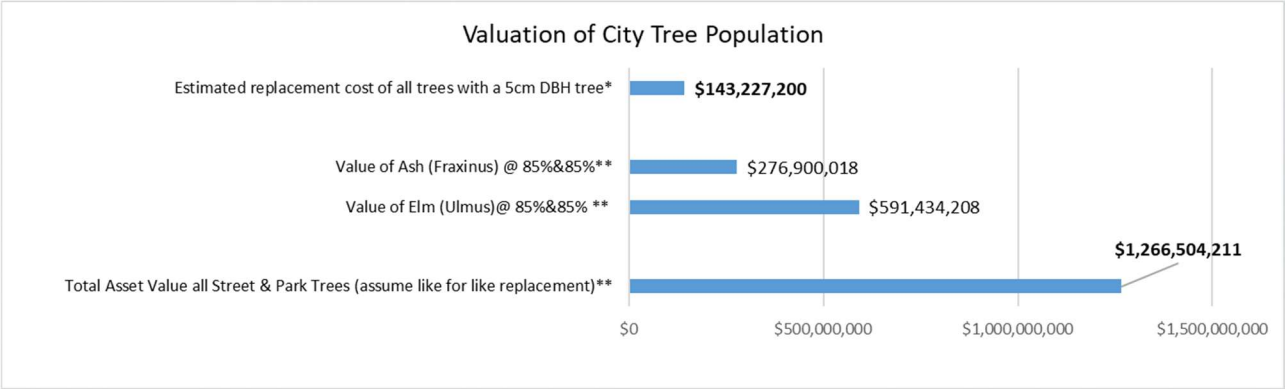
Forestry & Pest Control Operations
Open Space Services Branch
Parks, Recreation & Cultural Services Department
City Planning & Community Development Division

REGINA

Regina is one of 120 cities currently recognized worldwide for Tree Cities of the World. The inaugural announcement was made in February 2021. The City received designation in 2022 for the second year in a row. The Tree Cities of the World Program is a combined effort with the United Nations Food and Agriculture Organization and Arbor Day Foundation. There are now 15 Canadian cities included in the designation.

Community & Urban Forest Measures

Valuation Estimates of Regina's Urban Forest



* Estimated replacement cost is $800 per tree. Breakdown is as follows:

- Average unit cost & install of a 5-10 cm tree = $500
- Thumbnail estimated establishment costs for minimum three years following planting = $300

** Values are macro population estimates only as recorded inside of the current GIS inventory (January 2022). These values are determined by:

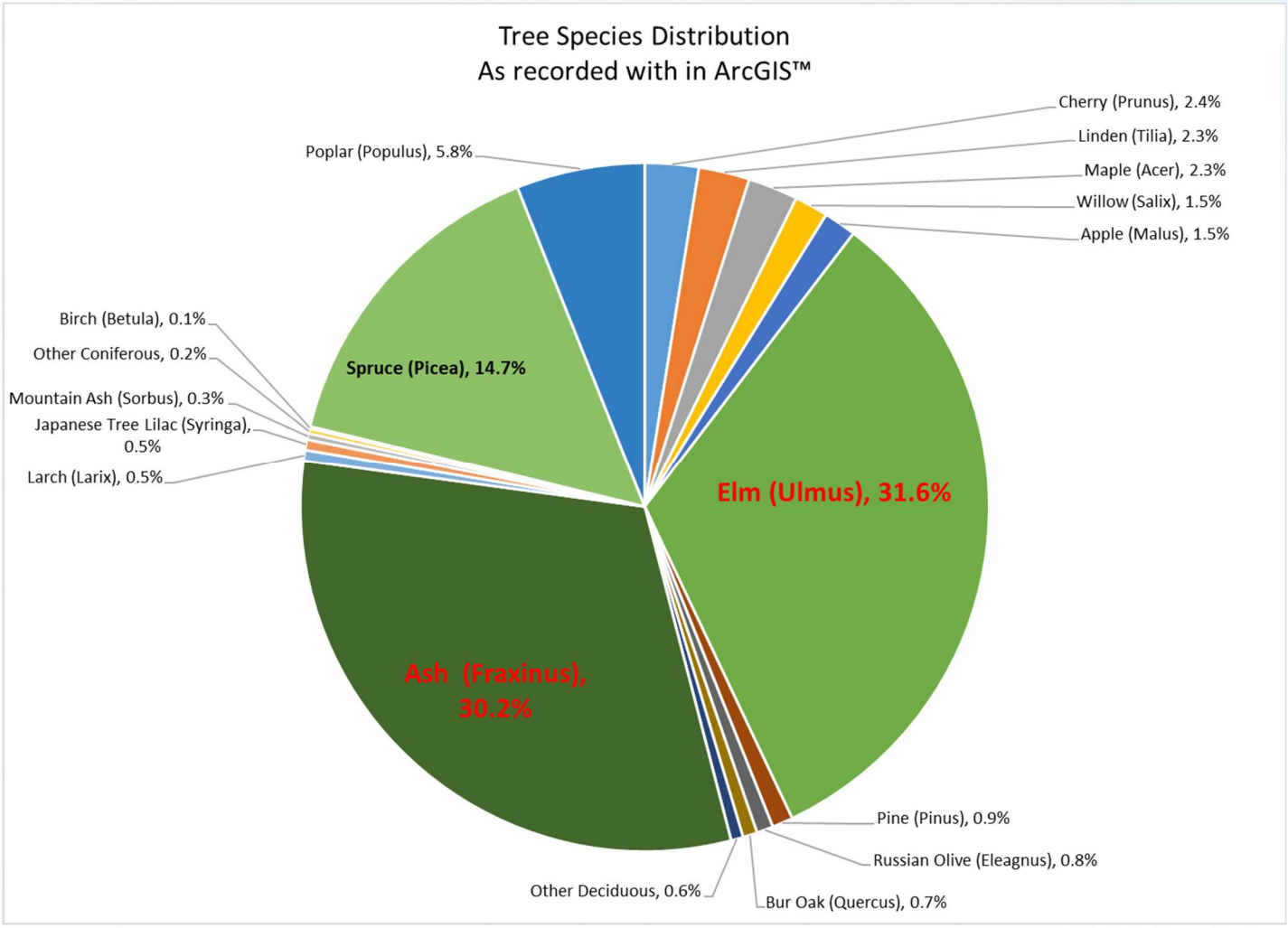
- Species ratings as determined by the Alberta Tree Ratings Guide (2003).
- This valuation on masse assumes 85% site condition rating.
- This valuation on masse assumes 85% overall health condition.
- Cost per cm^2 DBH ($12.26/$cm^2$).
- For 2021, the ash and elm values shown include site and condition rating adjustments as inventory on elm and ash is nearly complete.

Note(s):

1. At the time of an assessment of an individual tree, a formal condition and site assessment are also made.

2. The *Regina Forestry Bylaw (2008-48)* states that for any tree removed for development purposes, the requestor is charged 20% of the assessed value or $500, whichever is greater. This funding is then used to plant a minimum of two replacement trees (*Regina Urban Forest Management Strategy, July 2000*).

Tree Species Diversity



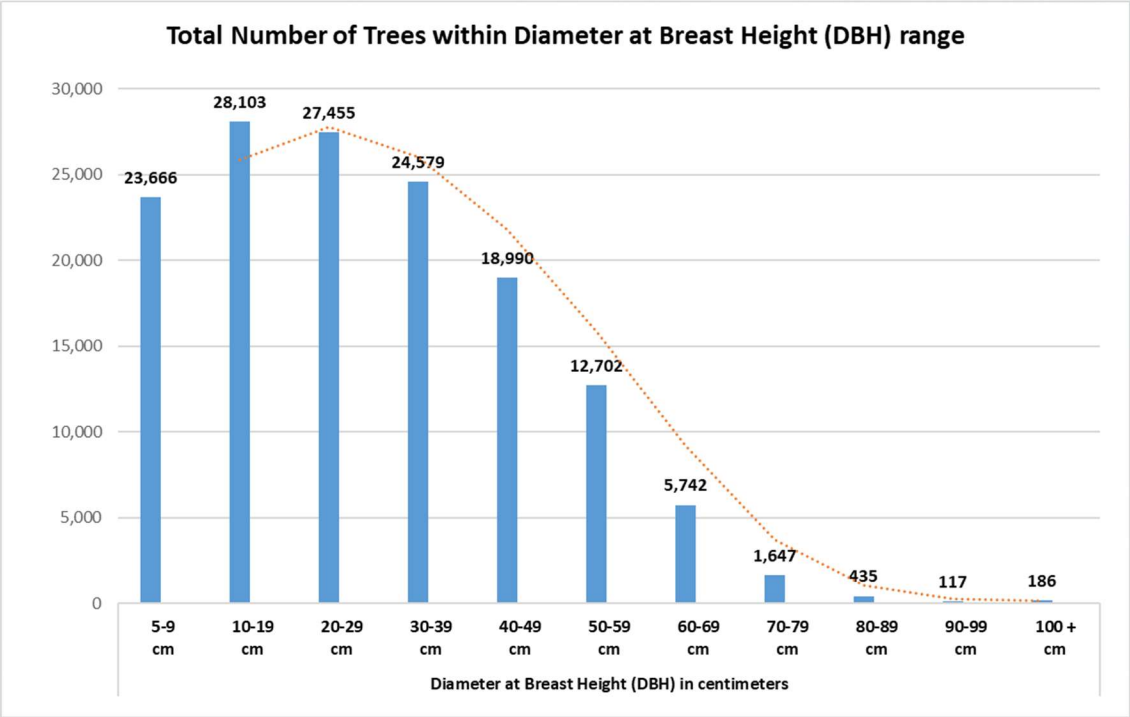
*Local common name followed by (Genus).

The pie chart shows the tree species diversity managed by the City, recorded within the ArcGIS™ tree inventory database as of January 13, 2022.

- Inventory is primarily based on residential street trees, park spaces and some buffer areas around major arterials (for example Arcola Ave).
- Total trees recorded within GIS inventory is 137,215 trees. This amount is estimated to be 77% of total street and park tree inventory.
- Regina remains predominately a monocultured urban forest, with two out of three trees within the city being either elm or ash.
- Shrubs were added as new inventory class during 2021. During this time 4,419 shrubs were added to inventory. Shrubs are not shown in this pie distribution.
- Some minor species not shown include cedar, hawthorn, hackberry buckeye and pear, with a total number combined of less than 0.1%.

In the *Regina Urban Forest Management Strategy (July 2000)*, the City's sustainability goal is no more than 25% of any one genus within a neighborhood area in the city. Prior to 1989, the most plantings were predominately monocultures of elm *(Ulmus)* or ash (*Fraxinus)*.

Size Distribution of Regina's Urban Forest (GIS)



This data is stored within GIS records as queried on January 13, 2022. As trees are added to inventory, Diameter at Breast Height (DBH) is recorded at the same time. These values change as more trees are added to inventory each year or at time of pruning when DBH is adjusted to growth.

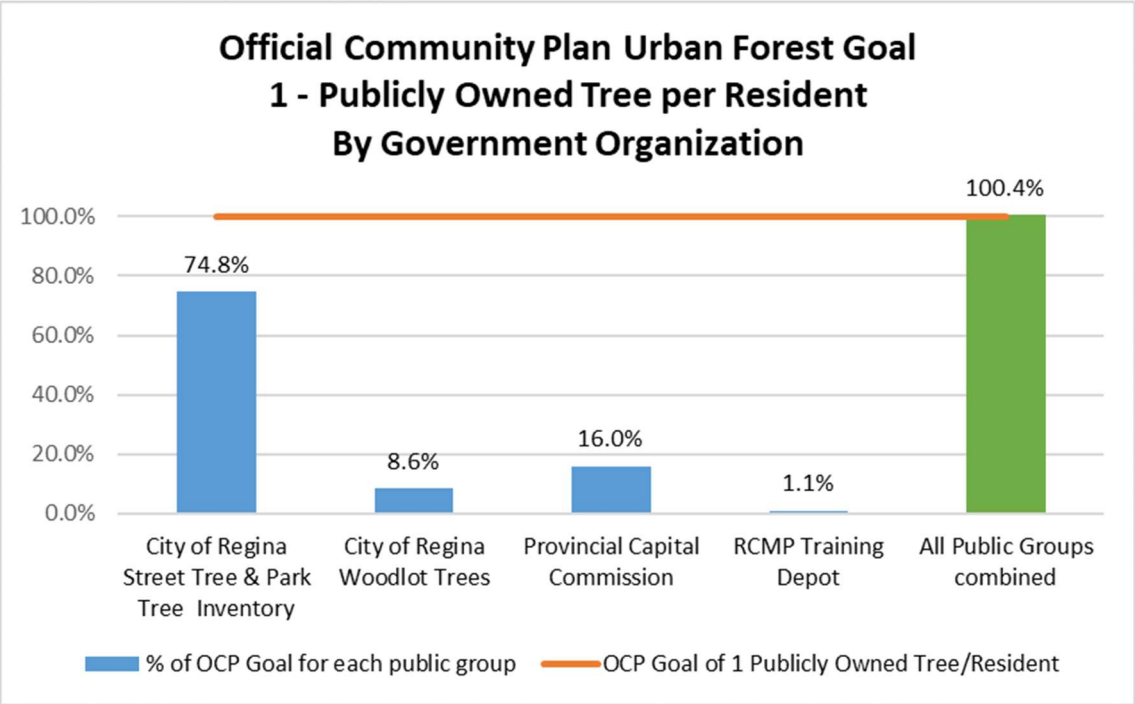
Trees with a DBH of 70 cm or greater comprise the top 1.7% of largest trees in the City. Moving to the next size class, trees with a DBH of 60 cm or greater add an additional 4% for a total of 5.7% of largest trees. Any trees that are 60 cm or greater, are considered significant community assets and hold the greatest monetary value.

Currently there are only 186 trees measuring over 100 cm in diameter as recorded in the ArcGIS database. Of these, the three most common trees in inventory are:

- 61 poplar (*Populus*)
- 52 elm (*Ulmus*)
- 45 willow (*Salix*)

The smallest trees with a DBH of 9 cm or less comprise 16.9% of current inventory. The smallest trees are considered the most juvenile trees in the inventory.

Public Trees to Official Community Plan

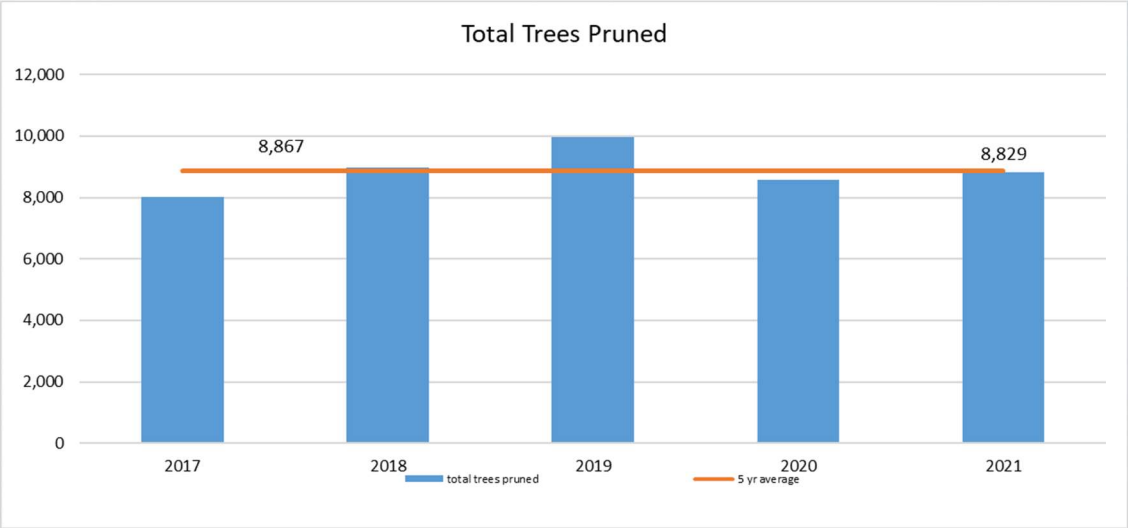


In Regina's Official Community Plan (2013), Environment Goal 4.7.1 states:
***Increase the urban forest to one tree per person in public spaces*.**

- **City of Regina street & park tree inventory = 179,034 trees**.
  - Assumes 2001 MCSII inventory was correct =161,836;
  - 2002-2011 net tree change = +4,407;
  - 2012–2021 net tree change = +12,791.
  - In future years, the inventory processes will either verify or nullify this assumption.
- **"Woodlot" trees = 20,491 trees.** The trees are located on properties owned by the City. These properties include the Dewdney West Tree Nursery, the Kings Park area (includes Tor Hill and Murray Golf courses). The tree counts were obtained through geospatial satellite analytics services provided by Western Heritage Inc. in 2020. The next analytics service of this type will be scheduled in 2030 or if a significant change happens to the properties.
- **Provincial Capital Commission = 38,336 trees.** Tree Inventory records as supported by City of Regina Geospatial Services. The City provided $2.72 million in funding during 2021 in support of Wascana Park maintenance operations (2021 City of Regina Budget Book).
- **RCMP Depot = 2,592 trees**. This value is based on geospatial satellite analytics services provided by Western Heritage Inc. This was done concurrently during the woodlot tree analysis.
- **Regina's population** = 239,437 (MBN Canada website, January 13, 2022). The City is part of and provides information to the MBN Canada network.

