

**The City of Calgary**  
**Parks Urban Forestry**

**Tree Preservation Research**

**December 2011**

**Focus Group and Survey Findings**



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# **1 CONTEXT AND OBJECTIVES**

Urban Forestry is a relatively new and still evolving field of study and can be defined as “The art, science and technology of managing trees and forest resources in and around urban community ecosystems for the physiological, sociological, economic, and aesthetic benefits trees provide society” Helms (1997). The City of Calgary’s urban forest includes trees along streets, in parks and on private land, vegetation in river valleys, and even on roof top gardens. The practice of urban forestry seeks to maintain and increase tree canopy cover and preserve trees in areas under development. According to Parks Urban Forest Strategic Plan (2007), the approach towards preservation and growth of trees is built around three areas: achieve and maintain healthy trees; collaborate with the community; and, resource to manage and measure the asset.

Over the years, The City’s urban forest has experienced many stresses such as rapid growth, harmful pests and diseases and unfavorable growing conditions in the urban environment. The general trend across many urban cities is that the urban forest is declining. The City of Calgary decided to review the potential impact of these pressures and investigate measures that would practically contribute to ensuring sustainable tree canopy for current and future generations.

City staff was asked to engage and report back on citizens’ views about encouraging the preservation of trees with the objectives of maintaining community character and preserving existing tree canopy coverage.

The City of Calgary sought to implement a research strategy, together with a broader citizen engagement process, to:

- Assess citizens’ awareness and opinions regarding Calgary’s urban forest;
- Evaluate the various initiatives involving tree preservation and growth with a focus on encouraging preservation on private properties; and,
- Explore and identify options for encouraging community participation in tree preservation and growth activities.

Administration’s summary of these findings will be presented to Council through the Standing Policy Committee on Community and Protective Services in early February 2012.

## 2 **METHODOLOGY**

On behalf of The City of Calgary, Leger Marketing conducted a three-phased research process to determine citizens' views about tree preservation and growth. The process included an initial qualitative phase of research including eight focus groups, followed by a quantitative survey phase and a weblink feedback portal embedded in The City's public website.

### 2.1 **QUALITATIVE RESEARCH**

A series of qualitative focus group workshops was first conducted. Leger developed a recruitment screening questionnaire to use for the random selection of participants. Following standard practice, experts such as arborists and those working in fields related to tree preservation and growth were excluded from the study as they could have easily dominated the sessions and influenced "general public" opinions. However, these key stakeholders will be included in future stakeholder engagement sessions to ensure their opinions are included in the final report presented to Council.

A total of eight focus groups were conducted, segmented by residents in communities with:

- Newly planted trees aged 1-20 years (2 groups);
- Established trees aged 21-40 years (2 groups);
- Maturing trees aged >40 years (2 groups); and among; and,
- Downtown residents (2 groups).

A recruitment screening questionnaire was used to ensure that focus group participants represented a range of communities (Wards), age brackets, gender, home owners and renters, and income levels. Groups were held at Leger's professional focus group facilities between October 1st and October 13<sup>th</sup>, 2011 during weekday evening and weekend daytime workshops. Each participant was provided with a cash incentive of \$75 for their time and participation. City of Calgary project team members attended all sessions.

The information obtained from this initial qualitative phase of focus group research formed the foundation for determining the major themes for the subsequent survey phase of research which measures citizens' awareness and perceptions regarding tree preservation and growth initiatives in Calgary.

## 2.2 QUANTITATIVE SURVEY RESEARCH

Following the focus group research, an online survey was developed and administered to a random representative sample of Leger's online web panel in Calgary. An online versus telephone methodology was chosen for several reasons. First, online surveys allow respondents to view images, such as various types of trees, whereas telephone surveys do not allow for this option. Second, online surveys are significantly more cost-efficient in comparison to telephone surveys. As well, data can be collected in a more efficient manner with online surveys in comparison to telephone surveys which typically require longer 'field' durations in which the interviews are conducted.

As for the online panel used, Leger owns and manages Legerweb.com, a proprietary online panel of more than 350,000 Canadians including more than 5,000 Calgary residents. This panel reflects a representative and a reliable cross-section of the Canadian population. Panelists are recruited from a variety of sources to minimize bias and enhance the overall feasibility of our online studies. Recruitment sources include random telephone calls, email invitations, third-party sample providers, banner ads, direct mail, and print ads. The majority (60%) of the panel is recruited by telephone as this has been shown to improve engagement and retention compared to other methods.

Senior Leger Marketing researchers continuously monitor the following to ensure that the web surveys are being completed as intended. This is extremely critical for an online survey, since there is no scope to train the respondent on how to complete a survey (compared to a CATI survey which is conducted and controlled by a trained interviewer).

Prior to the launch of the study, a pretest was conducted to assess the survey questionnaire tool and online approach. The aim was to complete a total of 750 online survey responses, and this goal was exceeded resulting in a total of 860 online survey responses being collected for analysis. The online survey was conducted between October 31st and November 11th, 2011. Results were weighted by age, gender and city quadrant based on Statistics Canada Census data to ensure they are representative of all Calgarians.

Target respondents included online Leger panelists who are currently residents of The City of Calgary and who are aged 18 years or older. For statistical reliability, we note that as a non-random Internet survey, a margin of error is not reported (margin of error accounts for sampling error). Had this data been collected using a probability sample in which all Calgarians would have had an equal opportunity to have been selected, the margin of error would be  $\pm 3.3$  percentage points, 19 times out of 20. Margins of error for subsets of the population will be larger. Differences in results among subsets of the population (e.g. males vs. females) are only reported if meaningful statistical differences were shown in the cross-tabulation data tables (e.g. differences that are outside of the margin of error).

The questionnaire is appended to this report. Data tables were delivered electronically to The City.

### 2.2.1 DEMOGRAPHIC PROFILE OF ONLINE SURVEY RESPONDENTS

Data were weighted by age, gender and city quadrant based on Statistics Canada Census data. The following tables detail the characteristics of the online survey sample.

Calgarians	n=860
<b>Quadrant of City</b>	
Southwest	33%
Southeast	21%
Northwest	27%
Northeast	19%
<b>Years Lived in The City of Calgary</b>	
Less than one year	2%
2 to 5 years	11%
6 to 14 years	27%
15 to 24 years	22%
25 years or more	38%
<b>Tree Canopy Coverage Type of Community</b>	
1 -10 years (newly planted)	20%
11 - 20 years (newly established)	26%
21-40 years (established)	26%
Over 40 years (mature)	25%
Downtown	2%

Calgarians	n=860
<b>Gender</b>	
Male	50%
Female	50%
<b>Age</b>	
18-24 years of age	11%
25-34 years of age	24%
35-44 years of age	21%
45-54 years of age	20%
55-64 years of age	12%
65-74 years of age	10%
75+ years of age	2%
<b>Children Under 18 in Household</b>	
Yes	31%
No	69%

Calgarians	n=860
<b>Own or Rent</b>	
Own	77%
Rent	23%
<b>Type of Dwelling</b>	
Single family home	60%
Detached home	8%
Townhome or villa	15%
Apartment-style condominium	9%
Apartment	6%
<b>Age of Home or Building</b>	
Less than 3 years	6%
4 to 10 years	20%
11 to 20 years	21%
21 to 39 years	32%
40 years or older	19%

Calgarians	n=860
<b>Education</b>	
High school, general or professional (8 to 12 years)	22%
College pre-university, technical training, certificate (CEP)	25%
University certificates and diplomas	8%
University Bachelor's degree (including classical studies)	32%
University Master's degree	10%
University Doctorate (PhD)	1%
<b>Annual Household Income</b>	
Less than \$30,000	8%
\$30,000 to \$49,999	10%
\$50,000 to \$74,999	14%
\$75,000 to \$99,999	17%
\$100,000 to \$149,999	20%
\$150,000 or more	11%
Don't know/prefer not to answer	19%

## 2.3 WEBLINK FEEDBACK PORTAL

The City of Calgary included an additional engagement opportunity for citizens to provide comments via a “weblink” feedback form found on The City of Calgary’s website and hosted by Leger. This “weblink” feedback form allowed citizens who were not necessarily invited to participate in the formal online survey to also express their opinions about tree preservation and growth initiatives.

The reader should note, however, that a self-selection approach such as this “weblink” feedback form is not statistically reliable, as it is not representative of the population of Calgarians, but only of those who chose to participate. Here, the sample could include experts, City employees, concerned citizens, corporate representatives, special interest group representatives, or others.

Thus, we can only report on these findings in a “qualitative” or directional nature and such feedback is presented in a detached appendix to this report. The weblink was available to Calgarians from November 2nd to 22nd and total of 638 citizens responded to this call for feedback.

### **3 KEY FINDINGS**

This executive summary represents the most salient findings from eight focus group workshops conducted in October 2011 and from a survey of 860 Calgarians in November 2011 regarding tree preservation and growth initiatives.

#### **#1: What Trees Mean to Calgarians:**

Focus group participants primarily express positive sentiments when thinking of trees. The general public, however, does not necessarily separate the concepts of tree preservation and growth. Instead, they are drawn to an umbrella concept of tree stewardship, including tree maintenance, protection and growth.

#### **#2: Awareness and Knowledge of Tree Preservation and Growth Initiatives:**

The majority (73%) of Calgarians do not feel that they are knowledgeable about tree preservation and growth initiatives. While a slight majority (60%) of Calgarians consider themselves to be knowledgeable about tree watering, a minority of Calgarians say they are knowledgeable about all other aspects of tree preservation and growth initiatives evaluated.

Few (17%) Calgarians are aware of The City of Calgary's tree preservation and growth initiatives, and most over-estimate the actual tree canopy coverage in Calgary. Misperceptions certainly exist where tree preservation bylaws are concerned and a lack of awareness prevails.

#### **#3: Perceived Benefits of Trees:**

Calgarians can identify an array of benefits from trees that are environmental, tangible, economic, eco-friendly and emotional in scope. The survey results confirm a strong identification from Calgarians with the benefits of trees. Citizens would feel a sense of "loss" without our urban forest, can associate fond memories with trees and contemplate generational differences with respect to interactions between children and trees.

#### **#4: Current Participation in Tree Preservation and Growth Initiatives:**

Active participation in tree preservation and growth initiatives competes with life's other priorities. As such, the majority of Calgarians report having watered trees within the past year, but a minority of citizens have participated in other activities. The more knowledgeable Calgarians are about tree preservation and growth, the more likely they are to have participated in related actions.

**#5: Challenges Related to Tree Preservation and Growth:**

A lack of knowledge is the KEY barrier to participation in tree preservation and growth initiatives. Subsequently, cost, space limitations, climate and a lack of motivation prohibit involvement in such activities. It is important to note that despite an acknowledged lack of awareness on this issue, the majority (77%) of Calgarians would like to be educated about how to properly take care of trees. Educating Calgarians, therefore, could prove to drive additional participation in such tree activities. Cost, land development and a lack of motivation are secondary challenges limiting participation in addressing “tree” issues.

**#6: Tree Preservation Legislation, Bylaws and Regulations:**

Calgarians are split in their views about rules when it relates to removing mature and/or healthy trees on private lands. Further, Calgarians do not favour regulations surrounding that would prohibit the removal of diseased or dying trees on private lands. Calgarians express strong support, on the other hand, for the implementation and monitoring of regulations for developers and infill developments.

**#7: Future Participation in Tree Preservation and Growth Initiatives:**

Given low awareness levels about tree preservation and growth, it is not surprising that survey respondents express a significant likelihood to visit a website for resource information. Specific programs, such as memorial or birthplace tree planting, are also appealing to Calgarians. Offering incentives can increase the likelihood of participation in tree preservation and growth initiatives, particularly when incentives represent monetary values rather than public recognition.

**#8: Communications:**

Calgarians express a strong desire for The City to communicate to citizens about the benefits, value and care of trees. Suggested communications mediums include an assortment of traditional and non-traditional strategies. Focus group participants commonly agree that tree educational communications strategies should reach out to ALL Calgarians, with certain individuals recommending target marketing to homeowners, children, community associations and Corporate Calgary.

## **SUMMARY:**

The original objectives of this tree preservation and growth research involved three key areas:

1. Assess awareness and opinions;
2. Evaluate initiatives; and,
3. Evaluate encouraging community participation.

The qualitative and quantitative phases of research show that the core response to these research objectives involves a need to educate Calgarians about tree preservation and growth. Armed with knowledge, Calgarians will be more motivated to participate in tree preservation and growth initiatives, and ultimately, will be empowered to embrace such activities on their own.



Awareness and knowledge of tree preservation and growth strategies is low. However, Calgarians express a significant desire to become educated in this field. As seen in the research, there is confusion about current tree regulations, yet Calgarians express a desire to explore the implementation of bylaws for developments in The City. In addition, an overall lack of awareness of tree care, tree preservation and growth initiatives, and resources related to trees prevails. Also evidenced in the research is the premise that the more knowledgeable Calgarians are about tree preservation and growth strategies, the more likely they are to have participated in such initiatives.

To this end, The City may wish to consider developing an educational campaign to inform citizens about tree preservation and growth initiatives. Focus group participants suggest using the “Blue Bin” recycling campaign as an example of how to educate, encourage and empower Calgarians to take action on issues that are indeed important to our community.

The detailed findings stemming from this research follow.

## 4 DETAILED ANALYSIS OF RESULTS

This report represents the findings from the eight focus group workshops which explored and identified citizens’ awareness and perceptions towards tree preservation and growth. With focus group results serving as a foundation, this report also presents the results from the subsequent online survey involving 860 responses which measured citizens’ awareness and perceptions of these issues. A summary of the comments from the weblink feedback portal constitute a separate report for The City’s review as the sample frame was not controlled and, therefore, cannot be considered to be an accurate and representative reflection of ALL Calgarians’ views.