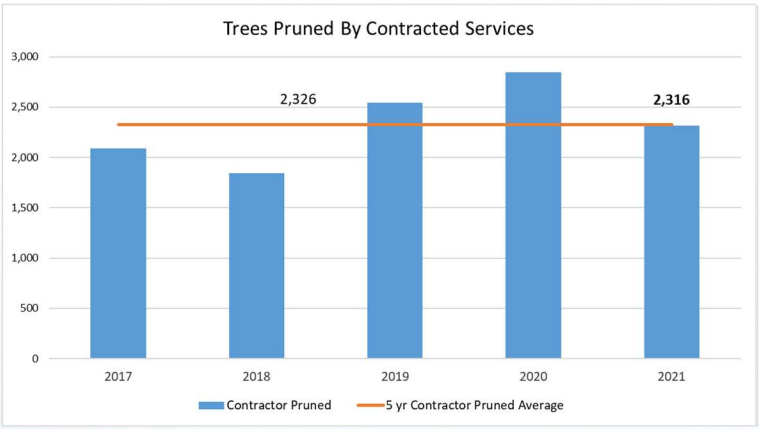
Urban Forest Maintenance

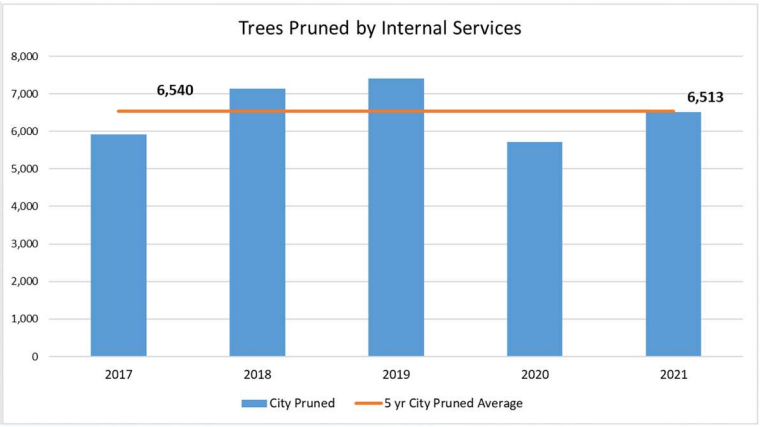
Tree Pruning



Tree pruning includes the following work codes - Internal Scheduled Pruning (aerial & ground), Service Requested Pruning (aerial & ground), Broken Branch Pruning, Public Works Pruning and Contracted Services. A total of 8,829 trees were pruned during 2021. Storm related work values are not included.

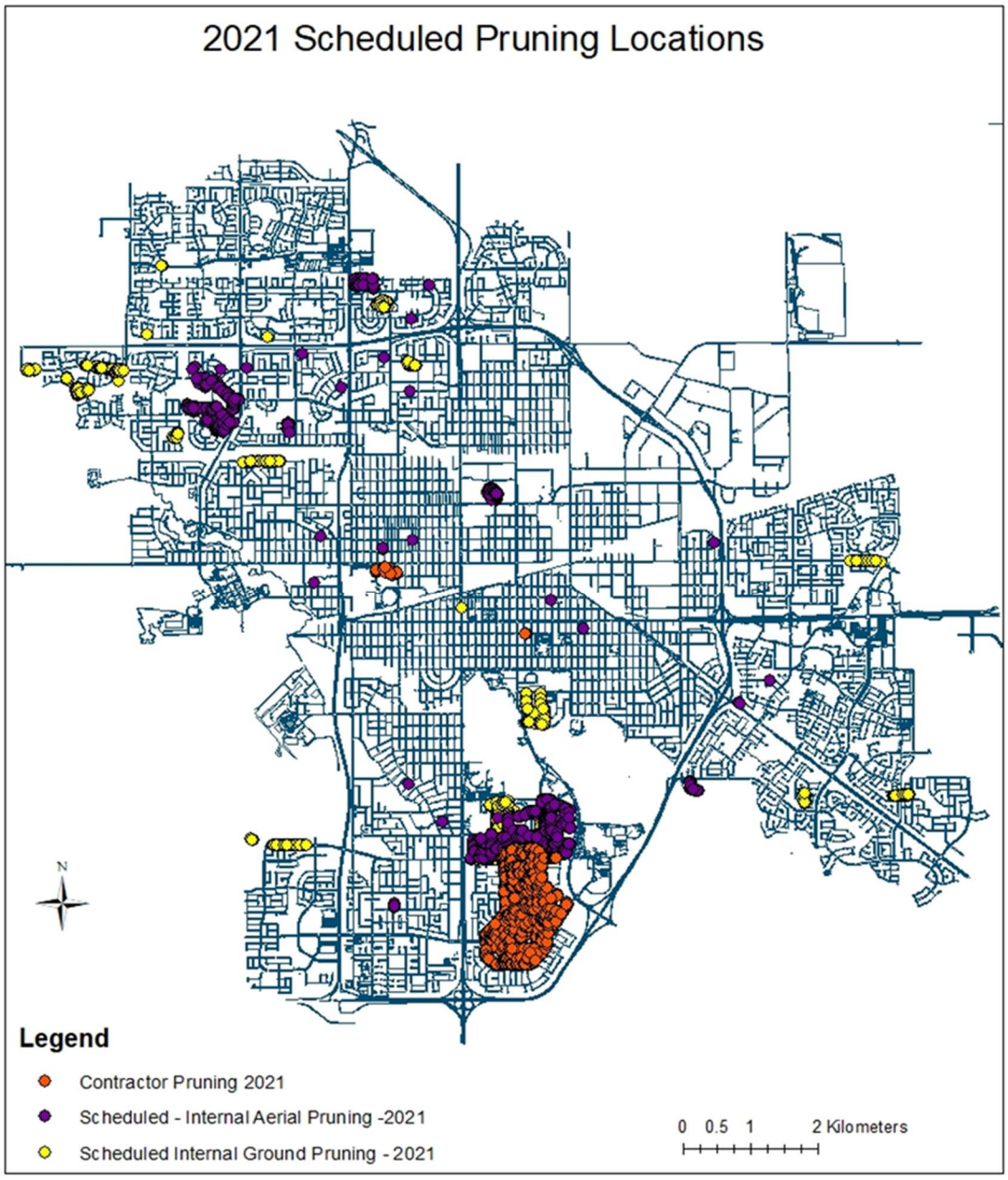
Contracted Versus Internal Pruning





Internal aerial pruning struggled during the first half of 2021. This was due to the out of service lift trucks due to lack of availability of parts related to the pandemic. Illustratively, unit 12111 went for recertification on February 1, it was returned to active duty on June 17. To cover for this kind of equipment shortfall, the forestry unit did a 10-week efficiency trial and redeployed staff resources by utilizing a 10-hour shifting combined with a 7-day service model running from July 4 to September 25. This allowed existing equipment to be double shifted with scheduled overtime reduced by 73% during the trial. Interestingly for the July to September period, aerial pruning exceeded the 2009 to present average by 44.9%. This then returned the total year internal pruning jobs to near nominal levels despite the equipment issues experienced.

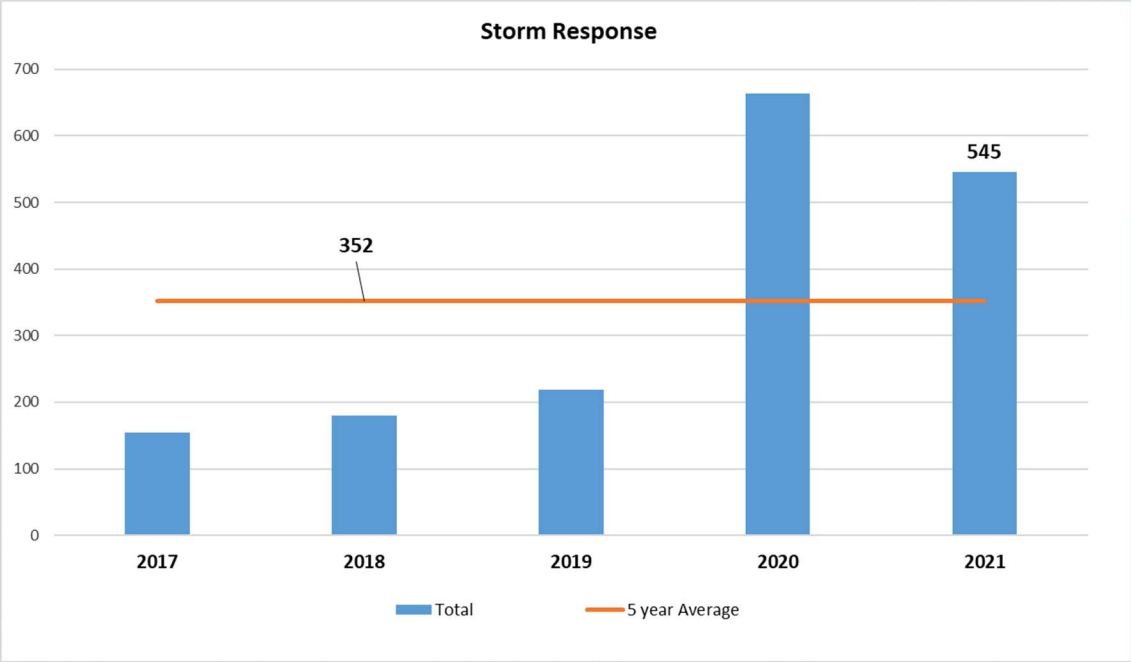
Scheduled Pruning Locations within Regina



Locations shown are recorded by field staff within the ArcGIS Collector™ app while completing scheduled pruning.

This does not include any service requested pruning, public works pruning, broken branch pruning as those are dealt with on an ad hoc basis. While these are also recorded within ArcGIS Collector™ by field staff as these types of jobs do not show any real discernable pattern of location.

Storm Response

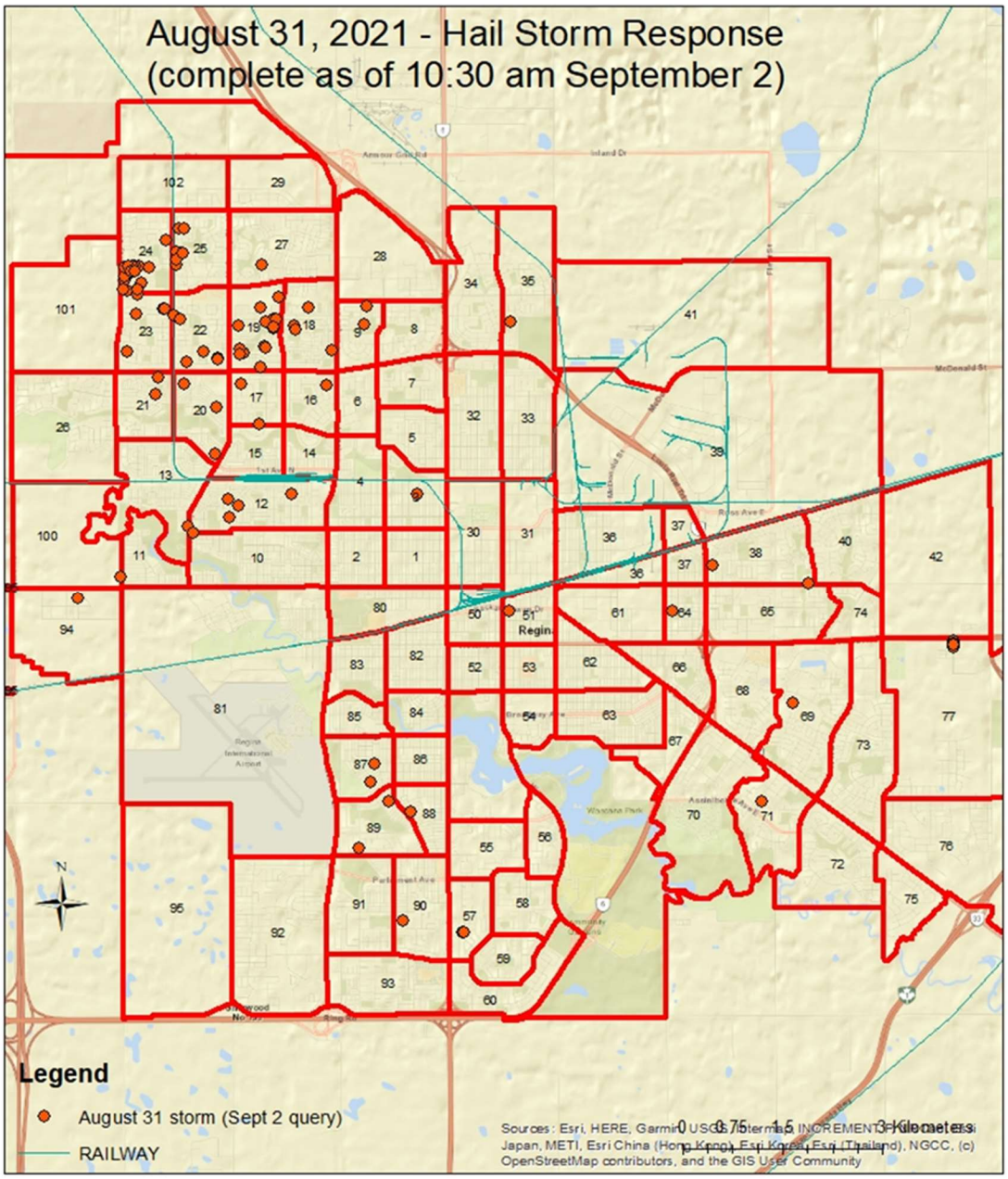


A total of 545 trees were serviced for storm related weather events. During late January, June and August there were three major storm events involving high winds. Especially notable was the abnormal winter wind event that occurred on January 13, 2021. Winds peaked at 122Km/hr during that event.

During all events the following was completed as part of Forestry's storm response:

- 105 trees were removed for safety reasons.
- 440 trees were repaired to a safe status.

For both 2020 and 2021, storm activity has exceeded the five-year average for damaged trees. Storm response work is not counted as part of regular internal pruning numbers. Larger storm events will negatively impact pruning numbers over time.