### 4.1 WHAT ‘TREES’ MEAN TO CALGARIANS

To begin, it is important for The City of Calgary to understand what “trees” mean to Calgarians. In the first exploratory phase of qualitative focus group research, participants express their thoughts on trees and their own perceptions of tree preservation.

**KEY FINDING #1:** Focus group participants primarily express positive sentiments when thinking of trees. The general public, however, does not necessarily separate the concepts of tree preservation and growth. Instead, they are drawn to an umbrella concept of tree stewardship, including tree maintenance, protection and growth.

#### Types, Elements and Associations

When thinking of the word “tree”, citizens of Calgary offer many different descriptions. The majority of responses put forth positive descriptions related to tree types, tree elements and specific associations held with the word “tree”, with examples provided in the table below.

Figure 1: Tree Types, Elements & Associations

Tree Types	Tree Elements	Tree Associations
<ul style="list-style-type: none"> <li>• Poplars</li> <li>• Weeping Willows</li> <li>• Elms</li> <li>• Oaks</li> <li>• Cottonwoods</li> <li>• Evergreens</li> <li>• Ash</li> <li>• Banyan</li> </ul>	<ul style="list-style-type: none"> <li>• Acorns</li> <li>• Maple syrup</li> <li>• Canopy</li> <li>• Leaves, foliage</li> <li>• Apples, fruit, food</li> <li>• Wood, lumber</li> <li>• Pine needles</li> <li>• Strength (trunk)</li> <li>• Medicine</li> </ul>	<ul style="list-style-type: none"> <li>• Tree houses/forts</li> <li>• Hammocks</li> <li>• Smells</li> <li>• Green, colours</li> <li>• Big, tall</li> <li>• Selling feature, money</li> <li>• Parks, flowers</li> <li>• Shade, shelter, privacy</li> <li>• Life and energy</li> <li>• Habitats</li> <li>• Regulations</li> </ul>

### Environmental Benefits, Emotions and Aesthetic Descriptions

In addition, many of the focus group participants think of the word “tree” in terms of environmental benefits, via feelings and emotions and in descriptions of beauty and aesthetics.

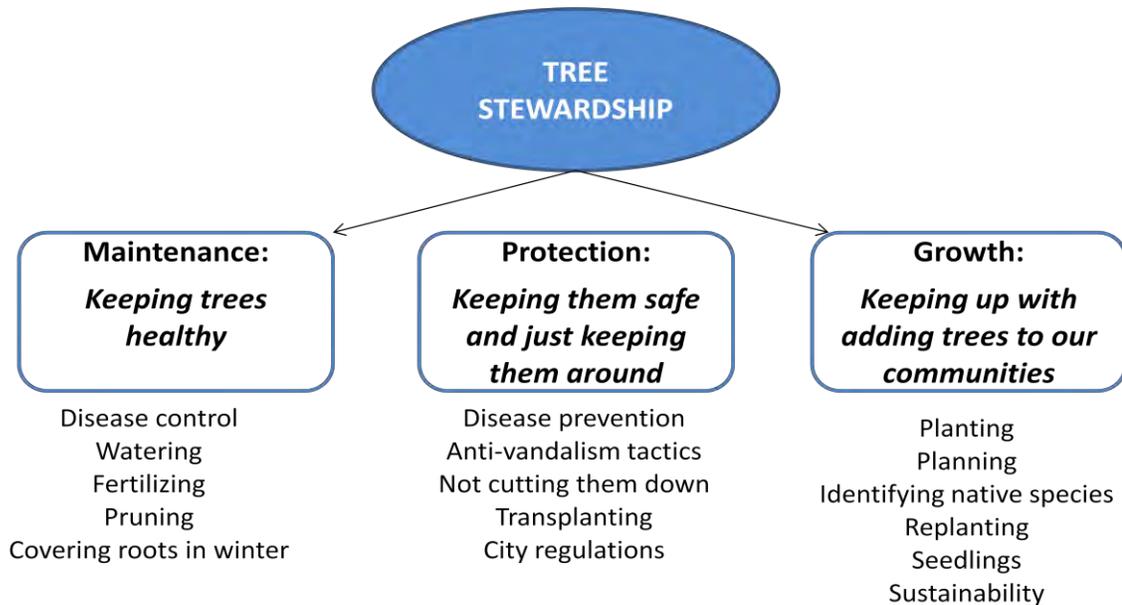
**Figure 2: Tree Types, Elements & Associations**

Environmental Benefits	Feelings and Emotions	Beauty and Aesthetics
<ul style="list-style-type: none"> <li>• Oxygen</li> <li>• Clean, fresh air</li> <li>• Quality of the air</li> <li>• Healthy environment</li> <li>• Greenhouse gas reductions</li> </ul>	<ul style="list-style-type: none"> <li>• Calming, relaxing, serene, soothing, tranquility</li> <li>• Refreshing, renewing</li> <li>• Peace, peacefulness</li> <li>• Happiness</li> <li>• Nostalgic</li> <li>• Love</li> </ul>	<ul style="list-style-type: none"> <li>• Beautiful</li> <li>• Magnificent</li> <li>• Characteristic</li> <li>• Decorative</li> <li>• Vibrant</li> <li>• <b>BUT</b></li> <li>• Dirty, pollution, <i>“The trees are not as green as they should be.”</i></li> </ul>

#### 4.1.1 PERCEPTIONS OF TREE PRESERVATION

The initial phase of qualitative research also assesses how Calgarians define and perceive “tree preservation”. Calgarians tend to think of “tree preservation” in terms of “tree stewardship” which can be separated into three silos, including ‘maintenance’, ‘protection’ and ‘growth’.

Figure 3: Tree Types, Elements & Associations



#### 4.1.2 CONSEQUENCES OF LOSING OUR URBAN FOREST

In the focus groups, participants describe what would happen if Calgary lost our urban forest. Responses commonly focus on five consequences related to: environmental repercussions, health implications, deterioration of our eco-systems, depression, and economic impacts. .

**Figure 4: Indicated Consequences of Losing Our Urban Forest**

Consequence	Commentary
<b>Environmental repercussions</b>	Smog, pollution, erosion, winds, noise pollution, warmer temperatures
<b>Health implications</b>	<i>"We'd die, or at least there would be a lot of health issues, especially respiratory."</i> Lack of clean air, allergies
<b>Deterioration/loss of our eco-systems</b>	Loss of wildlife, including rabbits, birds, squirrels, insects
<b>Depression</b>	<i>"It would take a toll on the human spirit."</i> <i>"It wouldn't be aesthetically pleasing and The City would look really drab."</i>
<b>Economic impact</b>	Value: <i>"Property values would plummet."</i> Tourism would decline <i>"I wouldn't live here."</i>

#### 4.1.3 ASSOCIATED TREE MEMORY BENEFITS

To further understand Calgarians' associations with the benefits of trees, focus group participants share stories of fond "tree memories". Stories related to recreational activities such as camping, hiking or swinging off of trees, family memorabilia and/or emotional connection are prevalent.

##### **Verbatim Comments From the Focus Groups:**

*"Playing in our tree fort."*

*"As a kid, we got trees at school and planed them in the backyard. We still drive by to see them.."*

*"When I was 10 years old, my Grandma had guava trees. I'd come home from school and I'd jump into the tree and eat. When it was cut down, I cried for 3 days. I didn't eat."*

*"I used to talk to a tree down by the ocean when I lived in Vancouver. That tree brought me comfort."*

In addition, "tree memories" often relate to connotations of benefits of seeing nature at play, and of having picturesque sights and focal points.

##### **Verbatim Comments From the Focus Groups:**

*"We hung bird feeders and watched all the different birds come to feed."*

*"There is nothing better than listening to the wind rustle through the trees."*

*"I like walking past the trees in the fall."*

*"Tree canopy-covered streets that you just wanted to walk down the middle of."*

*"There was this tourist attraction tree in Maui. It's the most amazing site and covers an entire square block."*

*"We built our cabin deck around a tree that we didn't want to take down."*

*"I remember picking crab apples from our backyard tree."*

*"I'll always remember the tree-lined paths to old plantations in New Orleans."*

#### 4.1.4 REACTIONS TO CUTTING DOWN TREES

Focus group participants respond quite solemnly when asked how they might react if their “memory” tree was cut down.

**Verbatim Comments From the Focus Groups:**

*“It’s like losing a pet.”*

*“I would not allow that. I would feel a loss.”*

*“I’d be devastated. It was a source of food and income.”*

*“I’d be sad and angry.”*

*“Within our cities, they are a landmark. Cutting them down is cutting away at the history of The City.”*

*“It would be like losing a part of my past.”*

*“It’ll take years to get it back to where it was.”*

*“They do have a lifespan.”*

*“If there was a good reason for cutting it down, I could live with it. But, it’s always a disappointment whenever things you are attached to are removed.”*

#### 4.1.5 CHILDREN AND TREES: THEN AND NOW

When assessing the perceived benefits of trees, focus group participants comment on whether children today have the same opportunities to experience trees in the same manner as the adult focus group participants did in their childhood.

Many participants feel that the societal or generational differences are too large with the influx of technologies and electronic activities available to youth. These participants feel that children are more in tune with the “digital world” than with nature and some cite the relevance of the “Nature Deficit Disorder”. In addition, many focus group participants feel that parents today are more concerned about safety issues, so they believe that fewer parents allow their children to interact with trees (e.g. climbing) than was the case in their generation.

Others feel that it depends on the neighbourhood in which children live and/or play to access appropriate trees which can provide fond memories. For example, certain focus group participants feel that children do not have the same opportunities to interact with trees in new neighbourhoods and/or downtown because trees are small and outdoor play space is limited. Conversely, these focus group participants mention that children in older communities have more established trees to play with and enjoy.

A few, especially those who live in communities with mature trees, feel that children may have the same opportunities, but that activity priorities may have shifted generationally to reduced outdoor activity and increased indoor activities.

## 4.2 AWARENESS AND KNOWLEDGE OF TREES AND TREE PRESERVATION

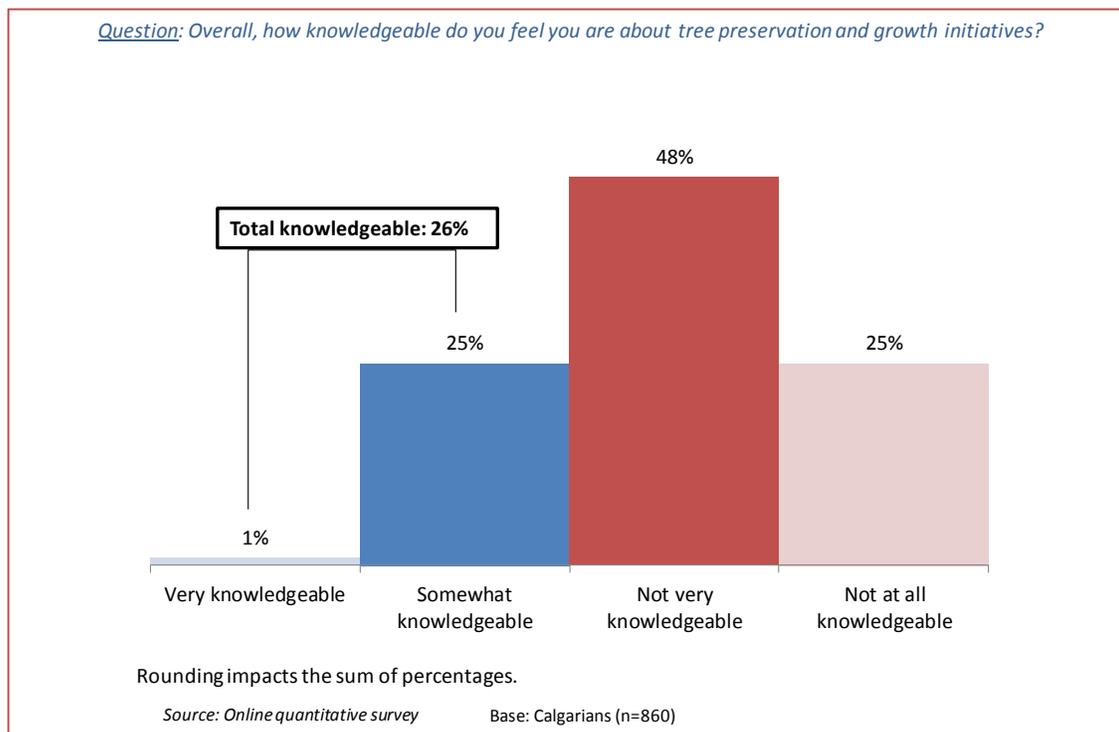
**KEY FINDING #2:** The majority (73%) of Calgarians do not feel that they are knowledgeable about tree preservation and growth initiatives. While a slight majority (60%) of Calgarians consider themselves to be knowledgeable about tree watering, a minority of Calgarians is knowledgeable about all other aspects of tree preservation and growth initiatives evaluated.

Few (17%) Calgarians are aware of The City of Calgary’s tree preservation and growth initiatives, and most over-estimate the actual tree canopy coverage in Calgary. Misperceptions certainly exist where tree preservation bylaws are concerned and a lack of awareness prevails.

### 4.2.1 OVERALL KNOWLEDGE OF TREE PRESERVATION AND GROWTH INITIATIVES

In the quantitative survey, 26% of Calgarians report that they are either very (1%) or somewhat (25%) knowledgeable about various aspects of tree preservation and growth. On the other hand, 73% of Calgarians are either not very (48%) or not at all (25%) knowledgeable about tree preservation and growth, thus identifying an opportunity for The City to further educate citizens.