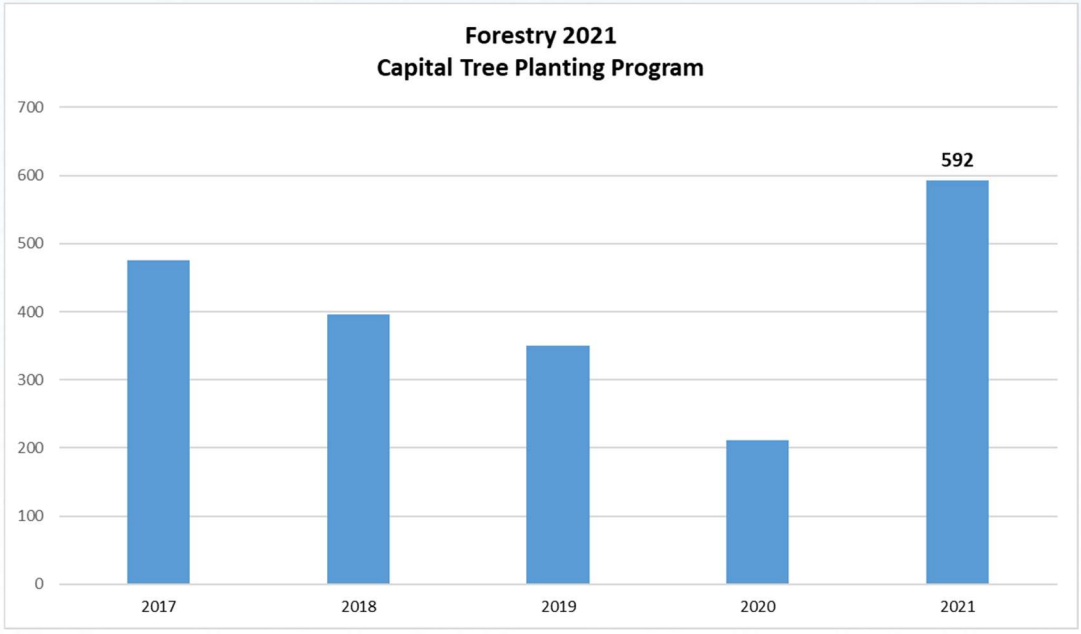


This map is derived from the work that was tracked resulting from the storm event that occurred on the evening of August 31, 2021. What is notable about this event is how the storm primarily impacted the far northwest corner of the City. The area around Whelan Drive was particularly damaged. For this event the Forestry team responded to 92 damaged trees, of which 23 trees were removals.

Forestry sector profile is shown on map.

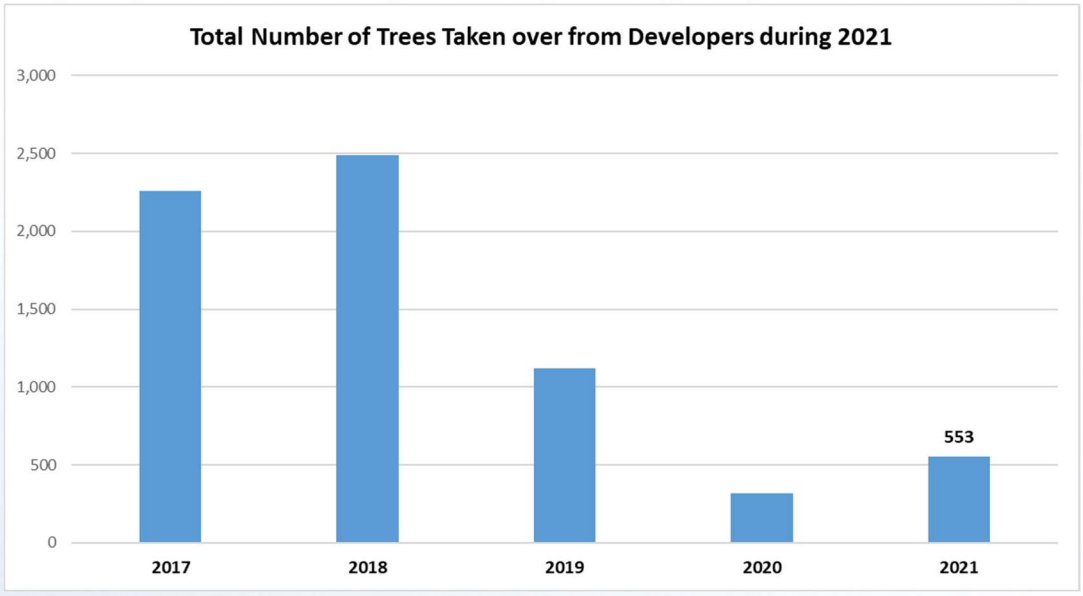
New Tree Planting & Diversity

Internal New Trees



For 2021, there were two capital projects led by the Forestry team. The first was the Street and Park Tree Replacement Program with a total spend of $122,340. The second was the Pacer's Park Project with a total project spend of $97,424 (to date).

Developer New Trees



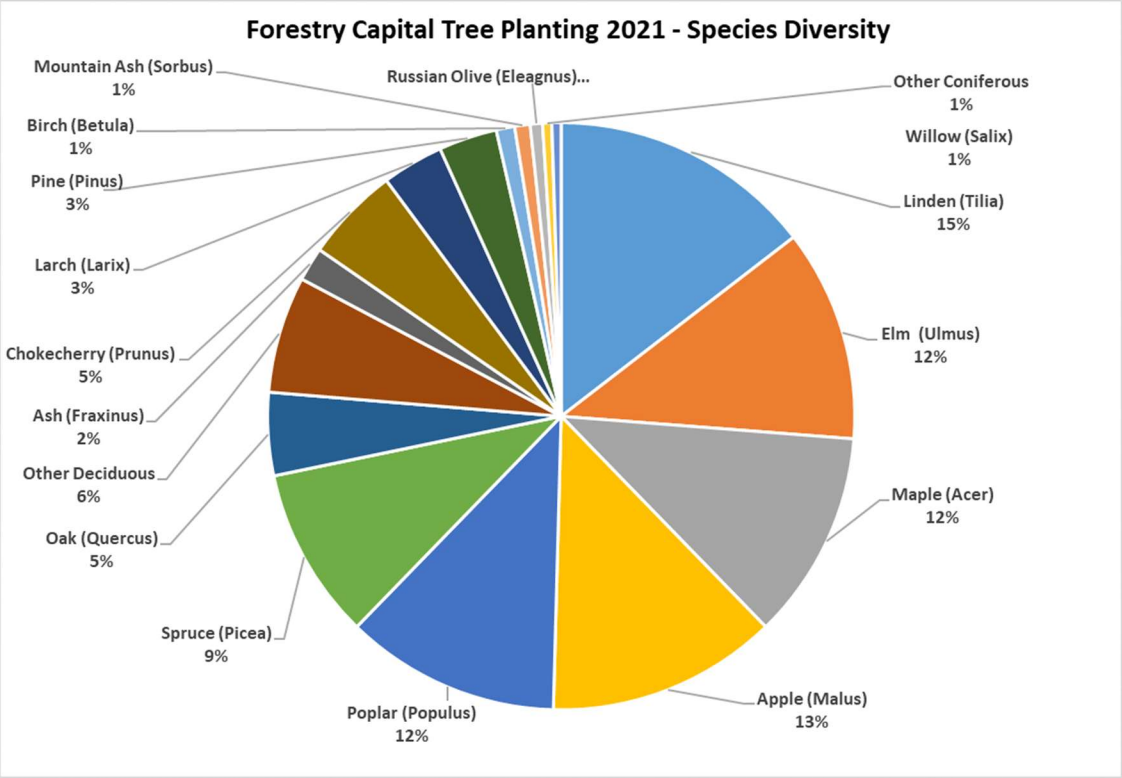
There were 553 trees recorded within GIS as Developer Takeover during 2021. These are non-Forestry managed planting programs. Any trees under developer or direct contractor control are not reported until the City has issued "CCC2" takeover.

Planting Diversity for 2021

In the *Regina Urban Forest Management Strategy (July 2000)*, a sustainability goal is no more than 25% of any one genus within a specific neighborhood of the city. The document further specifies that for a park space, no more than 20% of any one genus is permitted. Prior to 1989, majority of plantings were predominately monocultures of elm (*Ulmus)* or ash (*Fraxinus)*. This is to minimize risk to disease and insect damage.

In January 2018, due to minimizing future risk to Emerald Ash Borer, a decision to stop planting ash was made. As part of this decision, only trees that were previously approved that remained in the cue would be permitted for planting, as to not adversely affect the development community.

Internal Planting Diversity

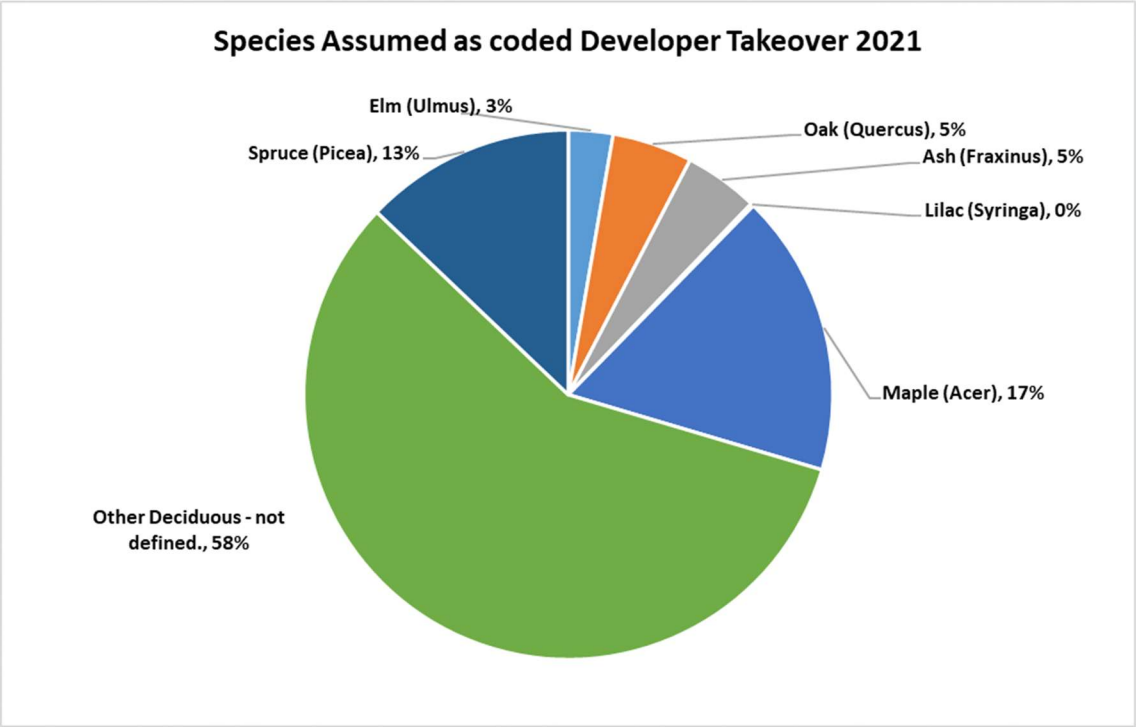


*Local common name followed by (genus).

Note about internal green ash plantings for 2021: These were sourced from existing inventory within the City. The trees were required to be removed for development projects which would have required their destruction. As the trees were internal to City Limits, the decision was made to save the trees and relocate.

The Forestry team is working to expand species diversity by trialing two new species of trees as experimental plantings. This will determine if survivability is possible with a changing climate. There were 12 Honey Locust (*Gleditsia*) planted in Ripplinger and Norseman parks. The work unit also sourced four male clones of Ginkgo biloba (*Ginkgo*). The ginkgo trees are located at Victoria, AE Wilson, Central and Arboretum parks. Species survivability is being evaluated on a seasonal basis. These trees are recorded as other deciduous in GIS.

Developer / Contractor Planting Diversity



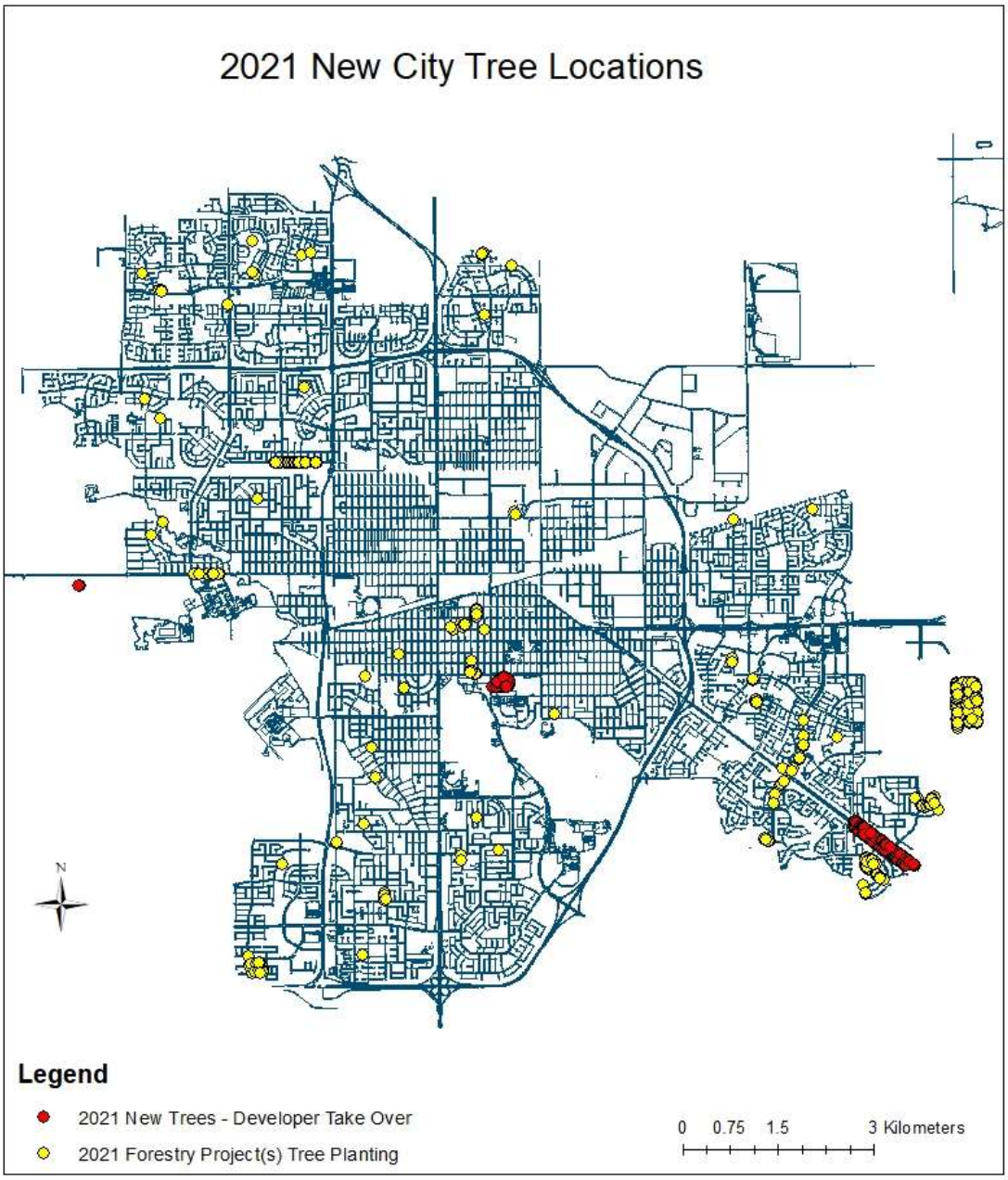
*Local common name followed by (genus).

For this year, the City assumed responsibility for 553 trees and shrubs from developers or non-Forestry managed contractors.

Of note is the other deciduous classification comprising 58%. This is due to shrub planting along some sections of Arcola Ave as there is a high-power transmission line where trees would not be suitable. Shrubs were used as alternates on that project for this reason.

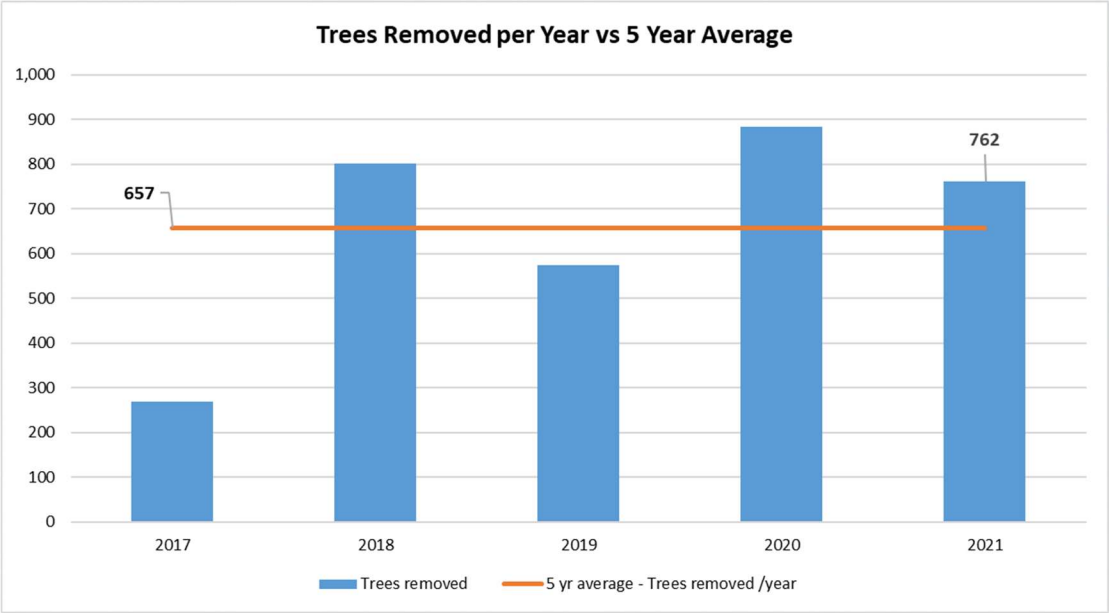
Prior to this year's report, City tree inventory did not include shrubs as a class.

New Tree Locations – Internal & Developer Combined

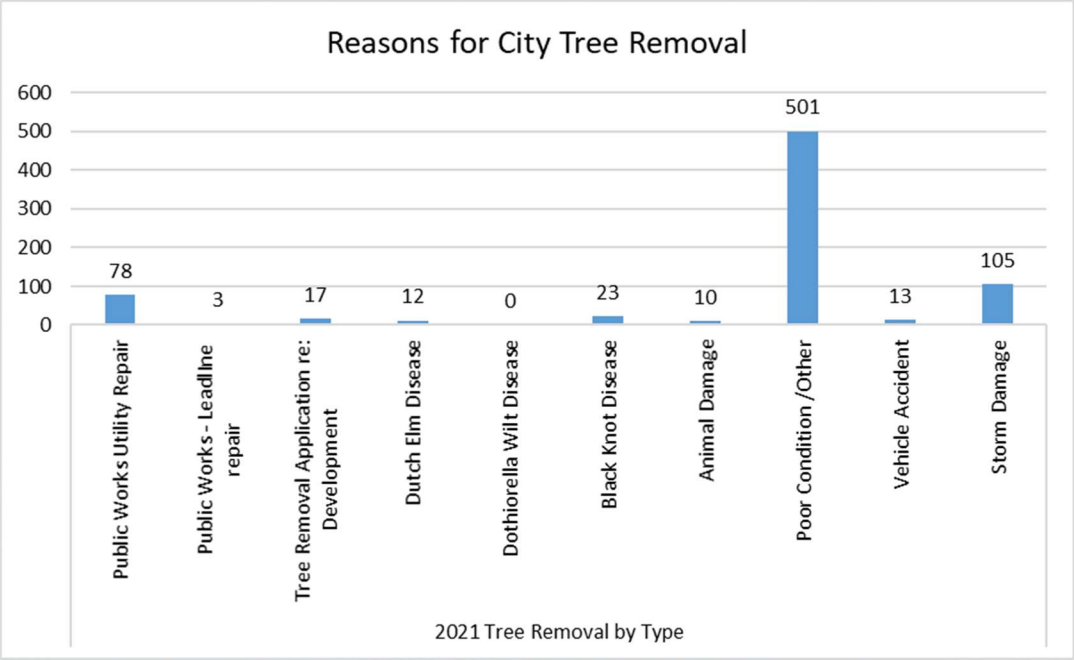


Highlight locations are where trees were planted, or Forestry assumed responsibility for trees during 2021. The map shows 1,145 new trees from tree takeovers from developers and City plantings. Of highlight is the Pacers Baseball Park Project located in east Regina. There were 177 trees planted at this location during October.

Forestry - Trees Removed



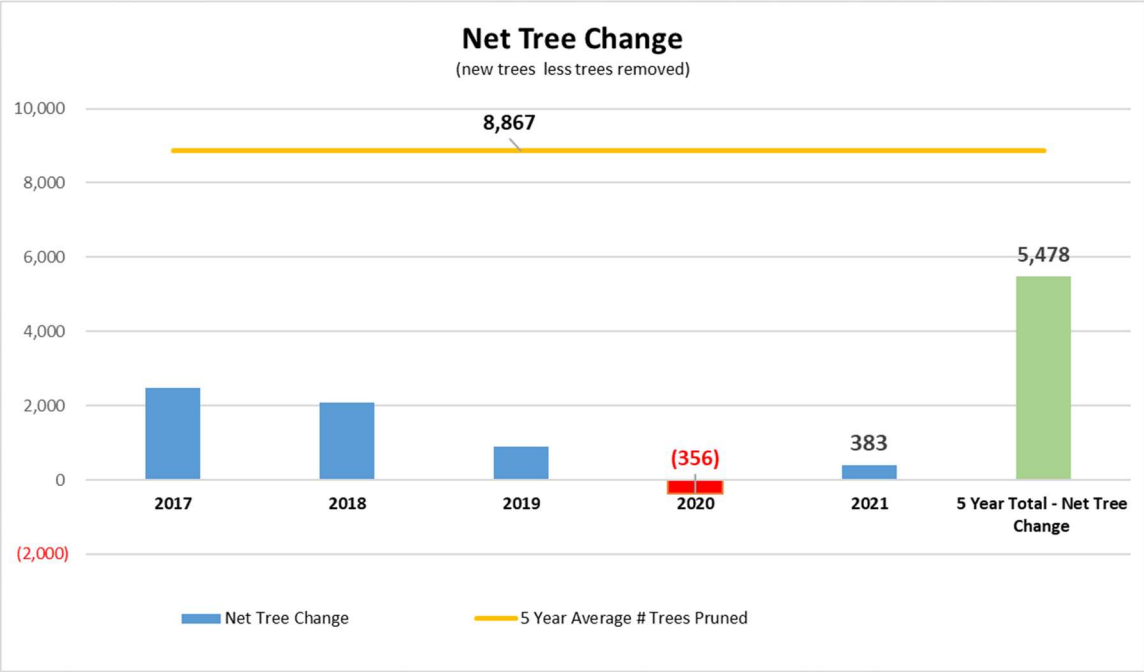
Tree removals by type



Tree removals continued to be above the norm. Much of the poor condition trees were impacted by the continuing drought experienced since 2017. During 2021, precipitation continued to be below average with Regina receiving a total of 342.2 mm precipitation (average 389.7mm/year, Environment Canada).

The drought experienced during 2020 was the fourth lowest precipitation amount in the Regina area for 130 years (204.4 mm). It is considered by the Forestry team that the 2020 drought continued to impact 2021 tree mortality.

Net Tree Change to Urban Forest

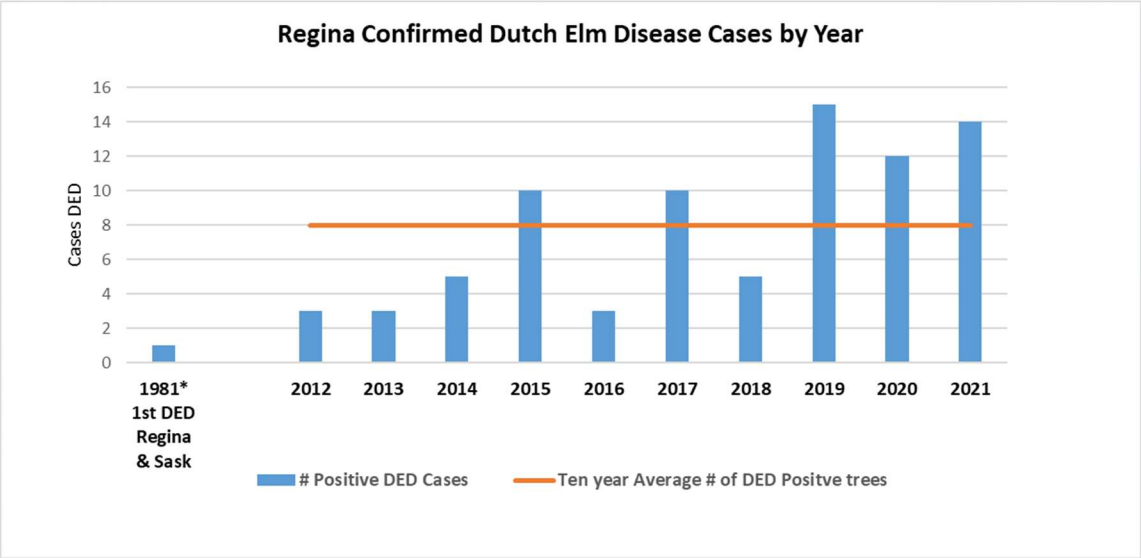


Net tree change is calculated from the total new trees (internal City and Developer combined) minus total trees removed. When looking at the result the following is considered:

- For 2021 there was a net gain of 383 trees. For 2020 there is a net loss of 356 trees to the urban forest. This means that plantings for 2021 were sufficient to exceed the previous year's net loss and the current years mortality combined.
- Five-Year Total Net Tree change (5,478 Green) indicates the significance to inventory change over past 5 years.
- The Five-year average of trees pruned is 8,867 trees/year (Yellow). Pruning has exceeded the net five-year net tree change. This is the third consecutive year that the pruning cycle has continued to exceed the net tree growth indicating pruning cycles are improving (i.e. service capacity is increasing)
- In a typical year, most new tree plantings are trees that have been assumed from greenfield development. Takeovers have slowed from a peak in 2017, and this trend is expected to continue for the foreseeable future.

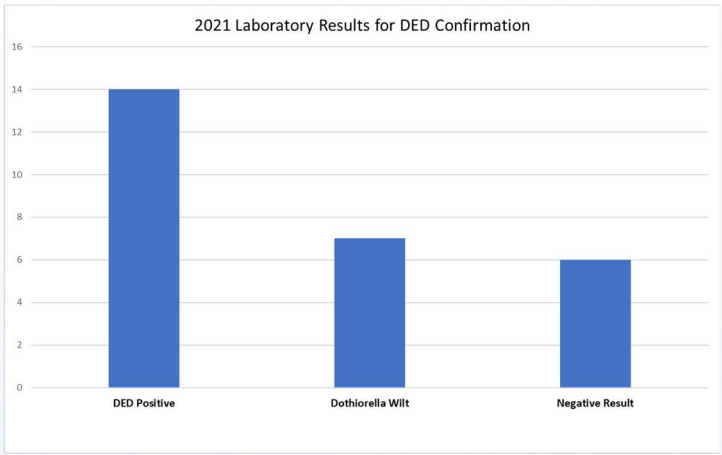
Pest Control Section

Dutch Elm Disease (DED) Incidences

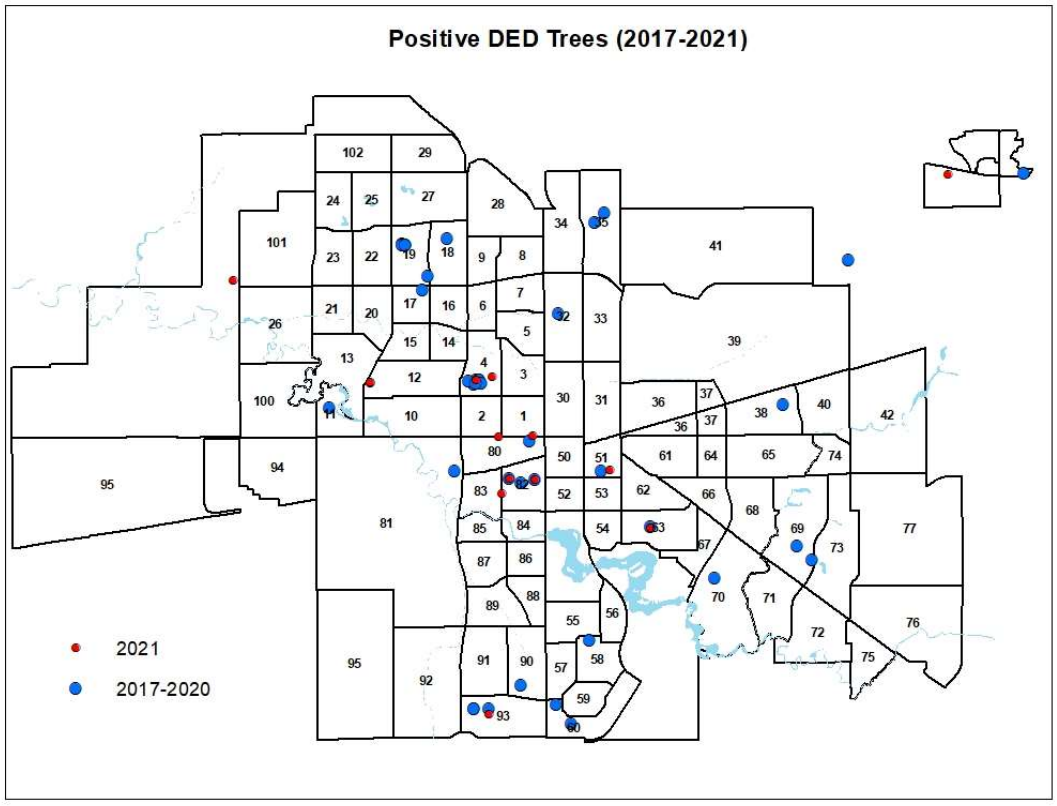


Fourteen trees were lost to Dutch Elm Disease during 2021. Of these, twelve trees were located on City property and two trees were located on private property. The total number of trees lost to DED from 1981 to 2021 inclusive (40 years) is ***150***. Current thinking is that increase in incidences are correlated to the recent multi-year drought conditions. One concern is that this higher value is appearing to become the new norm.

Elm Tree Samples – Laboratory Results

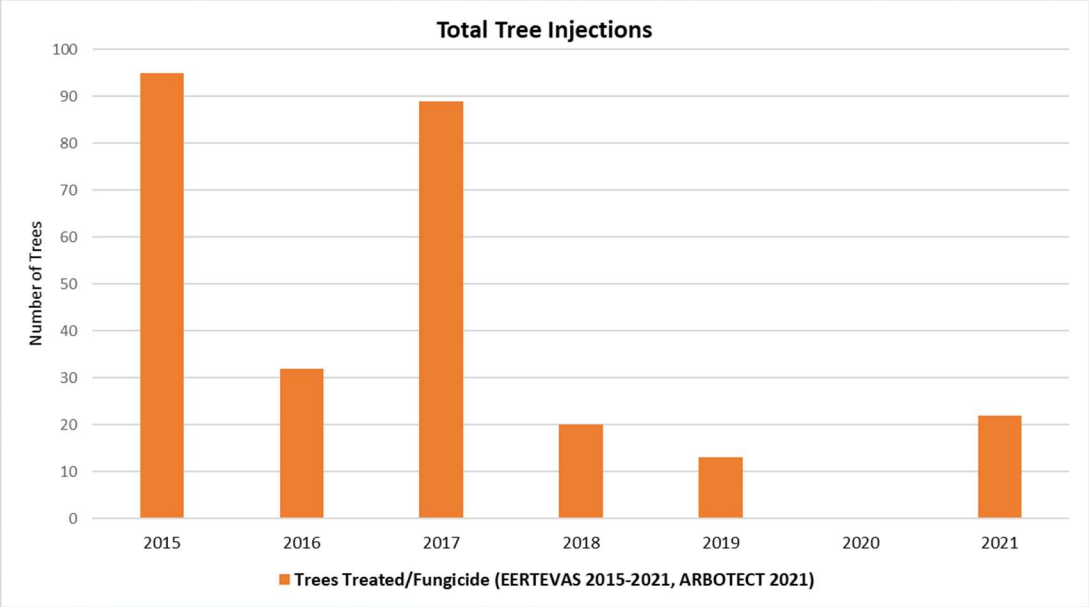


The Provincial Crop Protection Laboratory provides diagnostic services for tree disease identification. A total of 28 samples were submitted to the lab to formally confirm Dutch Elm Disease (DED). Only in a lab setting can the DED fungus (*Ophiostoma ulmi.)* be separated out from a similar fungus called DOTH (*Dothiorella ulmi).* DOTH is considered much less aggressive than DED and is managed through a pruning and fungicide program.