**Figure 5: Overall Knowledge of Tree Preservation and Growth Initiatives**



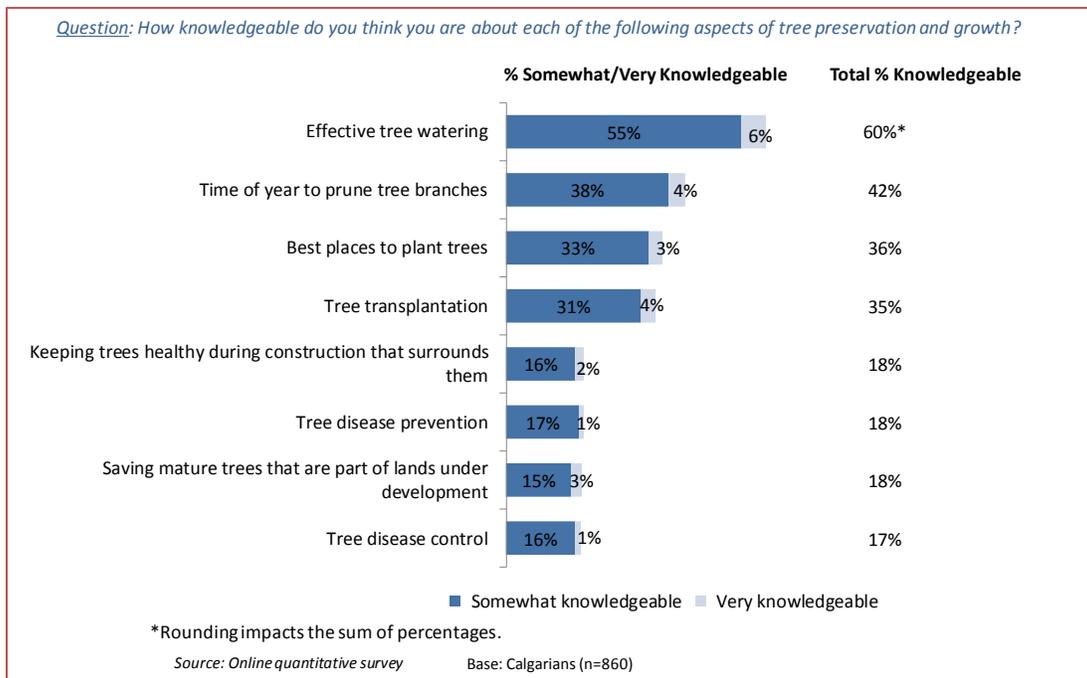
- Those aged 55 years or older are more knowledgeable about tree preservation and growth initiatives than are Calgarians in younger age groups (42% 55+ years of age vs. 16% 18 to 34 years of age, 21% 35 to 44 years of age, 30% 45 to 54 years of age).

#### 4.2.2 KNOWLEDGE ABOUT VARIOUS ASPECTS OF TREE PRESERVATION AND GROWTH INITIATIVES

The survey research also sought to measure the degree to which Calgarians are knowledgeable about *specific aspects* of tree preservation and growth. Of all aspects evaluated, the results show that Calgarians are most knowledgeable about effective tree watering (60% are knowledgeable), compared to 39% who feel they are not very (27%) or not at all (12%) knowledgeable about effective tree watering; however only 6% state that they are fully informed about effective tree watering.

Next, less than one-half (42%) of Calgarians indicate that they are somewhat (38%) or very (4%) knowledgeable about the time of year to prune branches, versus 57% who express that they are not very (36%) or not at all (21%) knowledgeable in this area (1% are undecided). Further, 36% of respondents feel they are knowledgeable about the best place to plant trees, compared to 62% who say they are not very (40%) or not at all knowledgeable about the best places to plant trees (2% are undecided). As well, 35% of respondents indicate that they are knowledgeable about tree transplantation, versus 63% who say they are not very (37%) or not at all knowledgeable in this area (2% are undecided).

**Figure 6: Knowledge About Specific Tree Preservation and Growth Initiatives**



Less than two-in-ten (18%) Calgarians evaluate themselves to be knowledgeable about keeping trees healthy during construction that surrounds them and conversely, 80% of Calgarians reports being not very (45%) or not at all (35%) knowledgeable about this topic (2% are undecided). A total of 18% of respondents also say they are knowledgeable about tree disease prevention, versus 80% who feel they are not very (44%) or not at all (36%) knowledgeable about this subject matter (2% are undecided). Similarly, 18% of Calgarians express being knowledgeable about saving mature trees that are part of lands under development, compared with 80% who are not very (46%) or not at all (34%) knowledgeable about this aspect of tree preservation (2% are undecided).

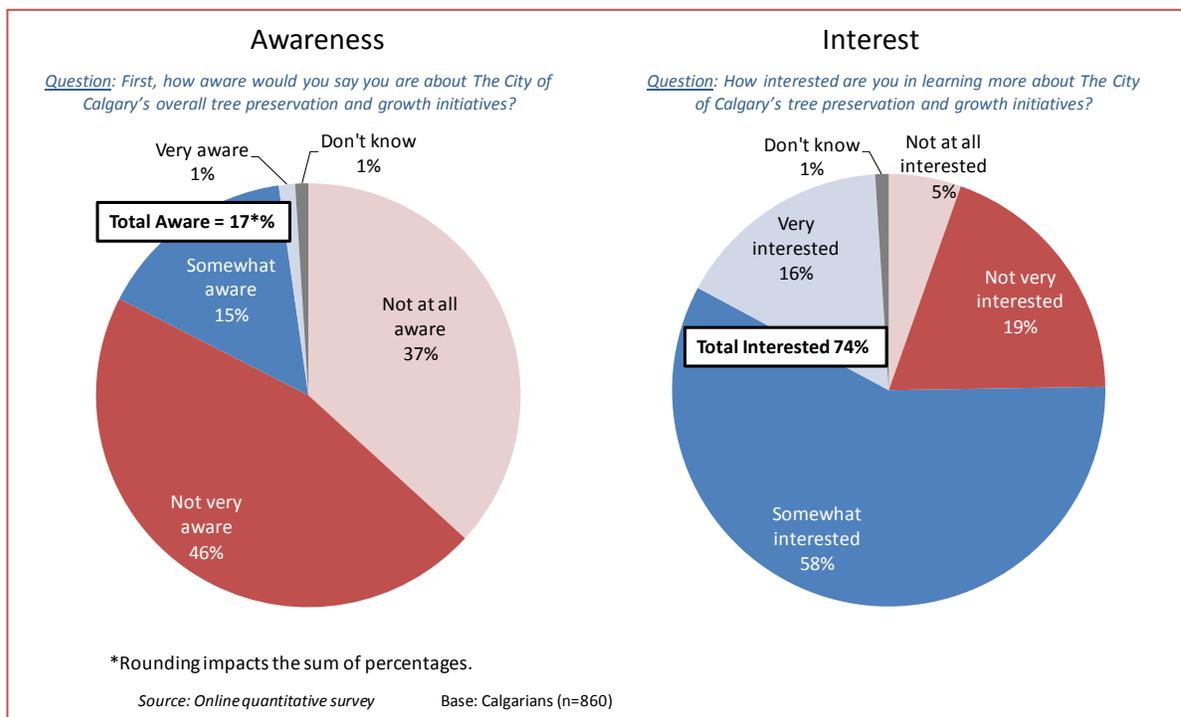
- Knowledge about various aspects of tree preservation and growth tends to be **higher** among:
  - Those aged 55 years or older;
  - Those who own their own homes; and,
  - Those who live in communities with established tree canopy coverage (21 to 40 years old).
  
- Knowledge about various aspects of tree preservation and growth tends to be **lower** among:
  - Those aged 18 to 44 years;
  - Those who rent; and
  - Those with children in their household.

#### 4.2.3 AWARENESS AND INTEREST IN THE CITY'S TREE PRESERVATION AND GROWTH INITIATIVES

Few (17%) Calgarians are aware of The City of Calgary's tree preservation and growth initiatives, including only one percent who say they are "very aware" of such activities. On the other hand, with rounding, 74% of respondents say they are either not very (46%) or not at all (37%) aware of tree preservation and growth initiatives in The City.

Perhaps related to low awareness levels of tree preservation and growth initiatives, approximately three-quarters (74%) of survey respondents say they are keen to learn more. In contrast, 24% report that they are not very (19%) or not at all interested (5%) in learning more about such initiatives.

**Figure 7: Awareness and Interest in The City's Tree Preservation and Growth Initiatives**



- Calgarians who are more aware of tree preservation and growth initiatives undertaken by The City of Calgary and are more interested in learning about it tend to be:
  - Aged 55 years of or older (aware: 25% 55+ years of age vs. 12% 18 to 34 years of age, 13% 35 to 44 years of age; interested: 79% 55+ years of age vs. 68% 18-34 years of age); and,
  - Homeowners (aware: 18% own vs. 11% rent; interested: 76% own vs. 67% rent).
- Respondents who are less likely to be interested in learning more about The City's tree preservation and growth initiatives include younger Calgarians (30% 18-34 years of age vs. 20% 35 to 44 years of age, 20% 55+ years of age).

#### 4.2.4 AWARENESS OF CALGARY'S TREE CANOPY COVERAGE

In the focus groups, participants estimate the percentage of The City's landscape which is covered in tree canopy. Responses range from guesstimates of 1% to 60%, yet most often stay below 30%.

In addition, participants calculate the age of the oldest tree in Calgary to be anywhere from 150 years to 1,000 years. Overall, participants do not know the actual statistics, but were curious to learn about the 'true' answers (note: actual tree canopy coverage = 7%).

When discussing whether the current tree canopy coverage is enough, not enough or too much, most focus group participants indicate that they would like to see an increase in the amount of tree canopy coverage in Calgary.

##### **Verbatim Comments From the Focus Groups:**

*"When you fly into Calgary, you're looking at a dead zone. We should have at least three times as many trees as we do have."*

*"I think that if you took a snapshot in time, we don't have enough trees because of all of our new neighbourhoods."*

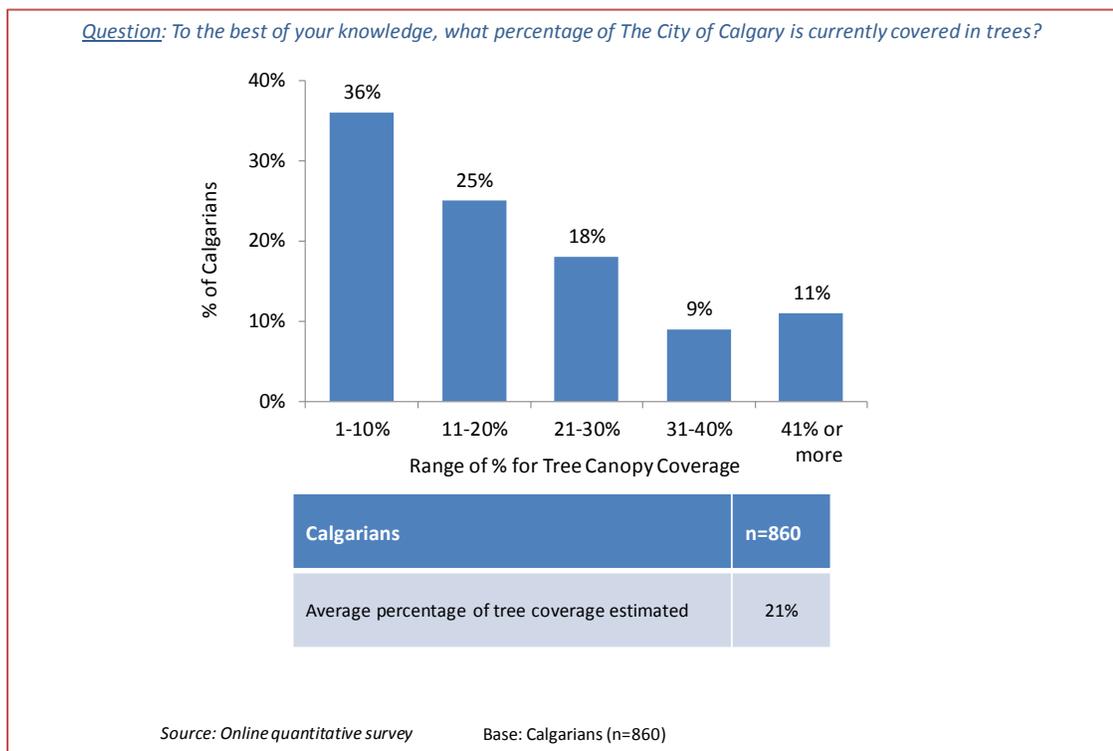
*"There's more effort into creating green spaces than adding trees."*

The quantitative survey substantiates this over-estimation regarding the canopy coverage in Calgary, with the average estimation resting at 21% and the median estimation being at 16%.

Specifically, 36% of respondents currently believe that Calgary’s tree canopy coverage rests between 1-10%, and an additional 25% of respondents think that the tree canopy coverage in The City sits at 11-20%.

Further, 18% of respondents believe that the current tree canopy coverage in The City is between 21 and 30%, an additional 9% of respondents estimate it to be between 31 and 40%, and 11% of survey respondents feel that the tree canopy coverage in Calgary is 41% or more.