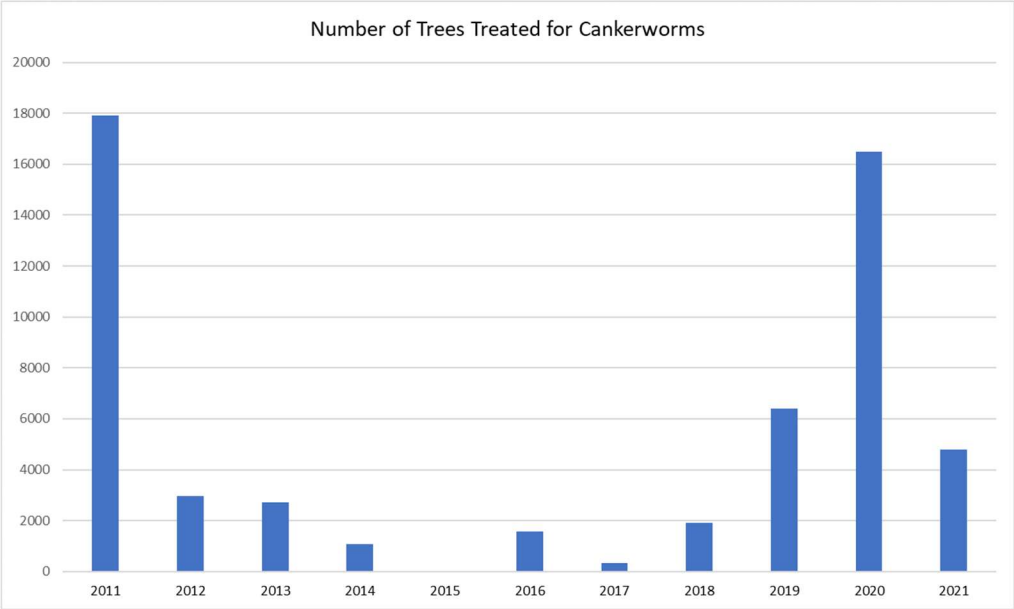
Locations shown are where elms were confirmed to have Dutch Elm Disease.

Tree Injections for DED Management

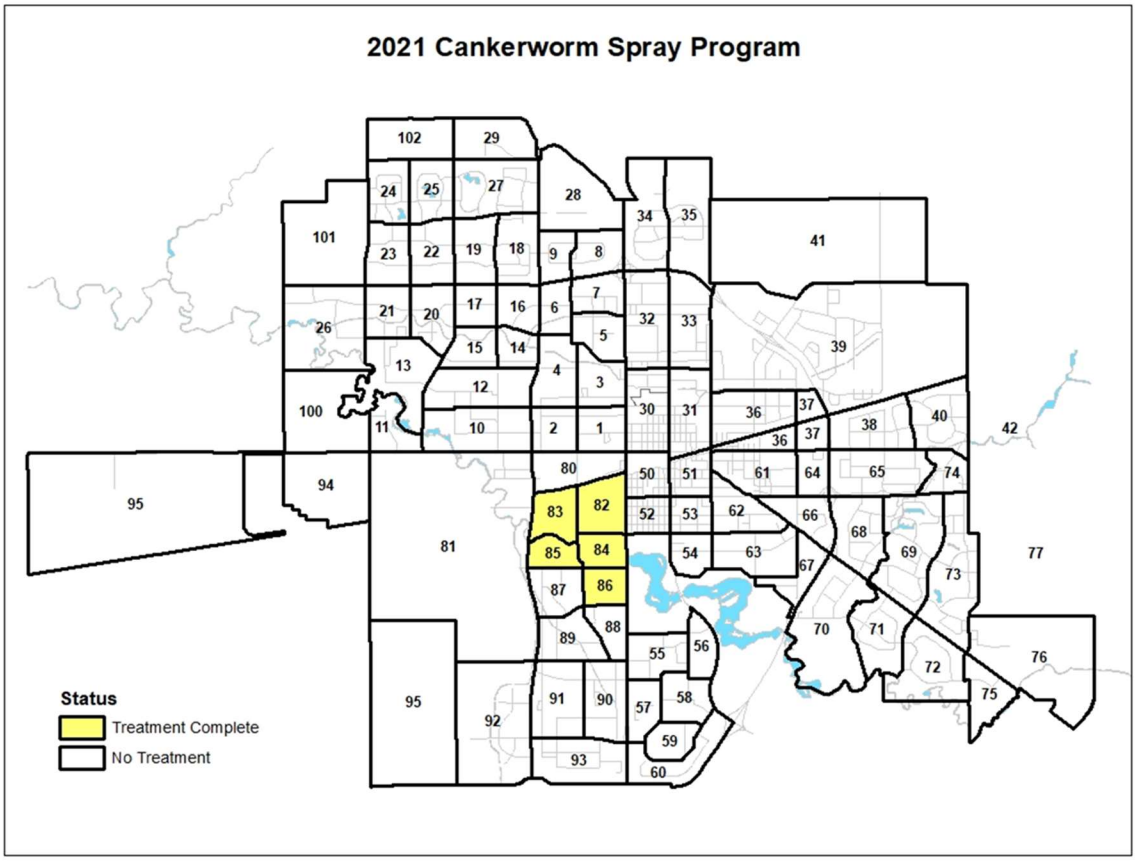


Pest Control provided a small injection program for trees that were thought to be close enough to a previously infected elm tree confirmed to have DED. The injections are intended to stop the spread of the DED fungus through underground root grafting. There were no injections carried out during 2020.

Cankerworm Program

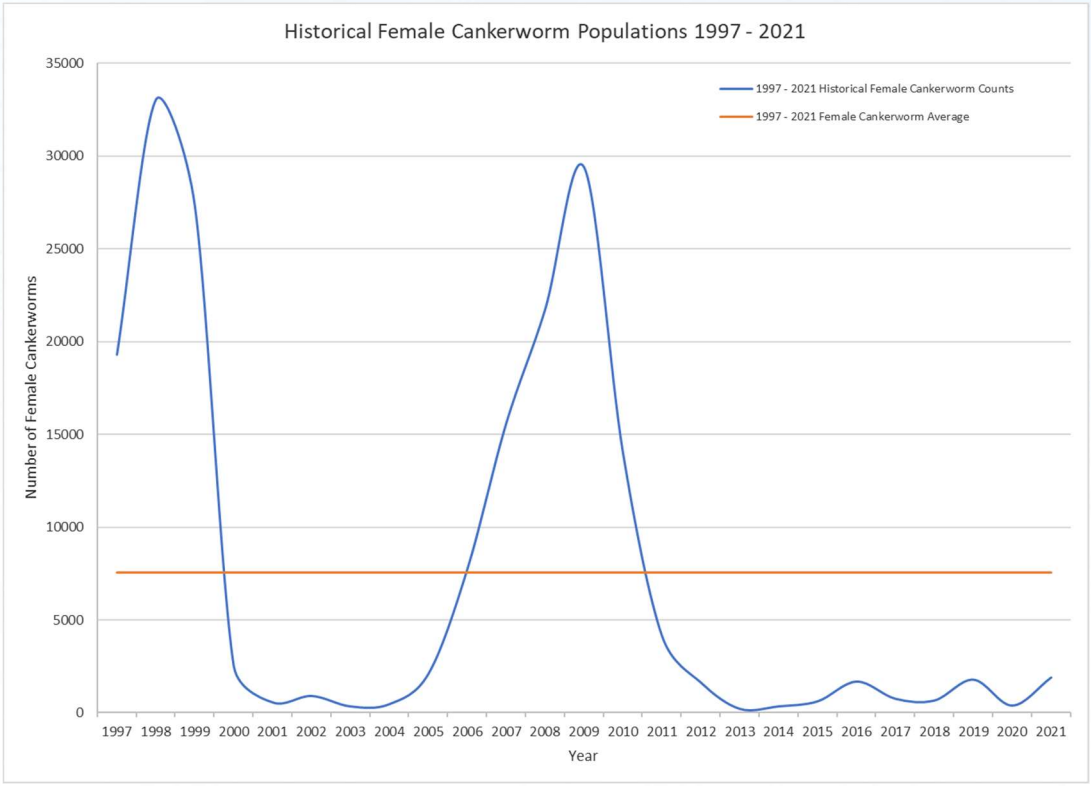


The graph shows total number of trees treated for cankerworm during 2021. Treatment was with a BT based spray. Historically treatments are based on populations exceeding established threshold.



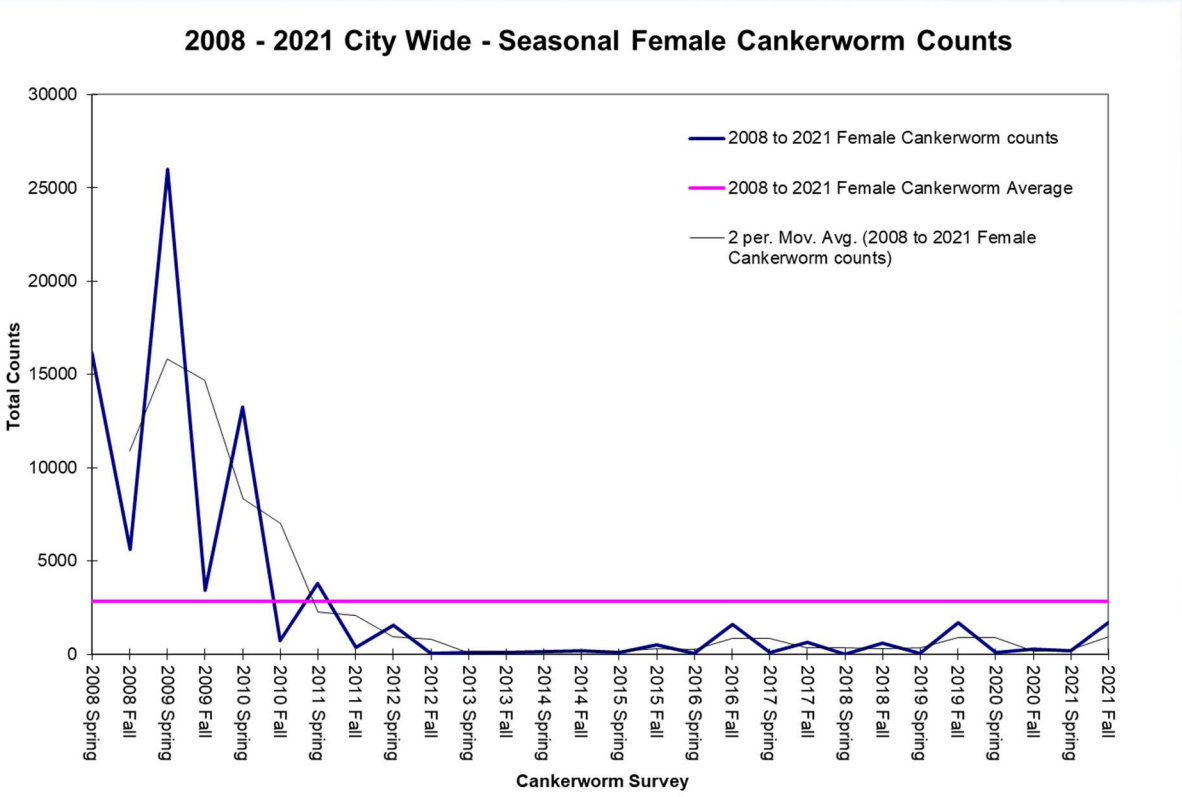
Sectors where treatments for cankerworms geographically occurred during 2021. In all, five sectors in whole or in part were treated.

Cankerworm Trends - Populations looking forward



Cyclical nature of cankerworm populations since 1997. Each year is a total sum of female cankerworms of both spring cankerworm species (*Palecrita vernata*) and fall cankerworm (*Alsophila pometaria*). This does not truly represent defoliation cycle as fall cankerworm larval stage straddles into the following year.

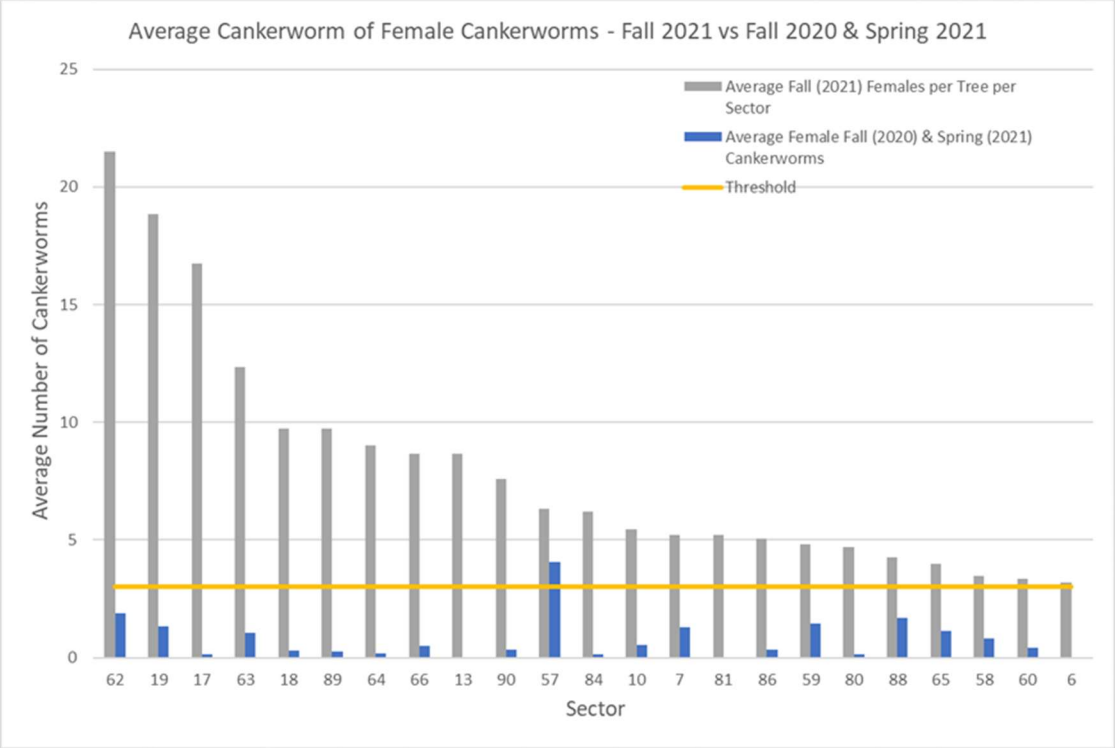
Cankerworm Trends - Populations looking forward (continued)



Historically, the driving population for defoliation event has been the spring cankerworm. This trend changed where the 2019 fall population was the driving population, causing a need for the 2020 control program. The 2020 spring cankerworm population was virtually non-existent.

Looking towards 2022, there is a notable uptick in the 2021 fall cankerworm adult population during the egg laying period. This could indicate damage from cankerworms could be increasing next spring.