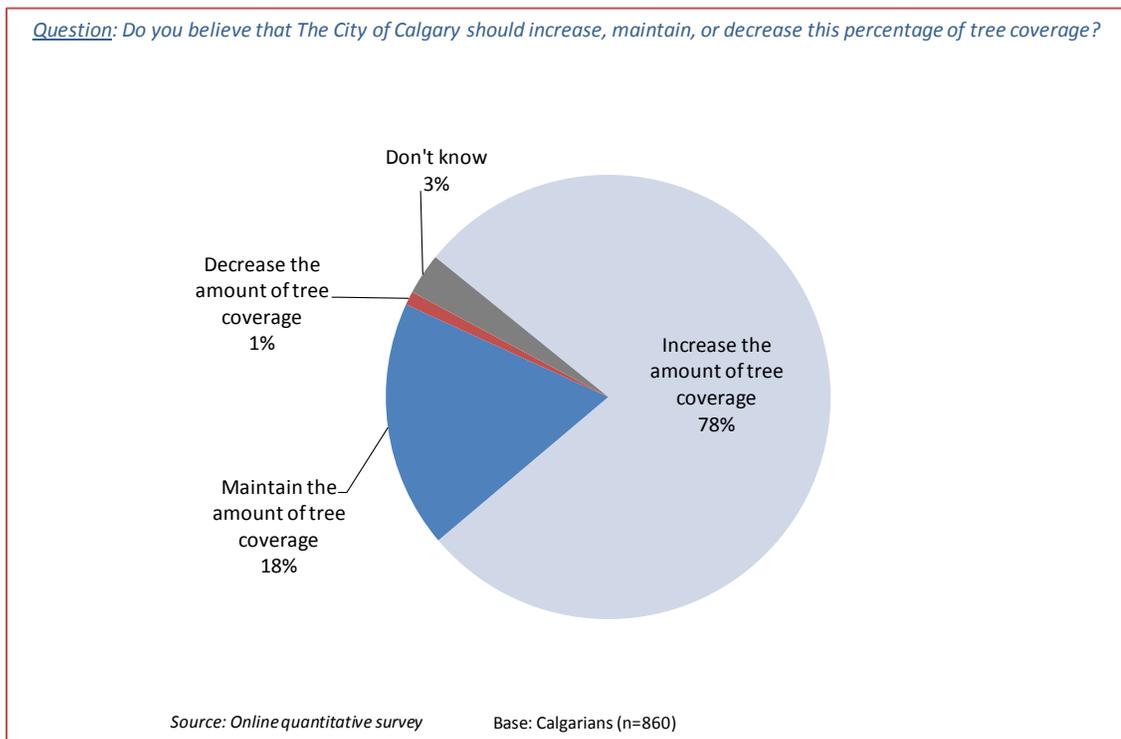
**Figure 8: Awareness of Calgary’s Tree Canopy Coverage**



Even though Calgarians over-estimate the *actual* tree canopy coverage in The City, most (78%) feel there is a need to *increase* the tree canopy coverage in Calgary.

In comparison, 18% of survey respondents believe that The City should maintain the current amount of tree coverage in Calgary, only one percent of respondents says that the amount of tree canopy coverage should be decreased, and three percent of respondents are unsure.

**Figure 9: Opinions about Increasing the Existing Tree Canopy Coverage**



#### 4.2.5 PERCEPTIONS OF THE DISTRIBUTION OF TREES IN CALGARY'S URBAN FOREST

Focus group participants also discuss the distribution of trees within Calgary's urban forest. Responses clearly indicate that they feel that the distribution of trees is not consistent either in terms of density or type of tree.

##### **Verbatim Comments From the Focus Groups:**

*"It's also about the types of trees. The inner city has a diverse variety and the suburbs have the same varieties."*

*"Maybe it's spread fairly evenly, but the smaller size of trees makes it look like it's not spread evenly."*

*"It's pretty patchy. In the East, it's more bare and in the West, along the river, there are more trees."*

*"There's not much in the downtown core."*

*"If you're on the outskirts, it definitely seems a bit more barren."*

*"The smaller lots in newer communities don't allow enough space for trees."*

*"There's more along the rivers and in inner-city older neighbourhoods."*

*"There's none in the industrial areas."*

#### 4.2.6 AWARENESS OF TREE PRESERVATION LEGISLATION, BYLAWS & REGULATIONS

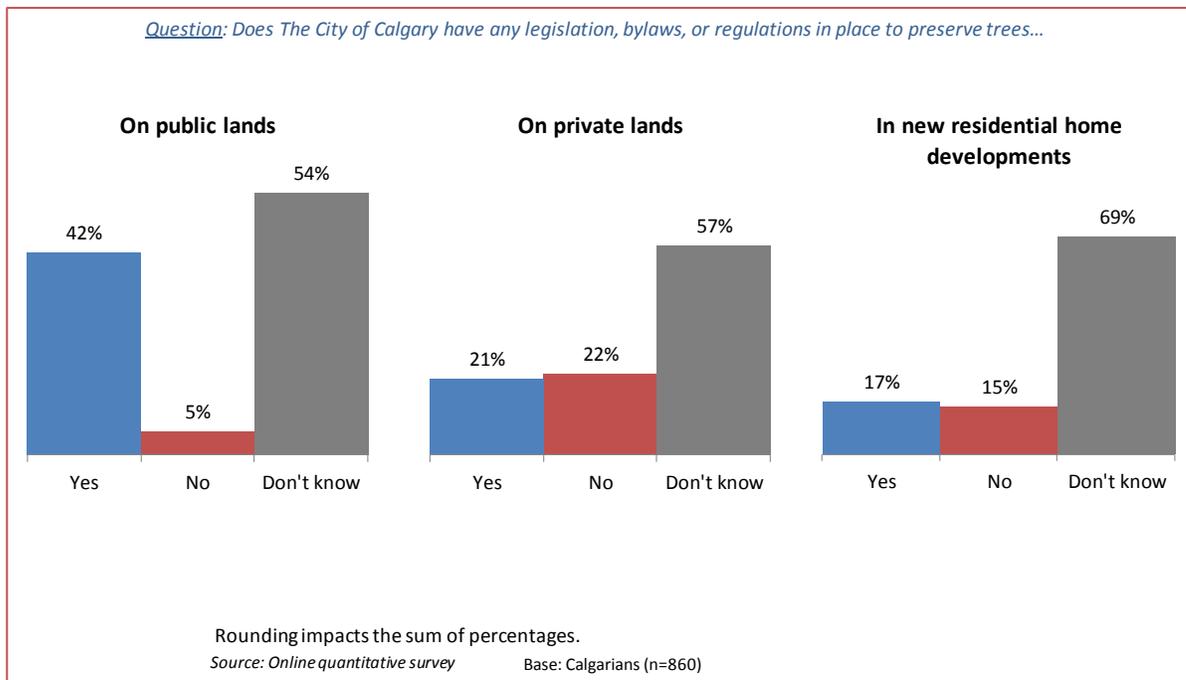
The majority of Calgarians do not know if The City of Calgary has any legislation, bylaws or regulations in place to preserve trees.

Specifically, 54% are unaware of such guidelines in existence for *public lands* in Calgary, whereas 42% say that Calgary has rules for preserving trees on public lands and 5% say The City does not have such guidelines.

With respect to *private lands*, the majority (57%) of respondents do not know if guidelines exist. A total of 21% feel that there is legislation related to preserving trees on private lands and a similar proportion of respondents (22%) believe that regulations do not exist for this matter.

Lastly, seven-in-ten (69%) survey respondents do not know if bylaws are in place for preserving trees in *new residential home developments*, compared to 17% who say they do exist and 15% who believe such regulations are not currently in place.

**Figure 10: Awareness of Tree Preservation Guidelines**



### 4.3 PERCEIVED BENEFITS OF TREES

**KEY FINDING #3:** Calgarians can identify an array of benefits from trees that are environmental, tangible, economic, eco-friendly and emotional in scope. The survey results confirm a strong identification from Calgarians with the benefits of trees. Citizens would feel a sense of “loss” without our urban forest, can associate fond memories with trees and contemplate generational differences with respect to interactions between children and trees.

In both the focus groups and online survey, Calgarians were asked to describe the benefits of trees using their own words or phrases (unprompted).

In the focus group workshops, participants provide an array of benefits from trees that are environmental, tangible, economic, eco-friendly and emotional in scope.

**Figure 11: Tree Benefits Identified in Focus Groups**

Benefit	Commentary
<b>Environmental</b>	Oxygen, clean air, erosion, decrease in pollution
<b>Tangible</b>	Provider of shade, maple syrup, recreation for families
<b>Economic</b>	Employment (those in tree maintenance), property values
<b>Eco-systems/wildlife</b>	Birds, singing, urban eco-systems, squirrels and other animals
<b>Emotional</b>	Relaxation, personal connections, sense of peace

**Verbatim Comments From the Focus Groups:**

*“Having more trees actually increases the quality of life. It makes people happier. Happy people are productive people.”*

*“There’s an element of establishment, a place of belonging. And, there are all of the scientific benefits like oxygen, carbon exchange, erosion, pollution, insects, wildlife and birds.”*

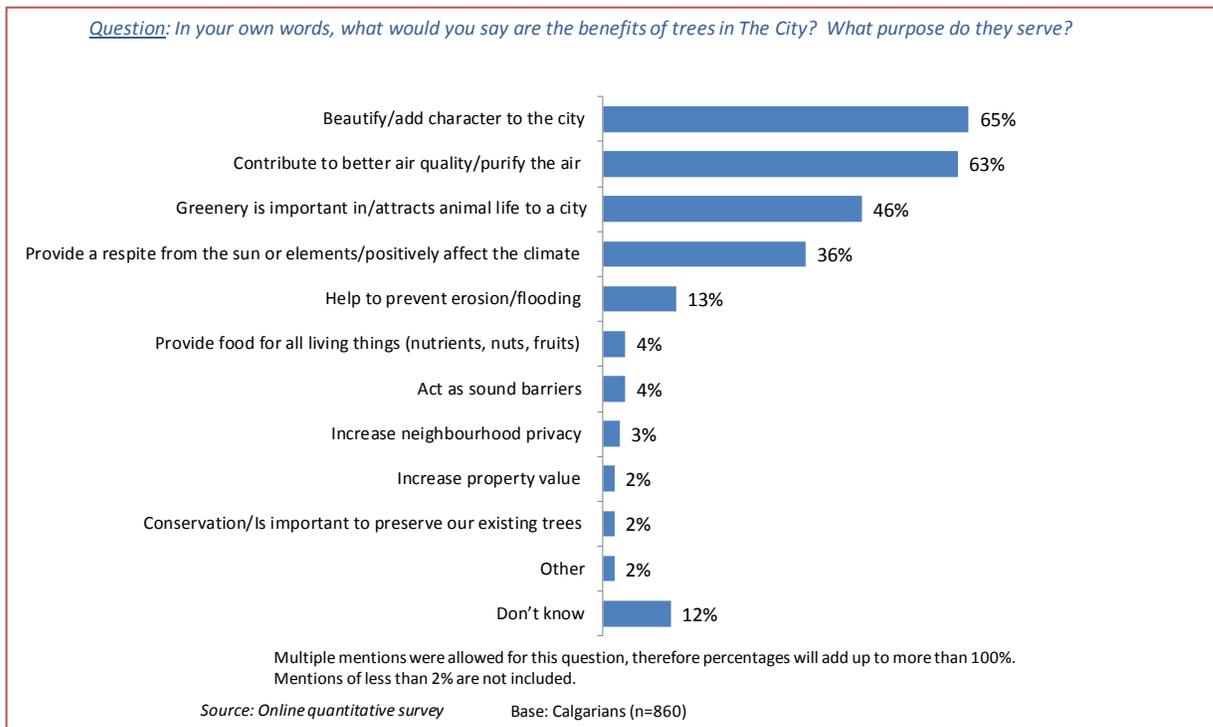
The online survey also asked Calgarians to identify the benefits of trees. The reader should note that survey respondents were allowed to provide multiple responses to this open-ended question, thus results will exceed 100%.

The data shows that the most common perceived benefits of trees relate to beautifying / adding character to The City (65%) and improving air quality (63%).

In addition, 46% mention benefits related to the importance of trees to our ecosystem, and 36% point to the “tangible” benefits of providing shade.

Other tree benefits related to erosion (13%), food (4%), sound barriers (4%), privacy (3%) and property values (2%) are mentioned less often.

**Figure 12: Perceived Benefits of Trees (unprompted)**



With respect to **property values**, focus group participants also highlight this as a benefit of having trees. In their opinion, the value of trees is constituted upon the quality of life, as a source of food and medication, and in terms of monetary rates for properties.

**Verbatim Comments From the Focus Groups:**

*“Trees beautify our city. Driving under a canopy of leaves is an incredible state.”*

*“Trees are an important part of our city’s ecosystem, cleaning the air and providing habitats for birds and small animals.”*

*“They can act as shelter and as barriers for wind and snow.”*

*“They are supplying you and your life – with the necessities of life.”*

*“It is so much nicer to have trees around you. You feel better.”*

*“We picked the fruit for the harvest.”*

*“The ming tree kills 60 kinds of diseases. It has fantastic applications, but it’s not found in this part of the world.”*

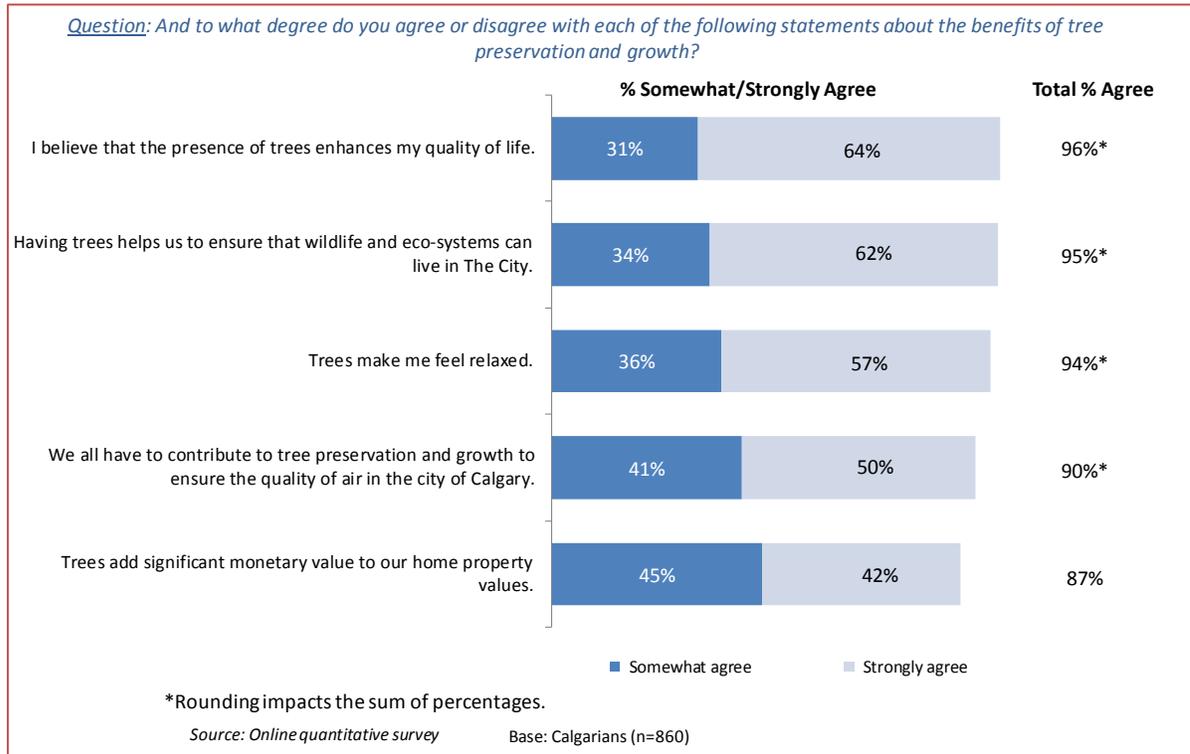
*“I don’t know the dollar value of a tree, but if there are two houses – one with trees and one with more trees and better landscaping – that is the one I would buy.”*

*“Just look at Mount Royal. It increases the price of residential properties.”*

When prompted in the quantitative survey, the vast majority (96%) of Calgarians agree with tree benefits related to enhancing the quality of life (96%) and just 2% disagree with this statement (2% are undecided). Further, 95% of survey respondents agree that trees are beneficial to ensure that wildlife and eco-systems can live in The City, versus 3% who disagree and 2% who are undecided. A similar level of agreement (94%) is found when assessing agreement with trees making people feel relaxed (94%), compared to just 3% who disagree with this perspective and 3% who are undecided.