2021 Fall Cankerworm Survey

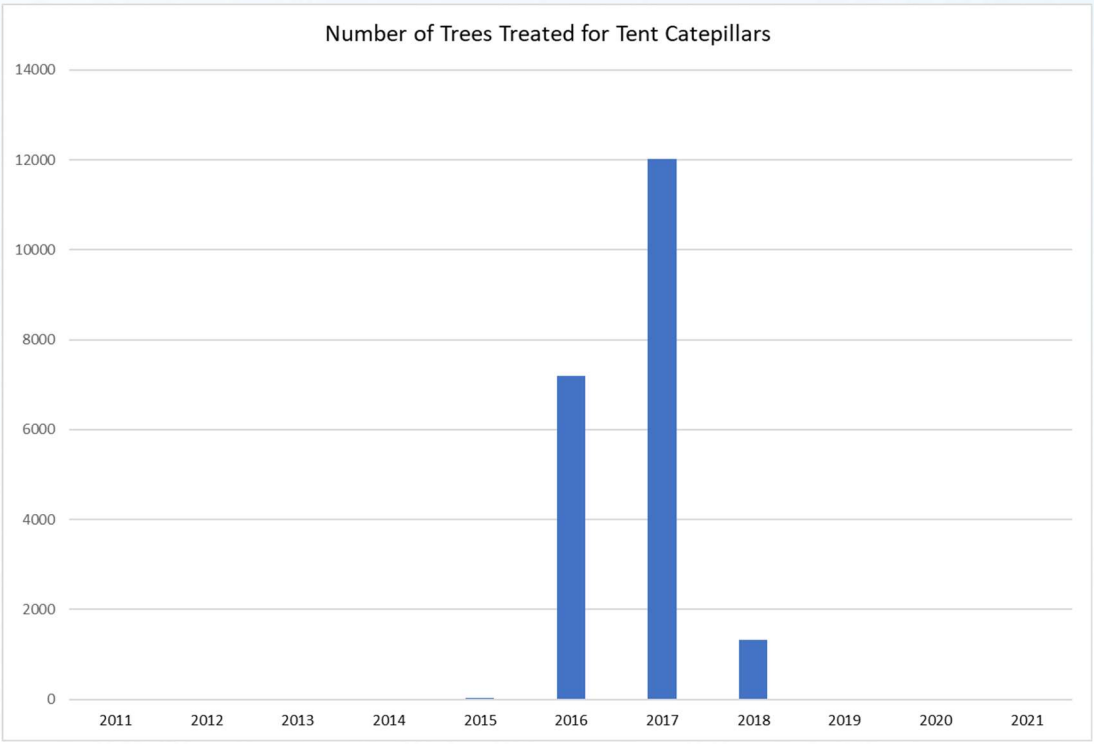


Of the 66 sectors surveyed during the fall of 2021, 23 sectors are currently identified as exceeding threshold (grey) for Fall Cankerworm (*A. pometaria*). For illustrative purposes 23 sectors represent approximately one third of the City which may require treatments if spring counts do not mitigate these tallies.

The previous adult cankerworm survey (blue) is for both spring and fall cankerworms which impacted the larval emergence for 2021. The same sectors are shown as a comparison to illustrate difference in population between survey cycles.

The action threshold established was from work the City's Pest Control group completed in 2008. This threshold was peer reviewed and published in the ISA's Arboriculture and Urban Forestry Journal (2008). The threshold value represents an estimated 25% defoliation event.

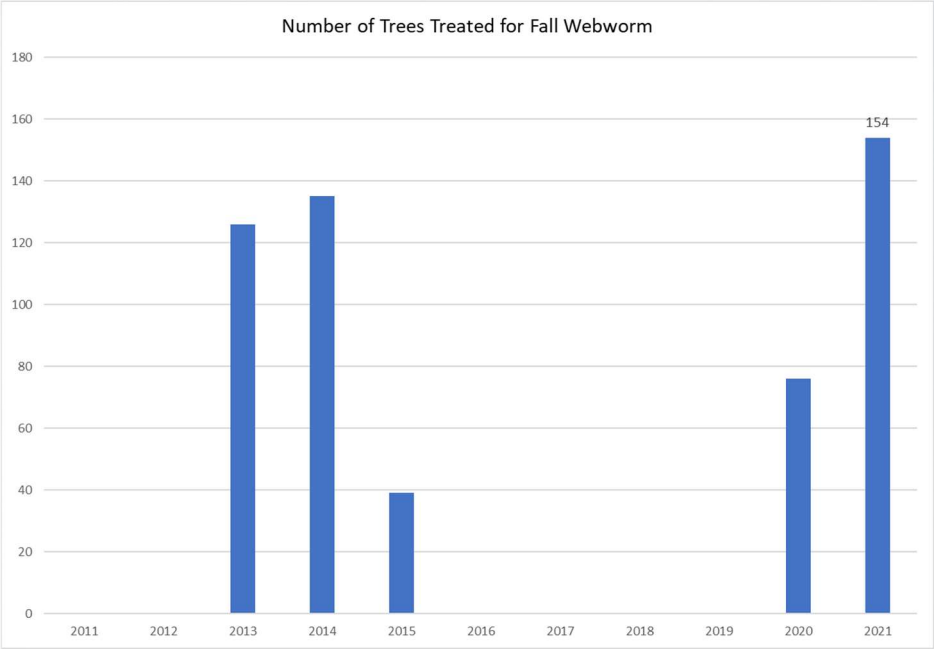
Tent Caterpillar Program



Fall monitoring during 2018 indicated tent caterpillar (*Malacosoma sp*.) would be below threshold. During 2021, no trees were required to be treated and no calls were received from residents regarding this insect. Branch sampling was not undertaken in the fall of 2021 to predict the 2022 population.

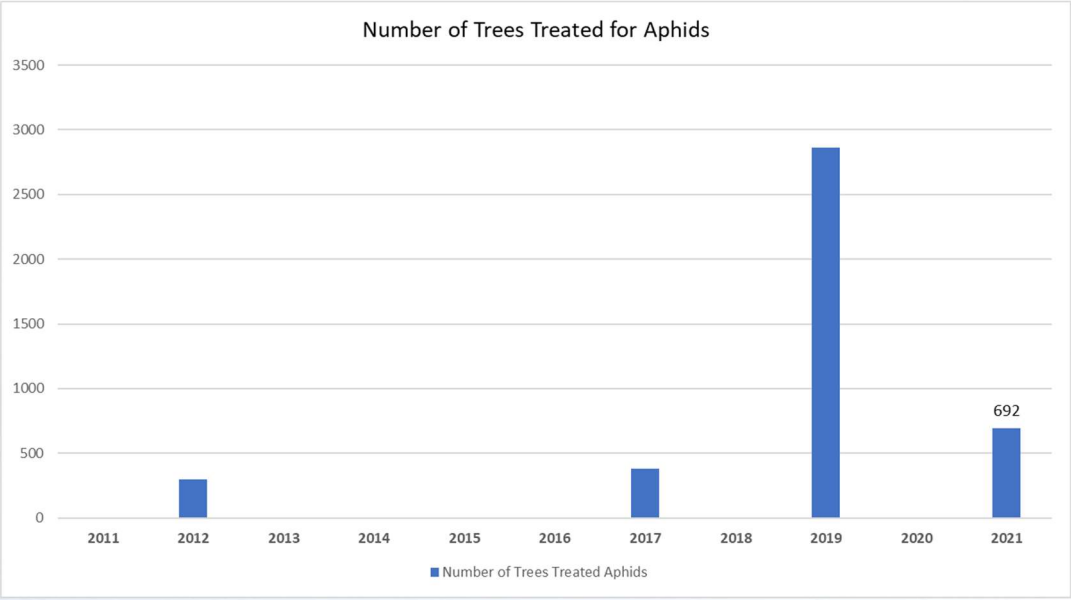
As this population seems to mirror cankerworm issues in the past, and cankerworm populations are increasing, it's likely time to begin to monitor for changes in the tent caterpillar population during the fall of 2022.

Fall Webworm Program



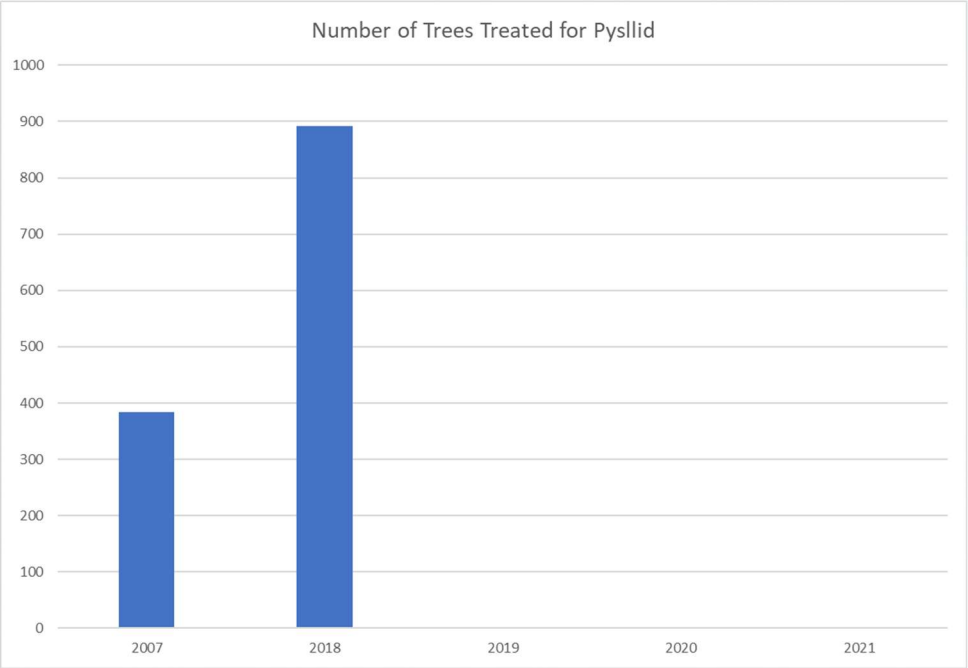
During 2021 a small control effort was made for control of fall webworm (Hyphantria sp.) 154 trees were treated, solely in response to service requests received.

Aphid Program



There were 692 trees treated for aphids *(Eriosoma sp.)* during 2021. Typically, this program is determined by volume of service requests received. When a call is received indicating a problem, the entire block is inspected and treated if required.

Cottony Psyllid affecting Ash trees

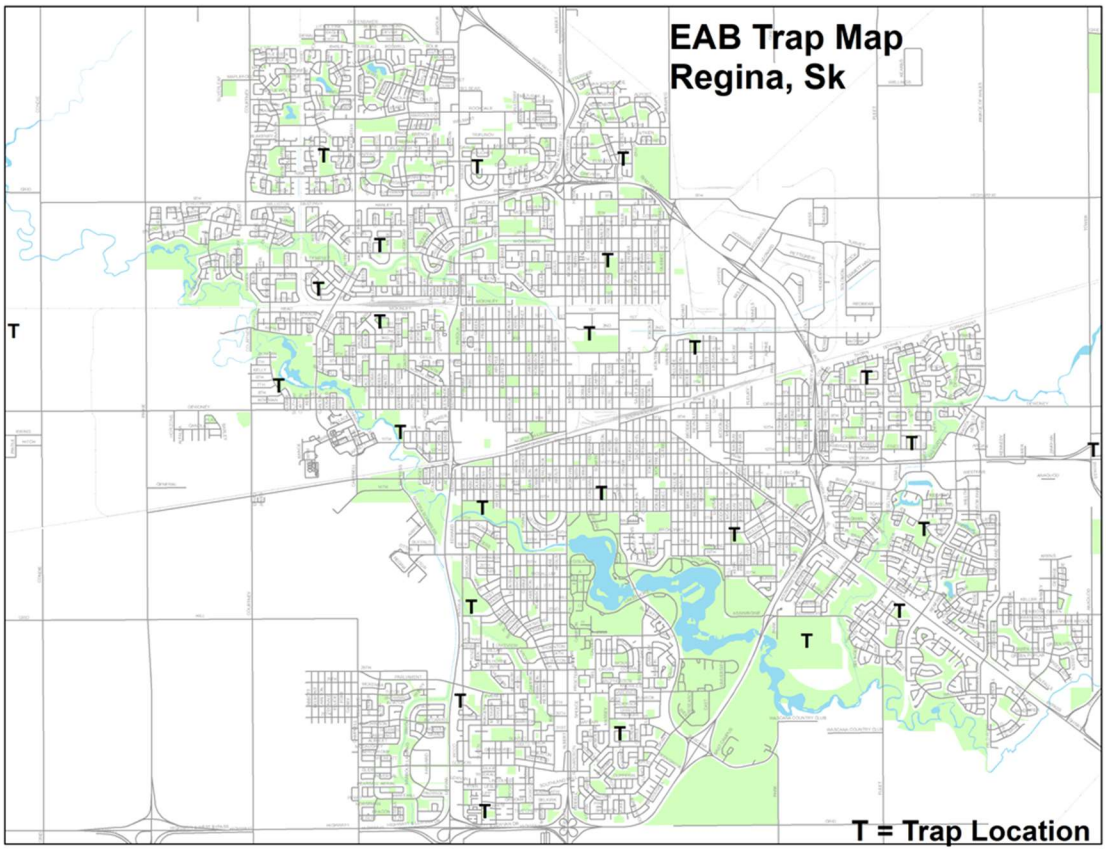


Cottony psyllid (*Psyllopsis discrepans*) primarily affects Black Ash trees (*Fraxinus nigra*). When psyllid appears, Black ash tree mortality dramatically increases. Researchers from the University of Saskatchewan and Agriculture and Agri-Food Canada have recently published a study where a bacterium *"Candidatus leberiacter*" seems to be associated with black ash mortality and cottony psyllid (Wamonje et al, 2022).

The insect made its first appearance in Regina during 2007. It then remained at an undetectable level until spring 2018. Following detection, Pest Control began treatments for the insect. During 2019, psyllid was almost undetectable, and no treatments were required. It is thought that the population had crashed due to below normal winter temperatures experienced in February 2019. During that month, eleven nights were well below -30°C with the coldest reaching -42°C.

Psyllid has continued to remain at an undetectable level during 2021. Detectable population spikes may continue to be sporadic.

Emerald Ash Borer Program

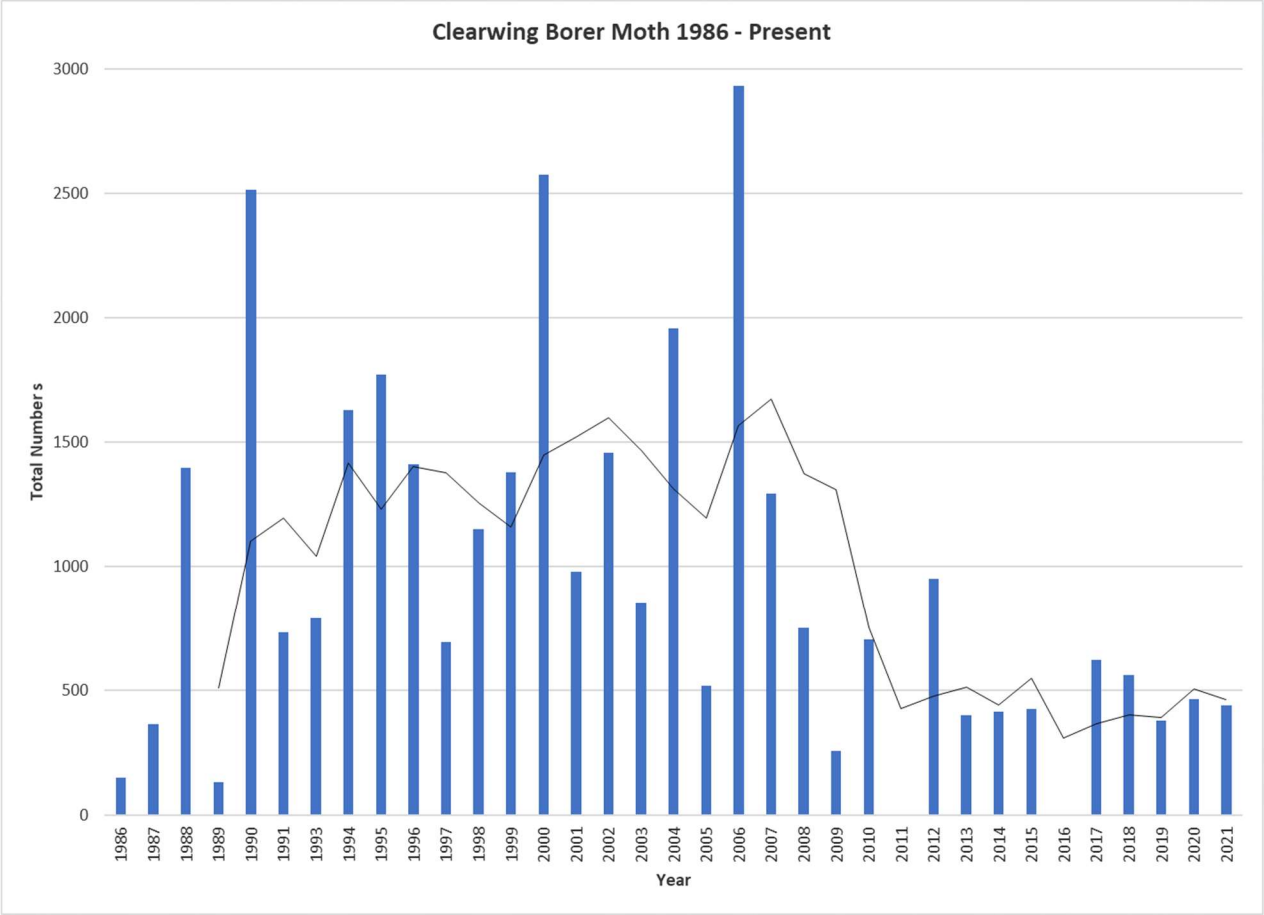


The City operates 25 Emerald Ash Borer (EAB) traps within City limits. EAB has the potential to destroy 100% of all ash (*Fraxinus sp*.) within City. Trapping locations for early detection of Emerald Ash Borer during 2020 are highlighted. Trap locations have not been altered for the previous four years.

Results:

- No EAB was detected during 2021.
- Closest known location for EAB: Winnipeg MB - first detected in 2017.

Clearwing Borer Moth affecting Ash Trees



Clearwing borers (*Podosesia sp.*) are moths with clear wings that have been known to damage ash trees within Regina. The larva of this insect mines the sapwood of ash trees which moves food and water in the tree.

The four-year trendline indicates population continues to remain at a low level.

The current strategy for control is intensive pheromone trapping. For 2021, 250 trapping locations were operated inside city limits - with two trap runs per location.

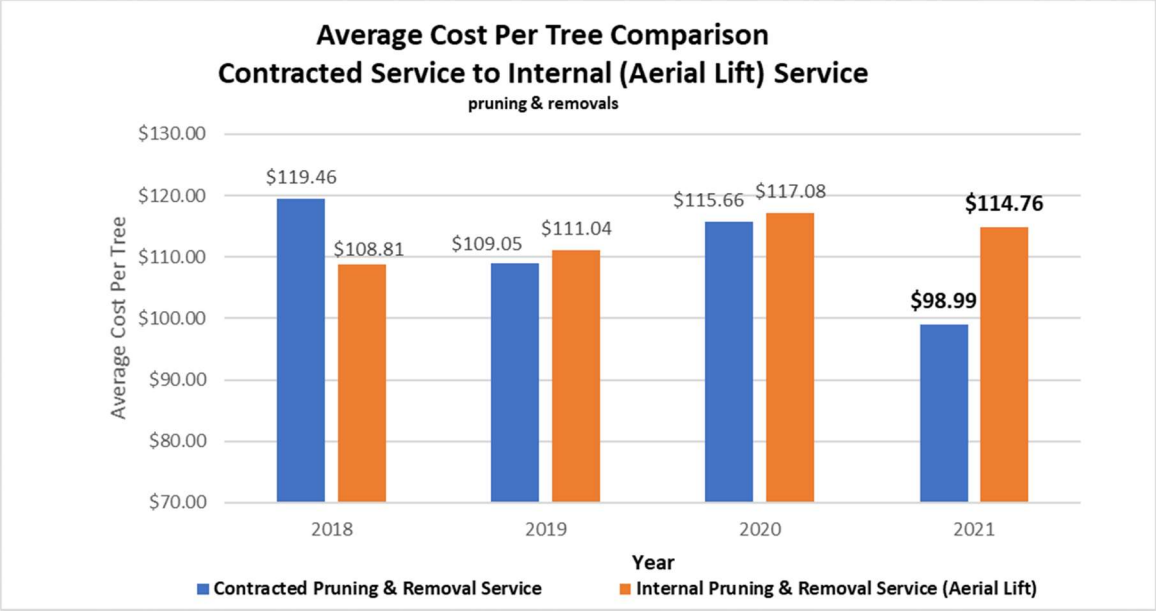
Outliers in data set include:

- 2011 – No trapping occurred
- 2016 – Incomplete dataset

City of Regina Strategic Outcomes

Community Outcome– Improve Service Financial Sustainability

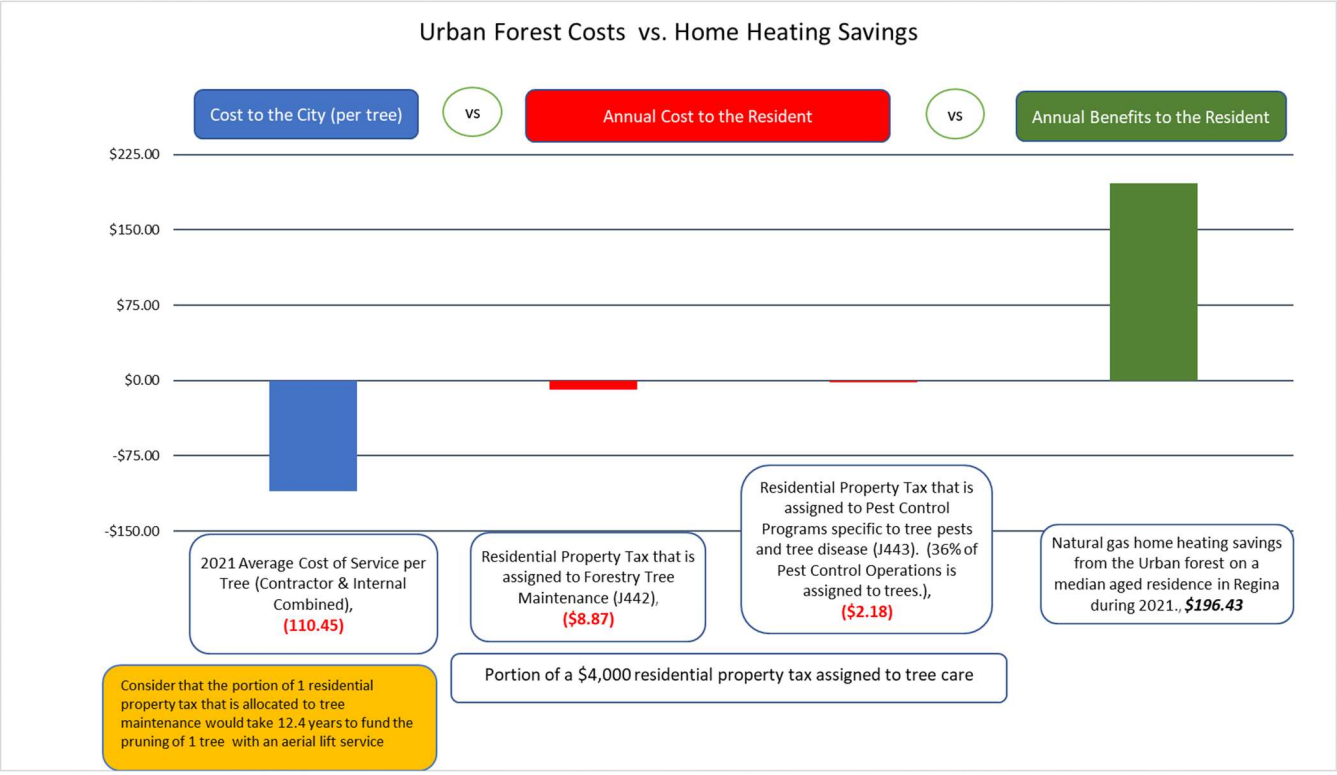
Contractor vs Internal Service Delivery Comparison



The graph shows a contracted and internal services comparison for 2018 to 2021 inclusive. Internal services are only for costs reflective of trees requiring the use of aerial lifts. There are number of factors affecting change to pruning and removal costs for the current year. Factors affecting cost differences include:

- The 2021 contracted pruning tender had a new vendor in the market. This tender pruned 2,305 trees at an average of $90 per tree plus GST. This was the lowest bid since this comparison has been actively tracked. Beyond the annual contract, there were 13 trees pruned/removed for unplanned work with a contractor. These ad hoc pruning costs are more expensive and do trend contractor costs upwards. The contracted service cost/tree shown accounts for both planned and unplanned situations.
- A 10-week internal Forestry efficiency pilot was completed from July to the end of September. The pilot included a providing a 7-day service model to maximize equipment efficiency. As part of that paradigm, a service truck using a chipper was fielded differently and is more comparable to private sector operations. It was also expected that the 7-day service model would naturally lower scheduled overtime. Upon review this overtime was reduced by 73% during the trial. The total efficiency resulted in a $50,597 savings over the 10-week trial.
- The overall size of tree, any obstructions/hazards encountered onsite, ease of access to the site affect pruning and removal costs. Removals are generally more expensive. Of the 762 city trees removed: 760 were removed by internal crews, two were removed by contracted service.

Community Outcome– Increase Understanding of Cost of Service
Urban Forest Cost Benefit Comparisons



The graphic shows the average cost to prune one residential tree as compared to the amount that is allocated to the Forestry Maintenance (J442) budget. The Pest Control budget (J443) that is specific to tree pests and diseases is shown as a comparison to Forestry Maintenance funding. The funding amounts illustrated are derived from a residence that paid $4,000 property tax during 2021.

Costs are then compared to the benefits of an urban forest with mature trees in a prairie landscape for a residential single dwelling home built in the early to mid-1960's. For comparison purposes, costs are illustrated in the negative as compared to benefits. Information for home change of energy consumption savings in Regina is derived from National Research Council data provided to City of Regina during 2014 (≈22.5 GJ). The energy saved is then applied to 2021 SaskEnergy residential rates for natural gas consumption and delivery in cubic meters ($134.33). Municipal delivery surcharge ($6.72), federal carbon tax ($46.35) and GST ($9.03) are included within the total savings.

For a $4000 residential property tax bill paid, the total of property tax for Pest Control and Forestry Operations as it relates to trees is $11.05. When measured against the savings of the federal carbon tax ($46.35) the rate payer essentially saved $35.30.

Financial Outcome – Increase Understanding Service Costs and Revenues Relative to Levels of Service

Plant Establishment Measures

Tree Watering Cycles

Year installed	# trees watered in system	Total Waterings Includes credited 2 raindays for each tree	Average # Waterings per tree (Includeds 2 credited rain days)	Average # Days between waterings	KPI Target Schedule	% of KPI target met
2021	298	3,609	12.1	11.4	Once every 12 calendar days	105.3%
2020	498	4,505	9.0	15.3	Once every 15 calendar days	98.3%
2019	1,529	10,640	7.0	19.8	Once per 4 weeks (28 days)	141.2%

* 2021 only spring planted trees were tracked. Fall plantings are not included in current year measures.

Total waterings all trees not including rain days	Total volume water dispensed (litres)	Average volume water per tree (litres)
14,104	803,480	57.0

*May 1 to Sept 15th.

During 2020, Forestry and Geospatial Services collaborated to develop a tree watering application to track tree watering and a Key Performance Indicator (KPI) for scheduling. This was to ensure trees in *unirrigated spaces* were receiving enough water to establish in drought conditions.

Once the app was developed it helped to schedule and guide crews to least watered trees. It then tracked each individual tree watering and concurrently tracked the volume of water utilized by the crew during that time-period. Within the scheduling portion of the app, first year trees (2021) were scheduled to be watered more frequently than second year trees (2020); second year trees watered more frequently than third year trees (2019). It is hoped that this will allow trees to acclimate to their surroundings.

By tracking costs, volume of water and tree watering frequency, the following was determined:

- During 2021 the average cost to water (one tree - one time) = **$13.09**.
  - This is a 28% improvement from previous year when the app was first utilized. The value in the 2020 report was costed at $18.17 (one tree - one time).
  - This improvement impacted improved Key Performance (KPI) indicators measuring against a preset schedule. The worst KPI for 2021 was the year two tree classification which measured 98.3% against target. For the previous year the same class of tree measured 73.2% against target.
- At the full KPI measure established, the average cost to establish one tree over three years (May 1 to October 31 or 34 estimated waterings @ $13.09 per) = **$445**

Community Outcome – Improve Service Financial Sustainability
Forestry's Efficiency Initiative (One page Summary)

During 2021, the Forestry team completed a 10-week efficiency trial and redeployed staff resources by utilizing a 10-hour shifting combined with a seven-day service model. This trial was completed during "peak season" and ran from July 4 to September 25. The results that were specific to pruning were then evaluated and provided to Deloitte as one part of the City's overall efficiency review.

The new service model also included deploying equipment similar to a private sector set up versus a traditional inhouse set up. This is where complete service truck with chipper is fielded instead of a lift truck followed by a separate chipper truck with chipper responding to individual service calls.

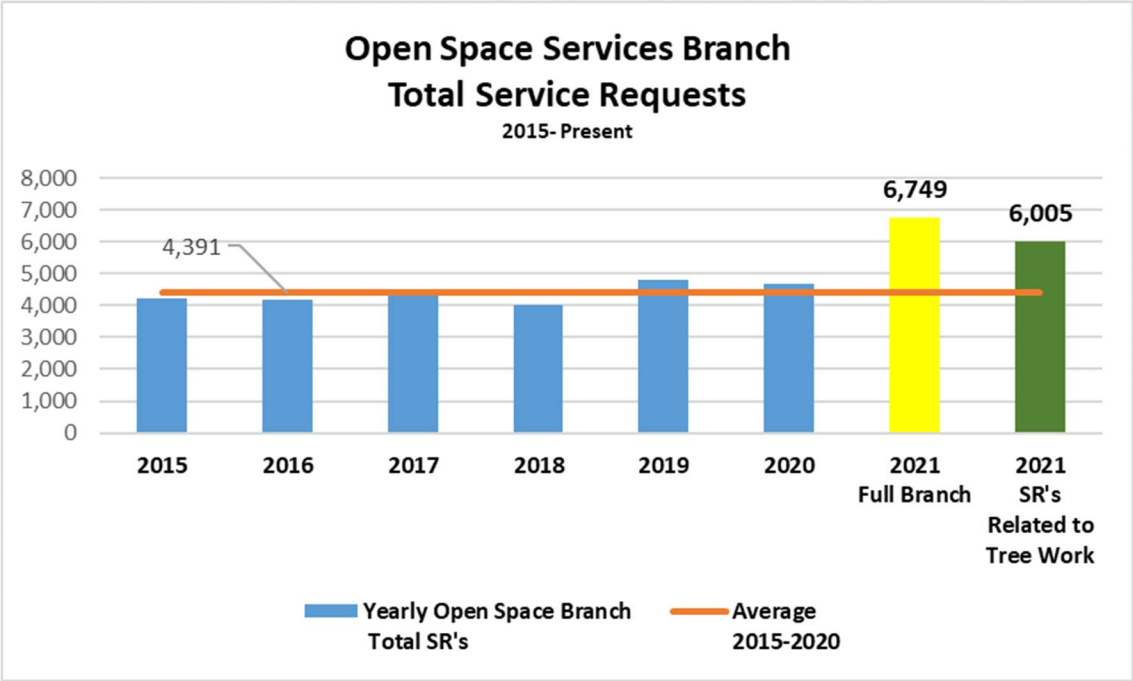
Service truck set up.

Results of the efficiency initiative are as followed:

- Seven-day service reduced scheduled over time by **73%** during the trial period.
- Service truck with chipper completed **1,045 trees** for an average cost of $72 per tree.
- Overall cost savings created by the efficiency initiative (service truck delivery and overtime reduction) was **$50,597.**
- Average cost per tree for all trees aerial pruned/removed by internal services was reduced from the previous year by **$2.32 per tree (1.98%).**
- Despite equipment availability issues caused by a pandemic-related parts supply issue specific to lift trucks, this was the second highest year in all internal forestry specific jobs completed since tracking began in 2009 - with **9,486 jobs** complete for the current year. For comparison purposes the 2009 to present average is 8,355 jobs complete for a typical year.
- With combining seven-day service and the use of a tree water scheduling app, this enabled watering crews to improve on tree watering schedules. Results show that per tree watering costs were reduced by **28%** from previous year. Concurrently total waterings improved to meet or exceed KPI target cycles. This was an unanticipated benefit.
- Increased ability to respond to an increase volume of service requests above norm **(53.7%).**
- Specific to the annual 2021 Operating Budget, Forestry's year end actual spending was **$134,410** underspent. This is a savings of **5.55%** from the City Council's approved budget.