Nine-in-ten (90%) survey respondents also agree that we all have to contribute to tree preservation and growth to ensure the quality of air in The City of Calgary. Conversely, 8% of survey respondents disagree with this opinion and 2% are undecided. Finally, a strong majority (87%) of survey respondents also agrees that trees have a monetary value to home owners’ property values, versus 7% who disagree and 6% who are undecided.

**Figure 13: Opinions about Specific Tree Benefits**



- Calgarians who recognize the monetary benefit of trees to home property values tend to be:
  - Aged 55 years or older(93% 55+ years of age vs. 83% 18 to 34 years of age); and,
  - Homeowners (89% own vs. 82% rent).

## 4.4 CURRENT PARTICIPATION IN TREE PRESERVATION INITIATIVES

**KEY FINDING #4:** Active participation in tree preservation and growth initiatives competes with life's other priorities. As such, the majority of Calgarians report having watered trees within the past year, but a minority of citizens have participated in other activities. The more knowledgeable Calgarians are about tree preservation and growth, the more likely they are to have participated in related actions.

### 4.4.1 INITIATIVES PERSONALLY UNDERTAKEN

Many participants in the focus groups report that they have **not** been engaged in a tree preservation and growth activity in the past year or so.

#### **Verbatim Comment From the Focus Groups:**

*"It just hasn't been at the top of my personal priority list. I recognize the importance and value though."*

The specific tree preservation and growth activities which focus group participants express they have been involved with over the past year include:

- Tree-planting for reforestation;
- Watering trees;
- Transplanting trees;
- Planted trees in yards;
- Landscaped;
- Applied insecticides to prevent disease;
- Firefighting;
- Helped my neighbour save his tree; and,
- Participated in Arbor Day sapling planting.

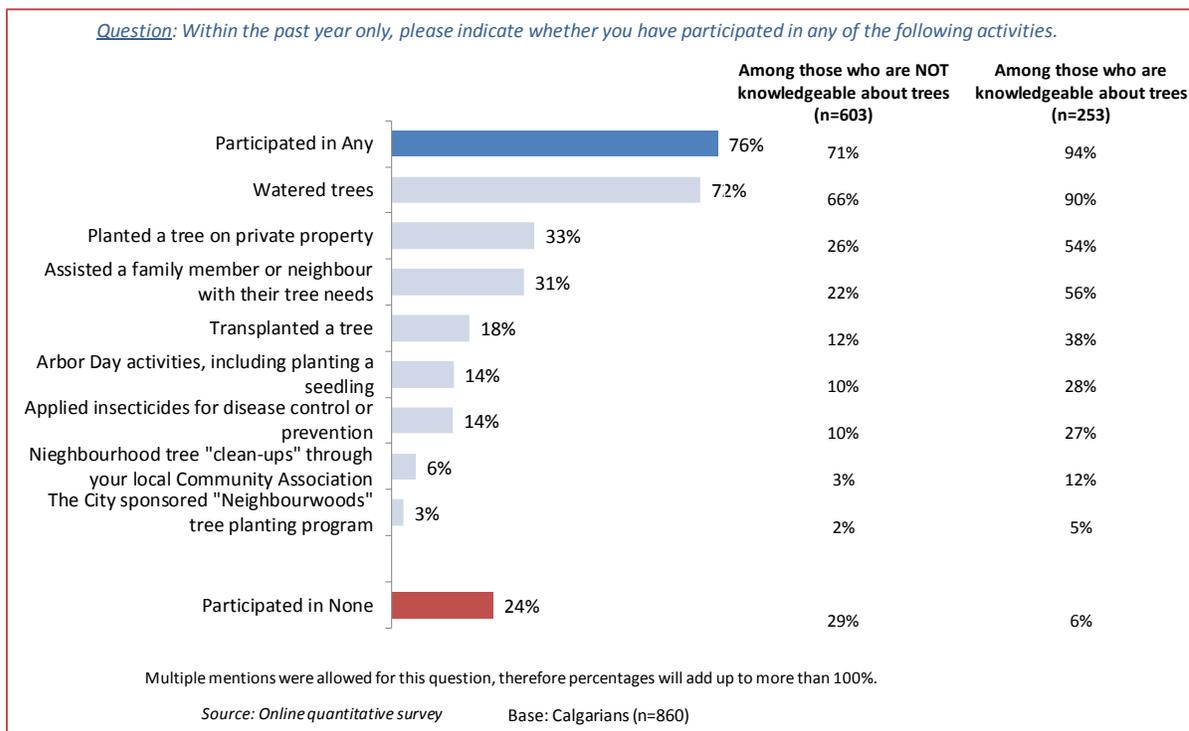
Parallel with focus group respondents, survey respondents were also asked to identify if they have participated in a variety of tree preservation and growth initiatives within the past year. Overall, 76% of Calgarians indicate having personally participated in such activities.

Participation, however, differs depending upon the activity in question.

Many Calgarians (72%) may express that they have watered trees this past year, but a far smaller proportion reports to have planted a tree on private property (33%), assisted a family member or neighbor with tree needs (31%), or transplanted a tree (18%). An even smaller proportion of survey respondents indicate having participated in Arbor Day activities (14%), applied insecticides (14%) or being active in neighbourhood tree clean-ups (6%) or the “Neighbourwoods” program (3%).

Consistently, participation in tree initiatives is significantly higher among those who are knowledgeable about trees.

**Figure 14: Participation in Personal Tree Preservation Initiatives**



- Participation in personal tree preservation initiatives within the last year tends to be **higher** among:
  - Those aged 35 years or older and (78% 35 to 44 years of age, 82% 45 to 54 years of age, 84% 55+ years of age vs. 67% 18 to 34 years of age);
  - Calgarians who own their own home (83% own vs. 55% rent); and,
  - Calgarians who have children in their household (84% with children in household vs. 73% without).

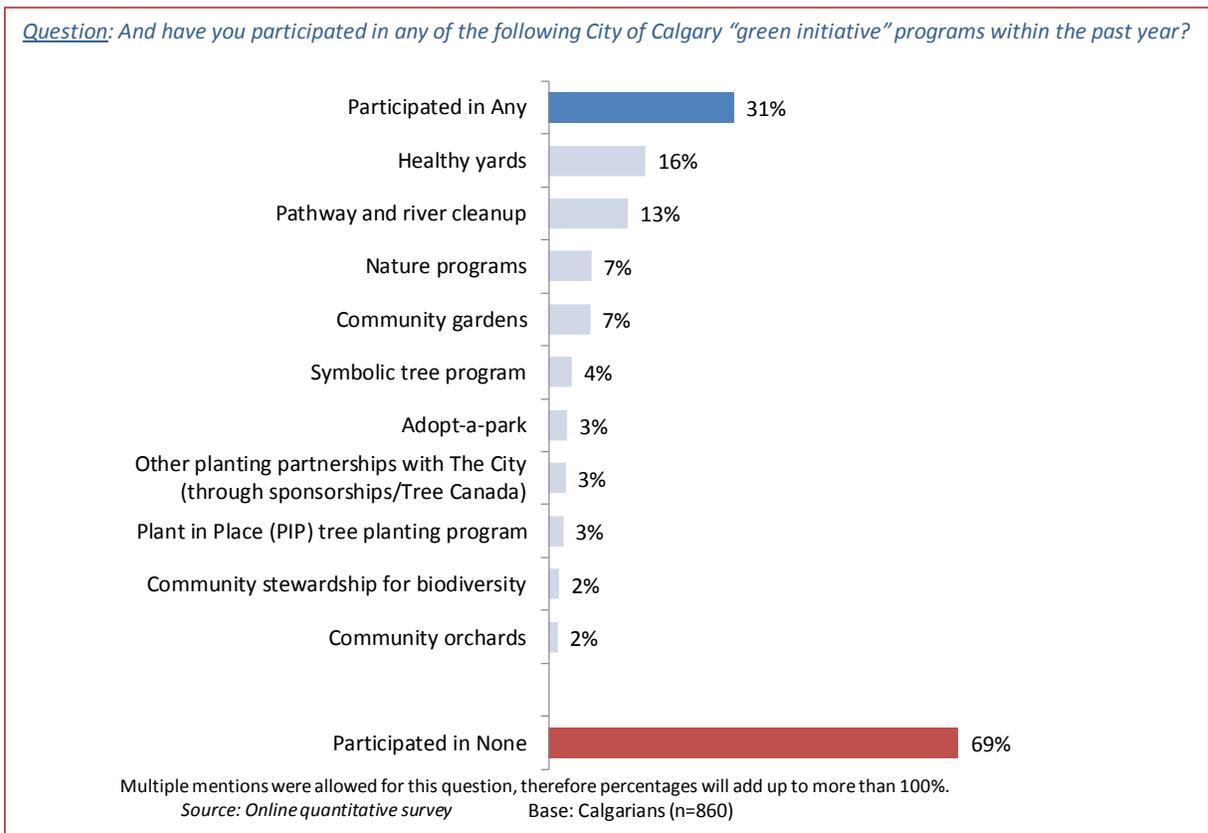
- Specifically, participation in personal tree preservation initiatives that have to do with the care or maintenance of trees on private property such as watering trees, planting or transplanting trees, or applying insecticides to trees is **higher** among:
  - Those aged 55 years or older;
  - Calgarians who own their own home; and,
  - Calgarians with children in their household.
  
- Participation in organized events such as Arbour Day Activities, a Neighbourhood tree “clean up” or The City sponsored “Neighborhoods” tree planting program is low among all Calgarians.
  
- Participation in personal tree preservation initiatives within the last year tends to be **lower** among:
  - Younger Calgarians aged 18-34 years of age (67% 18 to 34 years of age vs. 78% 35 to 44 years of age, 82% 45 to 54 years of age, 84% 55+ years of age);
  - Calgarians who rent (55% rent vs. 83% own);
  - Calgarians without children in their household (73% without children in household vs. 84% with); and,
  - Calgarians who live in communities with mature tree canopy coverage (40 years or older) (70% tree canopy 40+ years vs. 81% 1 to 10 years, 78% 11 to 20 years, 78% 21 to 40 years).

#### 4.4.2 PARTICIPATION IN THE CITY'S "GREEN INITIATIVE" PROGRAMS

The City of Calgary hosts a myriad of "Green Initiative" programs in which citizens can participate. Almost one-third (31%) of Calgarians report that they have participated in at least one City of Calgary Green Initiative program within the past year, however, 69% say they have not.

Green Initiative programs receiving the highest participation rates this past year are "Healthy yards" (16%) followed by pathway and river clean-up (13%). Further, fewer than one-in-ten respondents say they have participated in "nature programs" (7%) or "community gardens" (7%) this past year. Participation in the remaining Green Initiative programs is captured at less than five percent.

**Figure 15: Participation in The City's "Green Initiative" Programs**



- Participation in any of The City’s “Green Initiative” Programs within the last year tends to be **higher** among:
  - Those aged 35 years or older (34% 35 to 44 years of age, 33% 45 to 54 years of age, 39% 55+ years of age vs. 23% 18 to 34 years of age); and,
  - Calgarians who own their own home (33% own vs. 25% rent).
  
- Specifically, participation in the healthy yards initiative within the past year tends to be higher among:
  - Those aged 35-44 years (17%) or 45 to 54 years of age (21%) or 55+ years (25) vs. 7% 18 to 34 years of age); and,
  - Calgarians who own their own home (18% own vs. 10% rent).
  
- Calgarians who live in communities with established or mature tree canopy coverage (21 years or older) are more likely to have participated in pathway and river clean-up than Calgarians living communities with newly planted tree canopy coverage (1 to 10 years) (18% tree canopy 21 to 40 years, 17% 40+ years vs. 7% 1 to 10 years).

## 4.5 CHALLENGES RELATED TO TREE PRESERVATION AND GROWTH

**KEY FINDING #5:** A lack of knowledge is the KEY barrier to participation in tree preservation and growth initiatives. Subsequently, cost, space limitations, climate and a lack of motivation prohibit involvement in such activities. It is important to note that despite an acknowledged lack of awareness on this issue, the majority (77%) of Calgarians would like to be educated about how to properly take care of trees. Educating Calgarians, therefore, could prove to drive additional participation in such tree activities. Cost, development and a lack of motivation are secondary challenges limiting participation in addressing “tree” issues.

### 4.5.1 PERSONAL CHALLENGES RELATED TO TREE PRESERVATION AND GROWTH

All focus groups participants identify challenges that may face Calgary citizens in further participating in efforts related to tree preservation and growth. Participants cite four groups of challenges that include a lack of knowledge, a lack of motivation or skill, costs and space limitations.

#### Verbatim Comments From the Focus Groups:

*“When do I trim?”*

*“How do I care for my tree?”*

*“How big will the tree get?”*

*“Where should I plant it so it doesn’t get in the way of pipes and my foundation?”*

*“What diseases is it prone to and how do I deal with that?”*

*” It’s like blind ignorance.”*

*“I’d have to do research or hire somebody.”*

*“It’s great that there are trees, but I’m not motivated to put in all the time and effort into planting and taking care of them.”*

*“My Dad is 83 and getting up on that ladder to shape his tree is not a viable option.”*

*“The time required to care for trees and/or plant trees”*

*“We can’t afford to buy trees OR keep them healthy.”*

*“You can’t plant a tree in your backyard if your yard isn’t big enough.”*

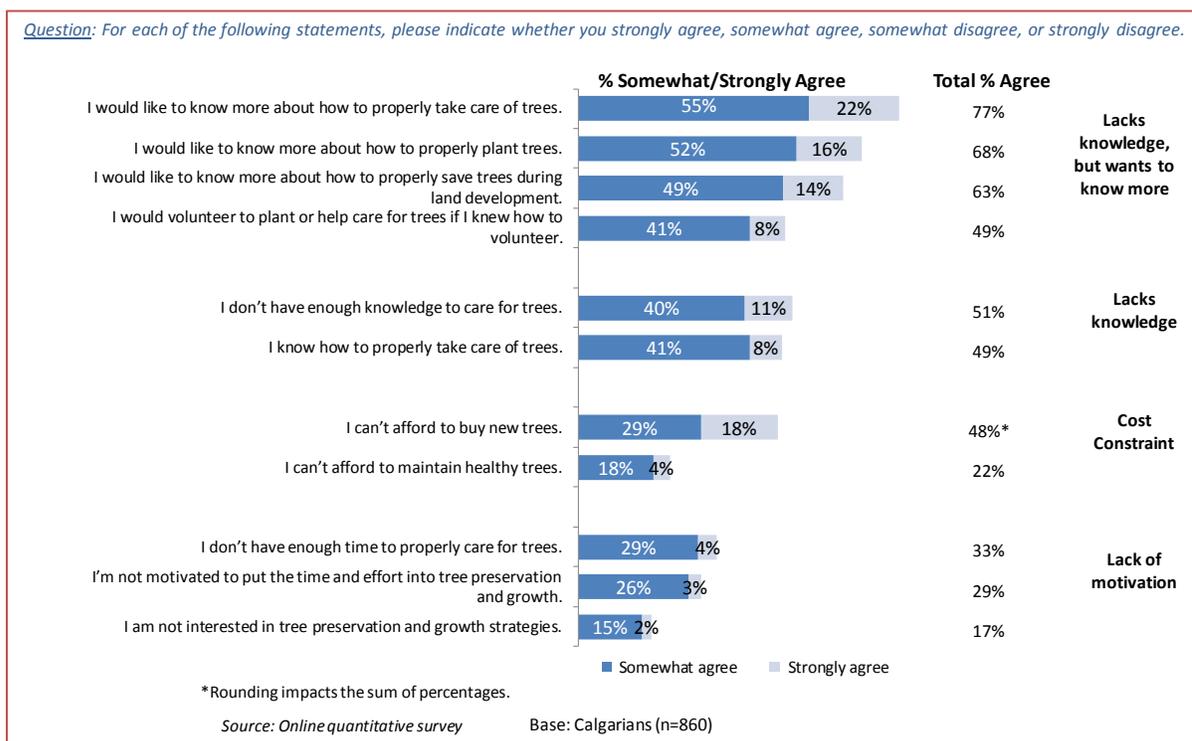
#### 4.5.2 ATTITUDES TOWARDS PERSONAL INVOLVEMENT WITH TREE PRESERVATION

As with the n challenges identified in the focus groups, survey results also show that Calgarians report a **lack of knowledge, yet want to know more** about their personal involvement with tree growth and preservation activities. Specifically, **77% of Calgarians would like to know more about how to properly take care of trees**, compared to just 18% who are not interested in learning about this subject matter and 5% who are undecided.

Further, 68% of Calgarians would like to know more about how to properly plant trees, whereas 26% of Calgarians disagree (21% somewhat disagree and 5% strongly disagree) and 6% are unsure. The survey also reveals that 63% of Calgarians want to know more about how to properly save trees during land development, versus 27% who are not interested (21% somewhat disagree and 6% strongly disagree) and 10% are unsure. In addition, almost one-half (49%) would volunteer to plant or help care for trees if they knew how to volunteer, compared to 40% who disagree with this statement (30% somewhat disagree and 10% strongly disagree) and 11% are undecided.

Also echoing what was said in the focus groups, **51% of survey respondents report that they do not have enough knowledge to care for trees**, with 45% who either somewhat (33%) or strongly (12%) disagree with this statement (4% are undecided). In addition, 49% of respondents feel that they know how to properly take care of trees, yet a very similar proportion (48%) of Calgarians disagrees (33% somewhat disagree and 15% strongly disagree) and 3% are undecided.

**Figure 16: Attitudes Towards Personal Involvement with Tree Preservation**



Underscoring comments revealed in the focus groups, survey results reveal that **cost** is another key barrier to participation in tree preservation and growth activities. Specifically, 48% of Calgarians feel that they can't afford to buy new trees, while 42% either somewhat (26%) or strongly (16%) disagree and 10% are unsure. As well, 22% of survey respondents believe that they can't afford to maintain healthy trees, yet 68% disagree with this notion (37% somewhat disagree and 31% strongly disagree) and 10% are unsure.

In addition, a **lack of motivation** is noted in both the focus groups and survey results as another barrier to participation in tree preservation and growth activities. One-third (33%) of survey respondents say that they do not have enough time to properly care for trees, versus 61% who either somewhat (40%) or strongly (21%) disagree with this statement and 6% are undecided. Further, 29% indicate that they are not motivated to put the time and effort into tree preservation and growth activities, while 63% disagree either somewhat (39%) or strongly (24%) and 8% are unsure. Finally, just 17% of Calgarians declare that they are simply not interested in tree preservation and growth activities, whereas 79% disagree with this notion either somewhat (35%) or strongly (44%) and 4% are unsure.

Overall, knowledge is the KEY barrier to participation tree preservation and growth activities, followed by costs and a lack of motivation. Educating Calgarians, therefore, could prove to drive additional participation in such tree activities.

- Calgarians who express an interest to learn more about tree growth and preservation tend to be:
  - Homeowners; and,
  - Have children in their household.
- Lack of motivation and cost are **bigger** challenges among:
  - Younger Calgarians (18 to 34 years of age).
- Older Calgarians (55 years of age or older) are less likely than those in younger age groups to indicate a lack of knowledge about tree preservation and growth initiatives.
- Calgarians who live in communities with newly planted tree canopy coverage (1 to 10 years) are more likely than those in other communities to demonstrate a desire to learn more about how to properly plant trees (76% tree canopy 1 to 10 years vs. 64% 21 to 40 years, 65% 40+ years).

#### 4.5.3 TREE PRESERVATION CHALLENGES FACING THE CITY OF CALGARY

Focus group participants identify a multitude of challenges that may face The City of Calgary in its tree preservation and growth efforts, including:

➤ **Development:**

- New housing developments offering more affordable options = smaller lots and limited space to plant trees
- Infills where trees are removed but not necessarily replanted or transplanted
- The need to expand transportation infrastructure to accommodate growth

**Verbatim Comments From the Focus Groups:**

*“We do have really high density housing where everything is just squashed together and you don’t even have that much space on your front lawn.”*

*“There’s a lack of accountability with the new developments. Who’s monitoring that they actually planted what they said they would?”*

➤ **Climate:**

- Chinooks, especially the wind factor damaging branches and entire trees
- Frozen ground, clay soil
- Dry (lack of natural watering)

➤ **Maintenance costs:**

- Need to pay wages to the employees/staff who prune, water, fertilize, etc.
- Need to monitor aging trees and watch for damaged and diseased trees

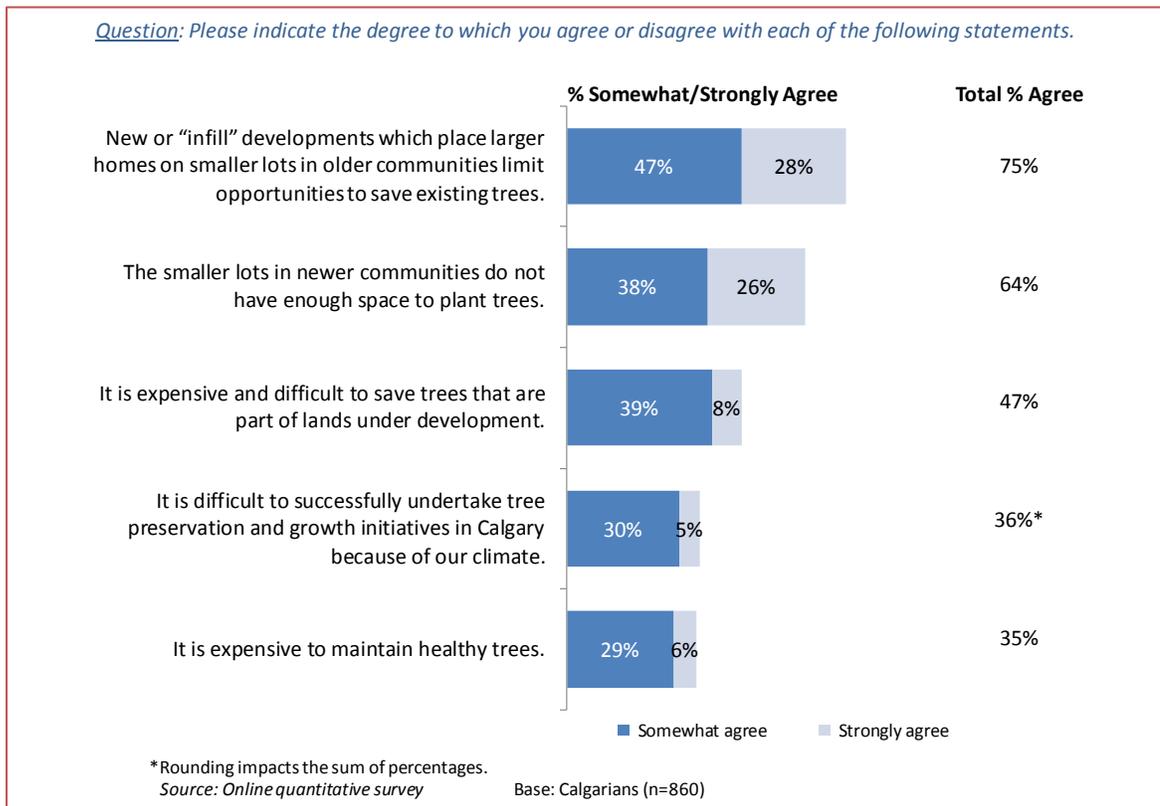
➤ **Protection Issues:**

- Fires, fire hazards
- Battling disease such as pine beetles or other pest control

Similar to focus group findings, survey results also show that 75% of survey respondents believe that new or “infill” **developments** which place larger homes on smaller lots in older communities limit opportunities to save existing trees. Conversely, 18% either somewhat (13%) or strongly (5%) disagree with this perception and 7% are undecided.

In total, 64% of Calgarians feel that **smaller lots** in newer communities do not have enough space to plant trees, versus 31% who either somewhat (23%) or strongly disagree (9%) and 5% are unsure. In addition, 47% of survey respondents feel that it is expensive and difficult to save trees that are part of lands under development, including 35% who either somewhat (23%) or strongly (12%) disagree and 18% who are undecided.

**Figure 17: Tree Preservation Challenges Facing The City of Calgary**



Out of The City’s control, the southern Alberta **climate** is also seen as a challenge facing The City’s tree strategies. A total of 36% of survey respondents feel that it is difficult to successfully undertake tree preservation and growth initiatives in Calgary because of our climate. Conversely, 55% of Calgarians disagrees with this statement either somewhat (31%) or strongly (24%) and 9% are undecided.

Also associated with costs, 35% of Calgarians feel it is expensive for The City to maintain healthy trees, yet 53% of survey respondents either somewhat (38%) or strongly (15%) disagree with this notion and 12% are unsure.

- Those aged 55 years or older are more likely than are those in younger age groups to recognize the challenges The City of Calgary faces in regulating or saving trees during development.
- Calgarians with children in their household are more likely than are those without children to identify the expense of maintaining healthy trees as a challenge for The City of Calgary (41% with children in household vs. 32% without).
- Homeowners are more likely than are Calgarians who rent to recognize climate restraints as a challenge for The City of Calgary (38% own vs. 27% rent).

## 4.6 TREE PRESERVATION LEGISLATION, BYLAWS, AND REGULATIONS

**KEY FINDING #6:** Calgarians are split in their views about rules when it relates to removing mature and/or healthy trees on private lands. Further, Calgarians do not favour regulations surrounding that would prohibit the removal of diseased or dying trees on private lands. Calgarians express strong support, on the other hand, for the implementation and monitoring of regulations for developers and infill developments.

### 4.6.1 VIEWS ON TREE REGULATIONS FOR PRIVATE LANDS

As previously noted, misperceptions exist where tree preservation bylaws are concerned and a lack of awareness about such guidelines prevails.