Community Outcome – Deliver Reliable Service

Customer Service Measures

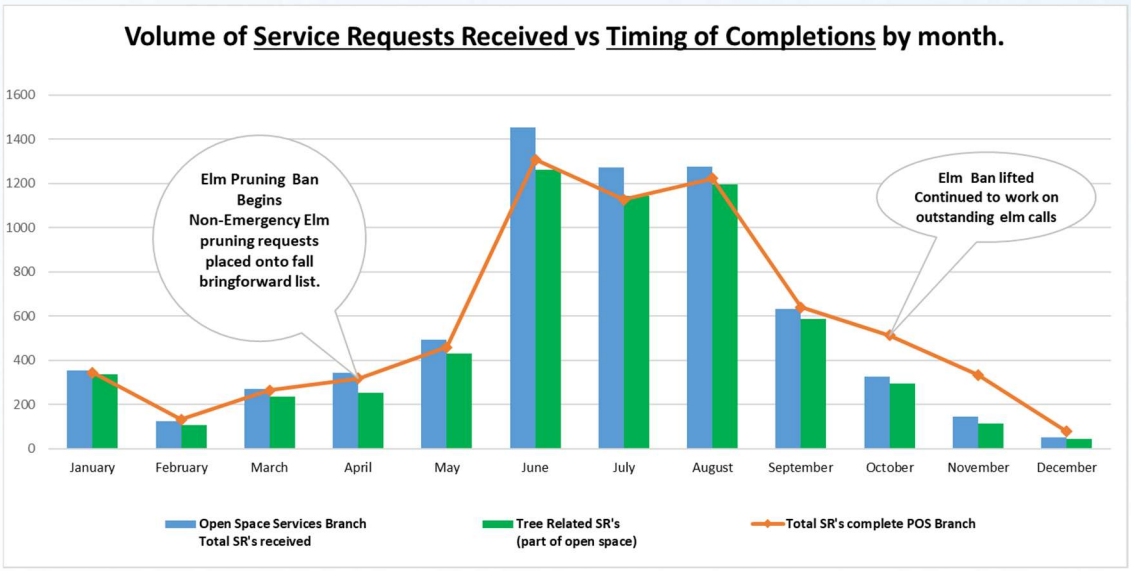


For 2021, there was an organizational change to the Open Space Services Branch by adding in Golf Course Services. This means that additional service requests are calculated differently compared to historically reported numbers. Taking that into consideration, golf service requests only totaled 67 additional requests (1%) of the current year totals. This was a record year for service requests received within the branch. Total requests at the branch level increased by 53.7% above the normal average (yellow). It is assumed there is likely some correlation to the pandemic and residents continuing to work from home wanting services provided differently.

The dramatic change illustrated to total service requests is mostly related to tree work requests from residents at their homes. Separated out, tree related work (green) totaled 6,005 service requests from residents. This comprised 89.0% of all service requests within the Open Space Services Branch.

Service requests are corporately tracked at the division and department levels. Consider that service requests just related to tree work represents 39.4% of all service requests at City Planning and Community Development Division level (nearly two requests out of five). When moved down to the Parks, Recreation and Cultural Services Department level this same value represents 57.2% of total service requests (nearly three requests out of five).

Completing requests throughout 2021

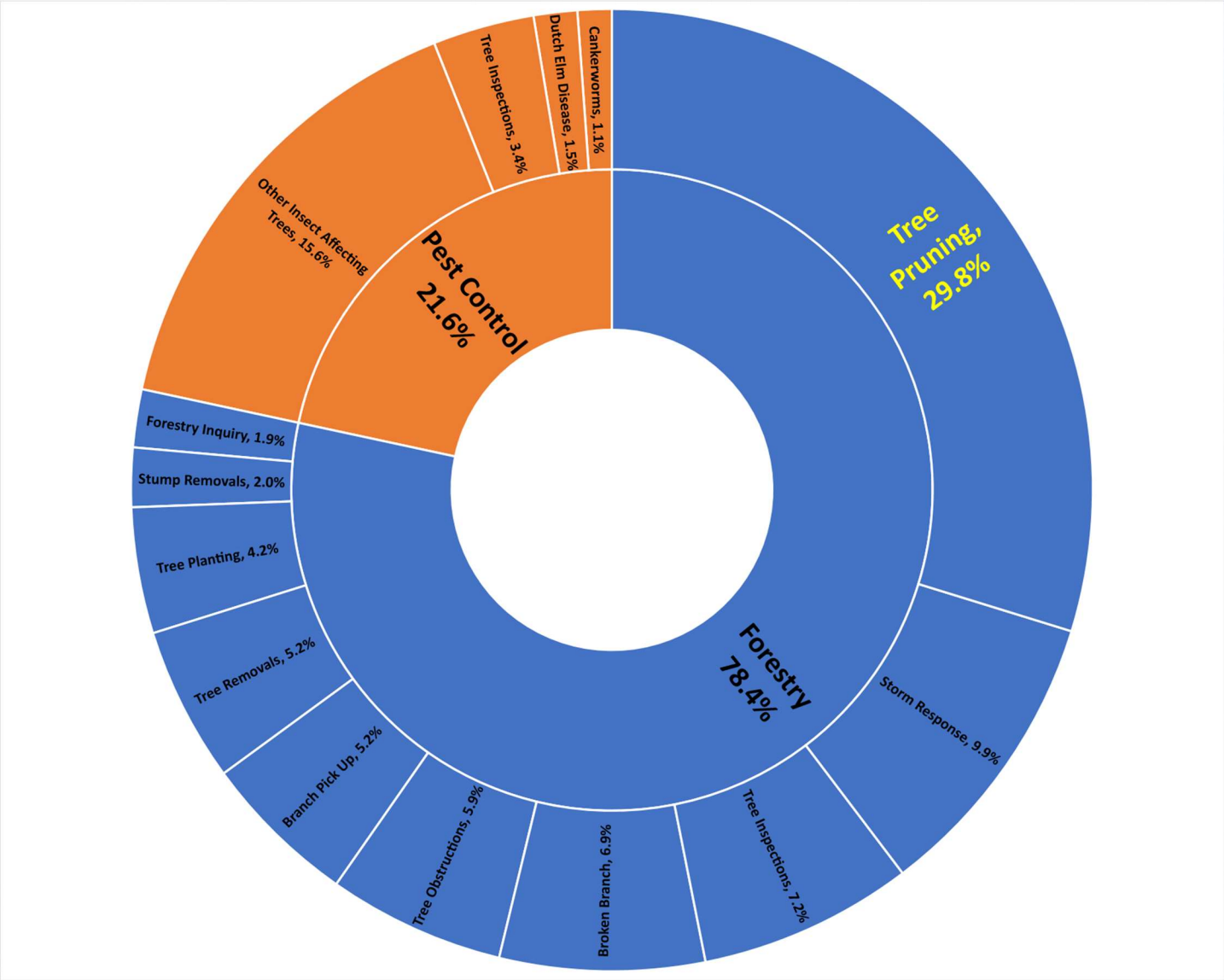


Most of the tree work service requests came during June, July and August. During these specific three months, 3,604 tree related requests were received. This is 60% of the year's total requests for tree work.

Non-emergency service requests for elm tree pruning received from April to August inclusive are deliberately delayed for response due to provincial DED regulation. There is a deliberate focus on responding to the backlog for these requests during September and October to meet customer expectations. As of December 31, 2021, of all service requests received, 99.9% were closed as complete.

The Forestry team provided a 10-week, seven-day service initiative from July to September. This change ensured that the team was able to respond to the increased volume of service requests. As a benefit scheduled over time was reduced by 73% from the previous year for the same period. Even with this change, the work unit as currently structured, is nearing maximum capacity regarding service request volume, as scheduled work was delayed to the fall to meet the demand.

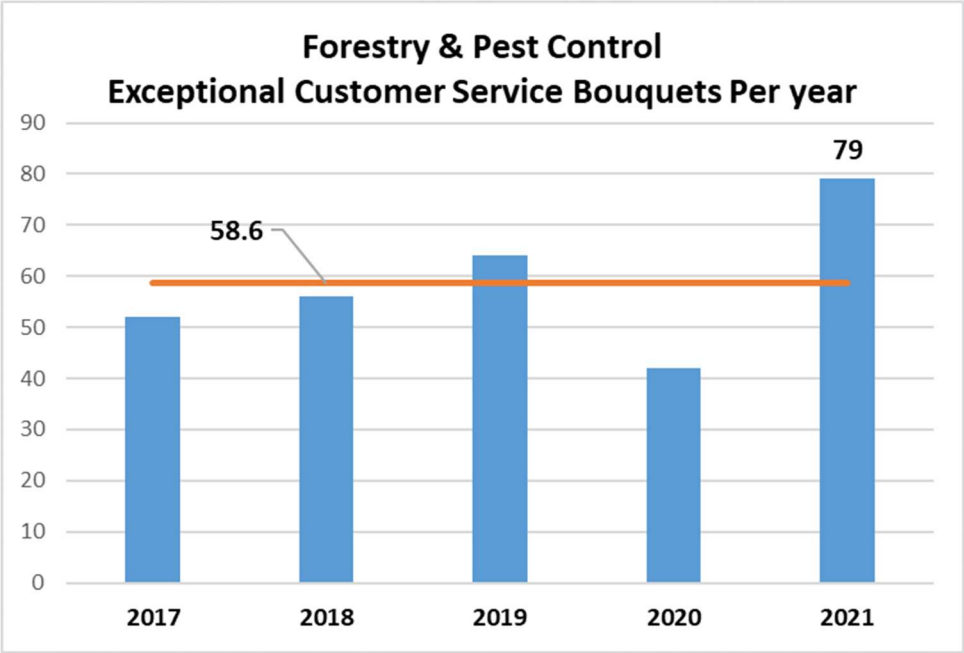
Urban Forest Service Requests by type



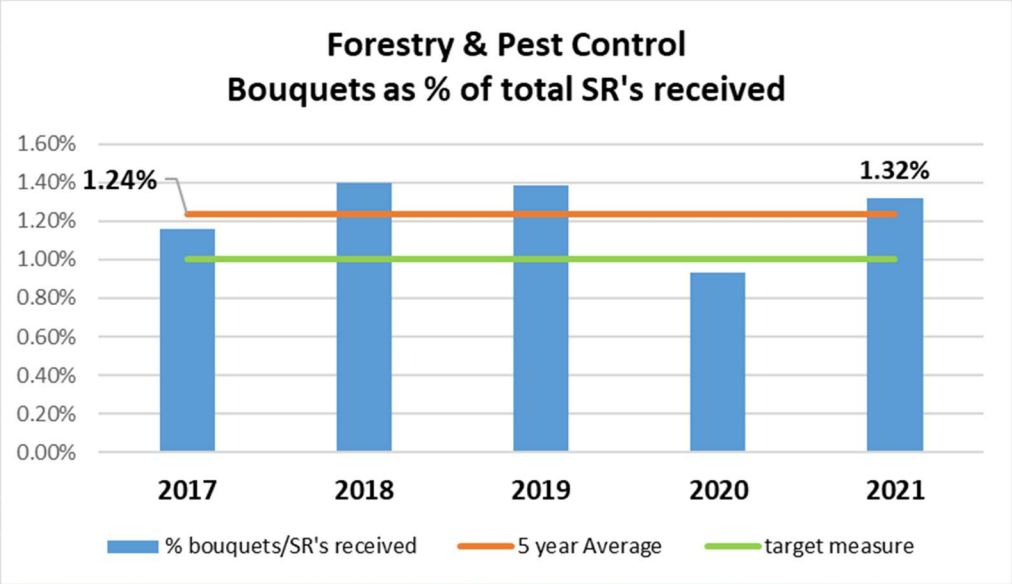
Pie distribution representing the percentage of tree related service requests for the 2021 calendar year.

Other insects affecting trees – often a catch all of calls from residents regarding fall web worm, aphids or cankerworms. It should be noted that cankerworms also have their own category but sometimes this cannot be distinguished easily at the Service Regina level as residents may not clearly identify the difference with the insects and trees affected.

Exceptional Customer Service Bouquets



Exceptional Customer Service Bouquets received are considered indicative of customer service delivered to the community. There was an increasing trend of bouquets from residents following work completed. When this number was first tracked in 2015, there were only 41 Bouquets.

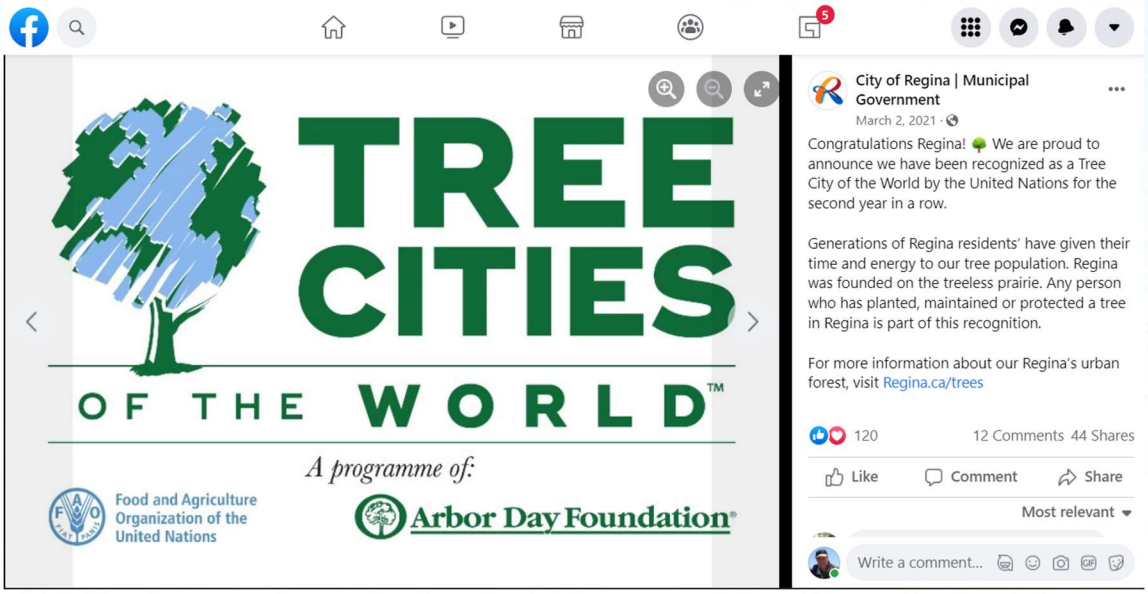


For every 100 Service Requests received during 2021, Forestry and Pest Control received 1.32 Exceptional Customer Service Bouquets following service. This is a benchmark measure that Forestry and Pest Control has created and is utilizing to ensure good customer service.

Since tracking this measure since 2015, it seems a reasonable target measure would be to continue to exceed 1% on a year-by-year basis. For 2022, this measure will be “set” as a goal.

Internal Process Outcome – Improve Internal and External Communication

Citizen Experience Department Statistics - Forestry and Pest Control Programming



With the ongoing pandemic and unpredictability of social gathering rules, there was an effort in 2021 to promote trees and tree care to residents through social media. During the year there were 10 posts on different aspects of the tree program. The above post was specific to Regina being a Tree City of the World.

Although not illustrated, the post with the greatest traction with residents was the promotion that occurred on September 21, 2021. This promoted the next day's, National Tree Day event where City staff gave away seedling fruit trees on September 21. The post reached 69,800 users. There were more than 300 comments and 500 shares.

Mission – We are dedicated to building a strong community by providing reliable, sustainable services.

Notable 2021 Events

June 3, 2021 – Mayor Masters, Councilor Stadnichuk and Councilor Zachidniak participating in planting of 250 seedlings on Boreal Island in AE Wilson Park. This was Regina's participation in the Sask Tree for Life Program along the Wascana Creek Watershed.

September 22, 2021 - National Tree Day – The City's Forestry team was distributing free edible tree seedlings at the Regina Farmers Market. The response from residents was huge! More than 350 people were lined up at the table prior to opening. All seedlings/whips were given away in 27 minutes.

END