Focus group participants spontaneously discuss municipal bylaws or regulations governing tree preservation and growth. In general, focus group participants are not entirely in agreement with tree regulations for private lands:

#### **Verbatim Comments From the Focus Groups:**

*“So if I’ve got this big ugly tree in my yard, I don’t want to be forced to preserve it. I want that option.”*

*“The City has a lot of power over developers, but how much pressure can we put on private property?”*

*“Are there bylaws? I’m not sure. I’ll have to look that up.”*

*“Be careful about trampling on an individual’s rights when creating rules about tree planting or removal.”*

*“I think we should have a Tree Registry so that we know if people cut trees down.”*

*“Calgarians wouldn’t like that. They’d think that was government interference.”*

*“It also depends on whether the person abides by the bylaw.”*

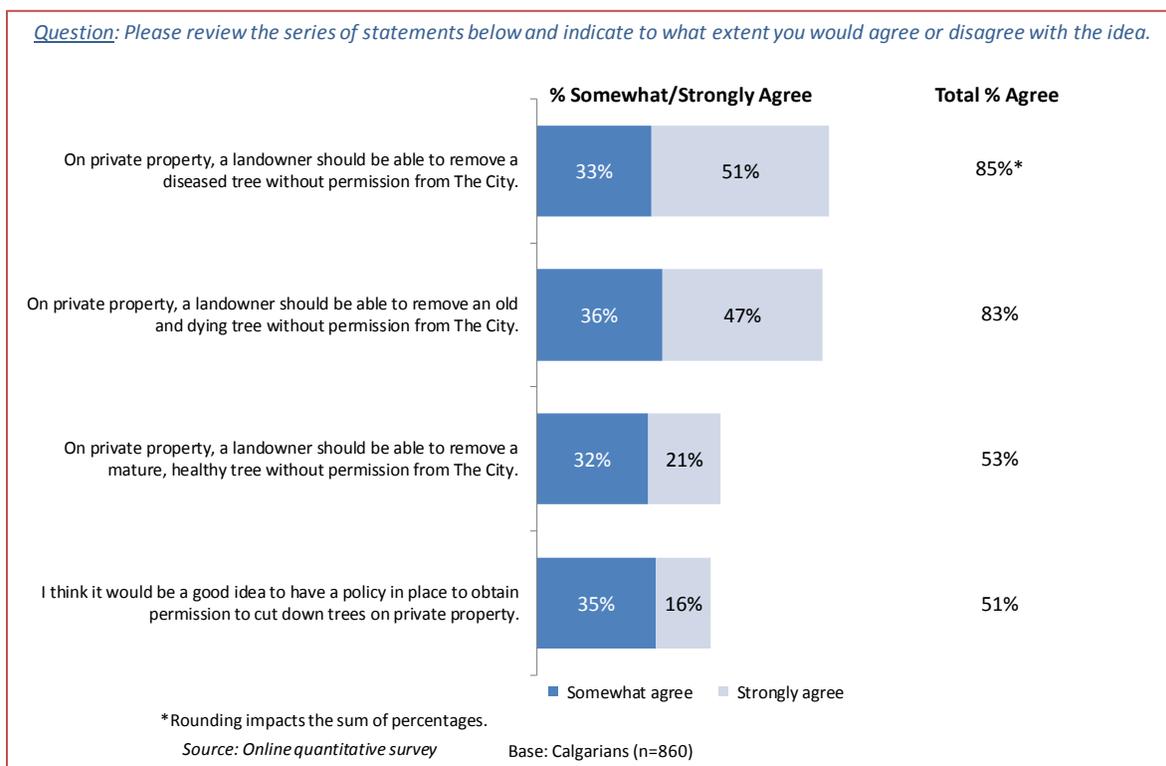
*“It could get annoying if you actually request permission and it’s taking a long time and the tree continues to cause more damage (e.g. pipes).”*

As a result of the focus group feedback, survey respondents were also asked to reflect on their stance related to tree regulations.

With respect to **private lands**, the strongest support is shown for *not having regulations* to allow a landowner to either remove a tree due to disease or old age. Specifically, a strong majority (85%) of Calgarians feel that on private property, a landowner should be able to remove a diseased tree without permission from The City. Just 12% of respondents disagree with this idea and 3% are undecided. Also with respect to private property, 83% of Calgarians believe that a landowner should be able to remove an old or dying tree without permission from The City, whereas just 14% disagree with this notion and 3% are unsure.

However, *views are fairly split when the tree is deemed to be a mature healthy tree*, with one-half (53%) of Calgarians agreeing that landowners should be able to remove such trees, compared to 43% who either somewhat (25%) or strongly (18%) disagree and 4% are undecided. Views are also split with respect to having The City implement a policy to obtain permission to cut down trees on private property. Specifically, 51% agree with this idea, while 44% either somewhat (25%) or strongly (19%) disagree and 5% are unsure.

**Figure 18: Views on Tree Regulations for Private Lands**



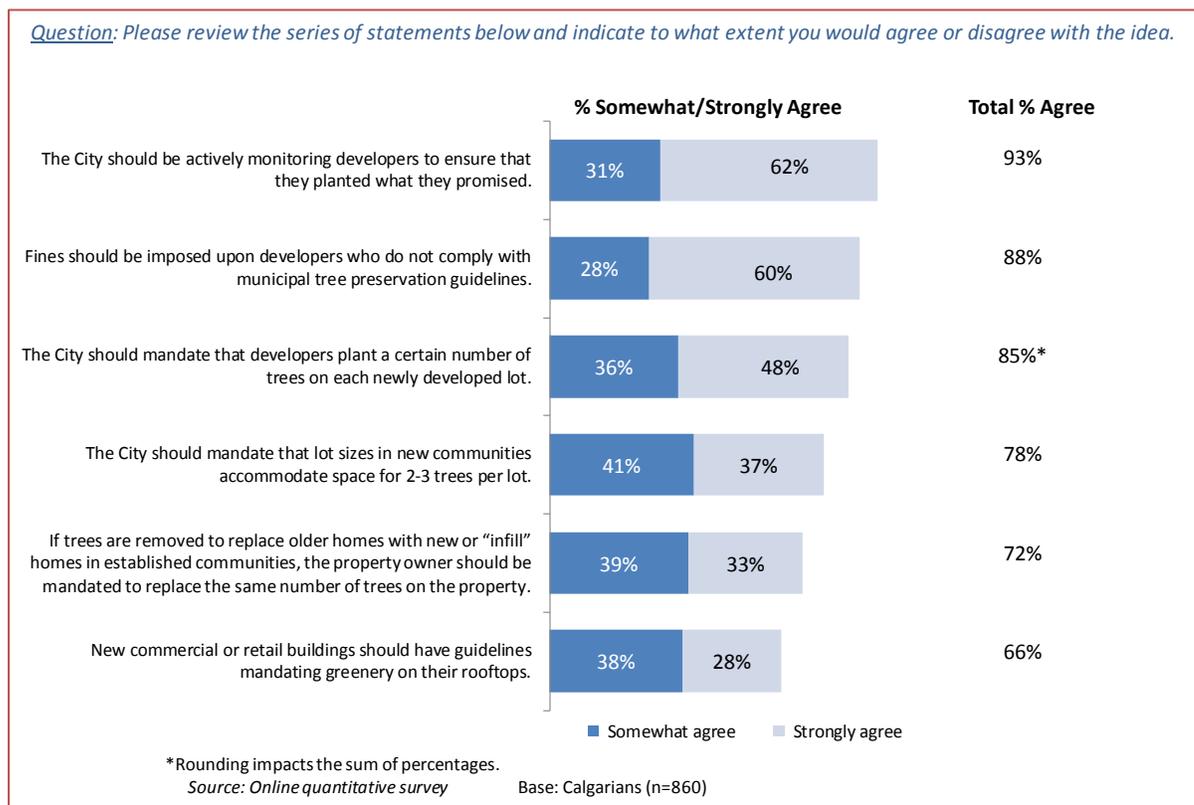
- Support for private landowners having the right to remove a diseased tree without permission from The City is **higher** among:
  - Calgarians aged 55 years or older (89% 55+ years of age vs. 82% 18 to 34 years of age); and,
  - Homeowners (88% own vs. 76% rent).
  
- In general, support for private property landowners to be able to decide to remove any trees from their property is **higher** among homeowners.
  
- Support for private landowners to be able to decide to remove any trees from their property is **lower** among Calgarians living in communities with mature tree canopy coverage (40 years old or older).

#### 4.6.2 VIEWS ON TREE REGULATIONS FOR DEVELOPERS AND DEVELOPMENTS

Calgarians participating in the survey phase of research were presented with possible scenarios for tree regulations. As noted in the qualitative research, Calgarians express strong support for the implementation and monitoring of regulations for developers and infill developments.

Specifically, a vast majority (93%) of survey respondents think The City should be actively monitoring developers to ensure that trees were planted, while just 4% disagrees with this idea and 3% are unsure. Further, a sizeable majority (88%) of Calgarians feel that fines should be imposed on developers who do not comply with tree guidelines, compared to just 8% who disagree and 4% are undecided. As well, 85% of survey respondents believe that The City should mandate that developers plant a certain number of trees on each newly developed lot, whereas just 11% are in opposition to this idea and 1% is unsure.

**Figure 19: Views on Tree Regulations for Developers and Developments**



Slightly more than three-quarters (78%) of Calgarians feel that The City should mandate that lot sizes in new communities accommodate space for 2-3 trees per lot, while on the other hand, 18% disagree with this idea and 4% are unsure.

With respect to “infill” developments, 72% of Calgarians feel that the homeowner responsible for the infill development should be mandated to replace the same number of trees removed for the development, compared to 23% who disagree and 5% are unsure.

In addition, two-thirds (66%) of respondents agree that new commercial developments should have guidelines mandating greenery on their rooftops, whereas 26% do not support this idea and 8% are undecided.

- Calgarians supportive of The City actively monitoring developers to ensure that they planted what they promised tend to be:
  - Aged 55 years or older (96% 55+ years of age vs. 90% 18 to 34 years of age);
  - Homeowners (95% own vs. 88% rent); and,
  - Calgarians with children in their household (94% with children in their household vs. 90% without children).
  
- Calgarians who live in communities with newly established (62%) or established tree canopy coverage (63%) are less supportive of regulating greenery on the rooftops of new commercial or retail buildings than are those with mature trees (73%).
  
- Respondents in communities with newly established trees (69%) are also less supportive of regulating property owners to replace the same number of trees removed to replace older homes with new or “infill” homes on their property than are those living in communities with a mature tree canopy coverage (79); and,
  
- In general, Calgarians who live in communities with established tree canopy coverage (21 to 40 years old) are less supportive of legislation, bylaws, and regulations for developers than those who live in communities with mature trees (+40 years).

## 4.7 FUTURE PARTICIPATION IN TREE PRESERVATION INITIATIVES

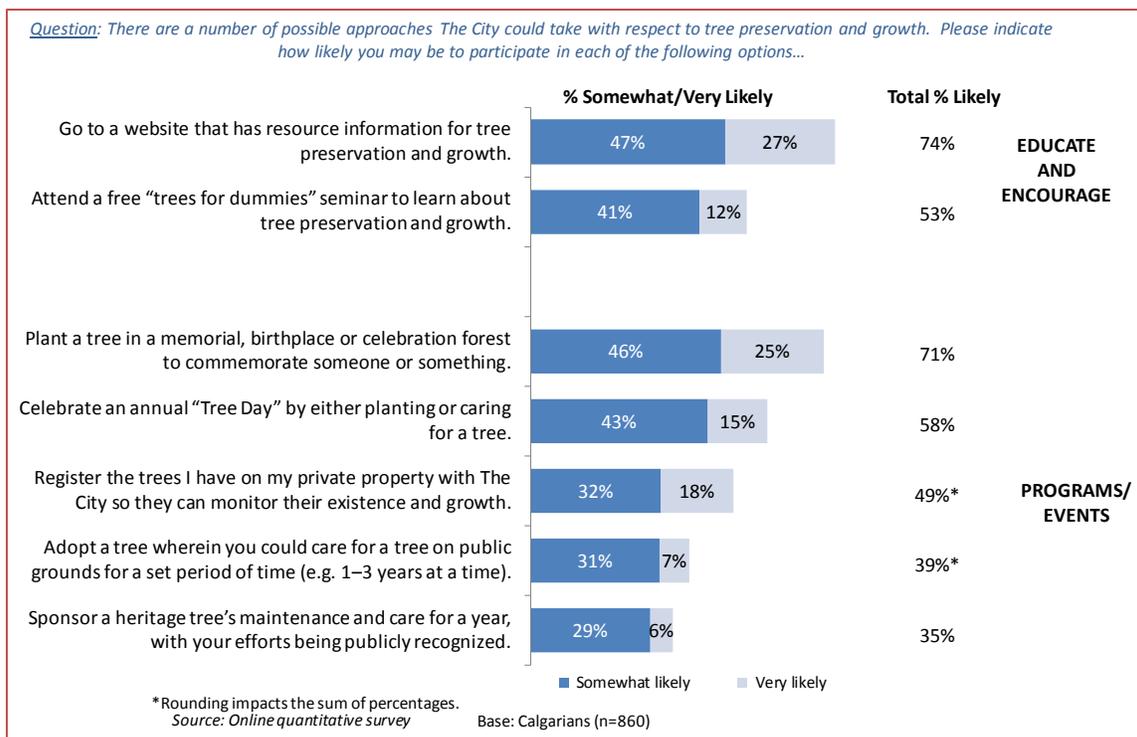
**KEY FINDING #7:** Given low awareness levels about tree preservation and growth, it is not surprising that survey respondents express a significant likelihood to visit a website for resource information. Specific programs, such as memorial or birthplace tree planting, are also appealing to Calgarians. Offering incentives can increase the likelihood of participation in tree preservation and growth initiatives, particularly when incentives represent monetary values rather than public recognition.

### 4.7.1 LIKELIHOOD TO PARTICIPATE IN FUTURE TREE PRESERVATION INITIATIVES

Survey respondents were asked to indicate how likely they may be to participate and/or use various tree preservation and growth programs, events or resources.

Calgarians are most likely to use a website that has resource information for tree preservation and growth (74%) of all options assessed, with just 24% saying that they would be not very (17%) or not at all (7%) likely to use such a website and 2% are unsure. The majority (71%) of respondents would plant a tree in a memorial, birthplace or celebration forest to commemorate someone/something, compared to 24% saying that they would be not very (17%) or not at all (7%) likely to do this and 5% are unsure.

**Figure 20: Likelihood to Participate in Future Tree Preservation Initiatives**



Further, 58% of respondents indicate that they would celebrate an annual “Tree Day” by either planting or caring for a tree, whereas 38% are not very (28%) or not at all (10%) likely to participate in such an event and 4% are unsure. As the focus groups unveiled, not many Calgarians are currently aware that Arbour Day still exists. A slight majority (53%) of Calgarians would also be likely to attend a free “trees for dummies” seminar, whereas 44% say they are not very (31%) or not at all (13%) likely to attend and 3% are unsure.

Next, almost one-half (49%) of survey respondents say they would be likely to register the existing trees they have on their own private property so that The City could monitor their existence and growth. On the other hand, 36% say they are not very (24%) or not at all (12%) likely to do this and 5% are unsure.

A minority (39%) of Calgarians would be likely to adopt a tree on public grounds and care for it for a set period of one to three years, compared to 55% of Calgarians who say they are not very (41%) or not at all (14%) likely to partake in such an adoption process and 6% are undecided.

The least desirable option of all tested is to sponsor a heritage tree’s maintenance for a year and be publicly recognized for the contribution (35%). A total of 58% of Calgarians say they would be not very (41%) or not at all (17%) likely to participate such a sponsorship program and 7% are unsure.

Overall, educational strategies seem to be more appealing than specific programs or events.

- In general, the propensity to participate in future tree preservation and growth initiatives is **higher** among Calgarians with children in their household.
- Overall, those more likely to participate in future “programs or events” – style tree preservation initiatives is lower among:
  - Older Calgarians (55 years or older); and,
  - Calgarians without children in their household.

#### 4.7.2 INCENTIVES FOR PARTICIPATION IN TREE INITIATIVES

In the focus group workshops, participants bring forth several ideas for incentives that The City could consider in its tree preservation and growth strategies, including:

- Offer tax benefits for planting trees;
- Initiate an “Outdoor home renovation rebate” much like the homeowners’ renovation rebate offered by the federal government;
- Offer a rebate on new tree purchases, much like the rebate for purchasing new high-efficiency toilets;
- Have competitions and contests (most planted, photographs of the most beautiful trees) which culminate in grants for Community Associations or public recognition;
- Public recognition: Community Association newsletters for individual citizens who planted trees; plaques on heritage trees much like on park benches; and,
- Offer grants for community planting initiatives to help cover costs of tools and supplies.

**Verbatim Comment From the Focus Groups:**

*“The minute there is an incentive, that’s when the majority of people will take advantage of it.”*

To further test the notion of using initiatives in tree preservation and growth strategies, the survey research also sought to test these specific ideas. Commonly, survey results indicate that incentives which involve a guaranteed monetary return such as tax benefits, rebates on tree purchases are more likely to succeed than are community contests or offers of public recognition.

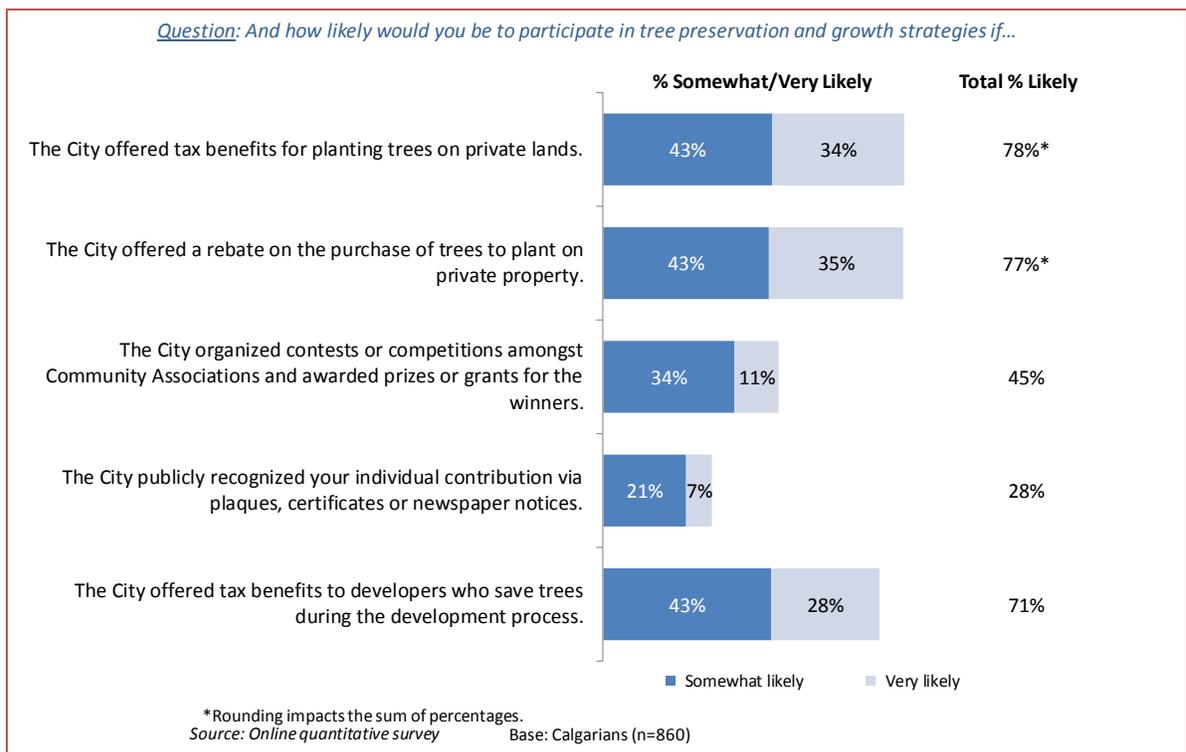
Looking at *private lands* in particular, 78% of respondents would be likely to participate in tree initiatives if The City offered tax benefits to plant trees on private property, versus just 16% of respondents who would be not very (12%) or not at all (4%) likely to participate in such a program and 6% are unsure. As well, 77% of Calgarians would be likely to participate in tree preservation and growth strategies if The City offered a rebate on the purchase of trees to plant on private property (77%). Conversely, 15% of respondents indicate that they would be not very (12%) or not at all (3%) likely to do this and 8% are unsure.

In addition, 71% of Calgarians support the idea of offering tax benefits to *developers* who save trees during the development process, 18% are opposed and 1% is undecided.

Survey results reveal a weaker likelihood of participation should The City organize contests amongst community associations wherein grants or prizes would be awarded (45%). A total of 48% of respondents indicate being not very (36%) or not at all (12%) likely to participate in contests and 7% are unsure.

Public recognition is the approach which garners the lowest likelihood of participation in tree preservation and growth initiatives, appealing only to 28% of Calgarians. Fully 64% of respondents is not very (42%) or not at all (22%) likely to participate in tree initiatives based on this incentive and 8% are undecided.

**Figure 21: Likelihood to Participate in Future Tree Preservation Initiatives with Incentives**



- The likelihood of participants to participate in future tree preservation initiatives if incentives are offered is **higher** among:
  - Younger or middle-aged Calgarians (18 to 44 years of age);
  - Homeowners;
  - Calgarians with children in the household; and,
  - Calgarians who live in communities with newly planted tree coverage (1 to 10 years old).
  
- Specifically, the propensity to participate in future tree preservation initiatives if the incentives are tax benefits for planting trees or rebates for buying trees is **higher** among:
  - Calgarians who own their own home; and;
  - Calgarians that live in communities where the tree canopy coverage is newly planted (1 to 10 years old).
  
- The likelihood to participate in future tree preservation initiatives if incentives are offered is **lower** among:
  - Older Calgarians (55 years of age or older); and,
  - Calgarians with no children in their household.

## 4.8 COMMUNICATIONS

**KEY FINDING #8:** Calgarians express a strong desire for The City to communicate to citizens about the benefits, value and care of trees. Suggested communications mediums include an assortment of traditional and non-traditional strategies. Focus group participants commonly agree that tree educational communications strategies should reach out to ALL Calgarians, with certain individuals recommending target marketing to homeowners, children, community associations and Corporate Calgary.

Throughout the focus groups via the results of the survey, communications about tree preservation and growth surface as an issue of importance for Calgarians. In the focus group workshops, participants express how they would suggest reaching out to Calgarians to further inform them of initiatives and encourage them to participate in tree preservation and growth activities. The key suggestions focus on offering incentives, speaking about the benefits and value of trees, and informing and engaging citizens and corporations alike.

Focus group participants were also asked to suggest what The City needs to say to citizens to get them to participate (more) in tree preservation and growth initiatives. Examples of participants' ideas are below and firmly concentrated on the notion of pride in our communities.

### Verbatim Comments From the Focus Groups:

*"Evoke pride in our community."*

*"There's no reason not to."*

*"It's more than just about you."*

*"Preserve and protect."*

*"Trees for life. Trees are life."*

*"Celebrate trees."*

*"We need more green and have a goal."*

*"If you want to live and breathe, plant a tree."*

*"Healthy trees."*

*"Take the lead."*

*"Get involved."*

Focus group participants suggest that The City use three primary mediums of communications to reach out to Calgarians:

1. **Social Media:** Facebook, Twitter, Websites, YouTube videos

**Verbatim Comment From the Focus Groups:**

*“Remember to be paperless if you do a campaign.”*

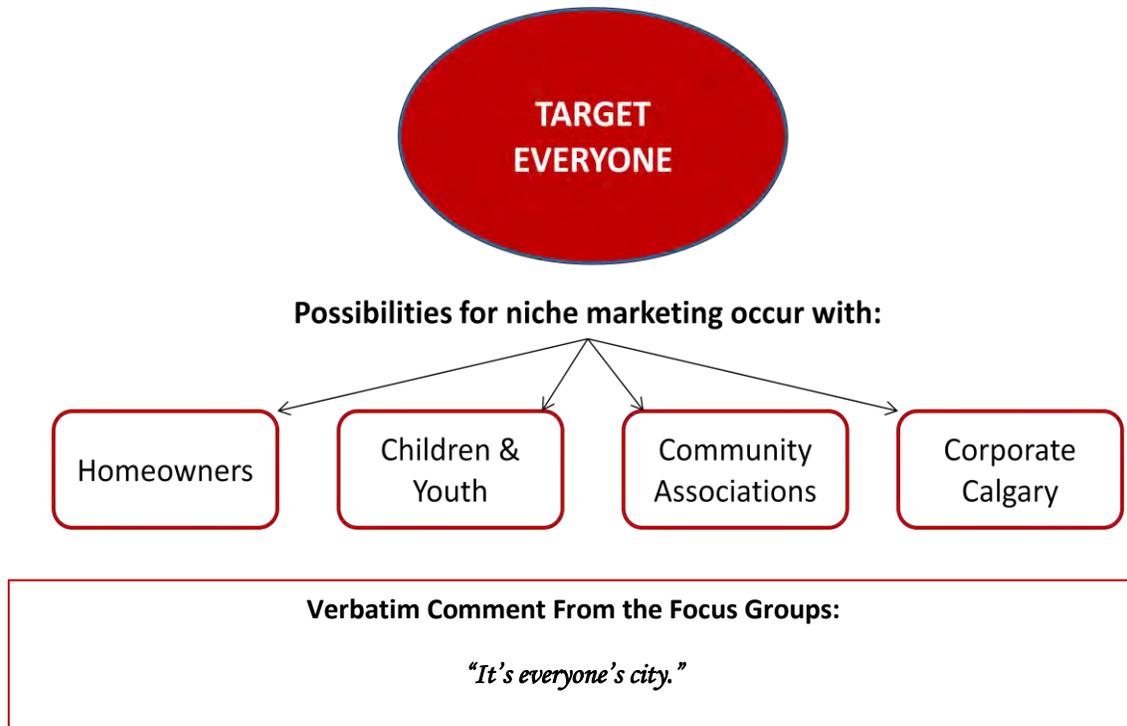
2. **Traditional Campaign Media:** Television, bus, LRT ads, Radio, toilet stalls, billboards

3. **Alternative Mediums:**

- Ads on City Parks vehicles, utility inserts;
- Free tree seminars;
- Engage corporations to volunteer and sponsor;
- Use prominent spokespeople; partner with the Calgary Horticultural Society;
- Festivals (Lilac, Earth);
- Via school teachers and/or an updated curriculum; and,
- Mayor Nenshi takes his purple shirt off and dons a green one.

#### 4.8.1 TARGET AUDIENCES

Focus group participants also debate who The City may target to further inform and engage Calgarians to participate in tree preservation and growth initiatives. The consensus is that The City should include all citizens in any potential communications strategies, and certain participants feel that specific subsets of The City’s population may merit “niche” marketing strategies as well.



The niche marketing strategies that participants suggest include homeowners to educate and encourage this key target market to embrace tree preservation and growth strategies on their private land. As for children and youth, many focus group participants feel that educational strategies should be incorporated into school curriculums at various stages of elementary and secondary school programs.

In addition, certain participants suggest further involving community associations in tree preservation and growth strategies, perhaps by offering grants and/or other incentives. These participants feel that “grass roots” participation is easier to achieve at the community level rather than at a City-wide level. Finally, certain focus group participants recommend reaching out to Corporate Calgary to provide volunteers to assist with tree preservation and growth initiatives, to help sponsor the costs associated with these strategies, and use corporations as a communications vehicle to educate working Calgarians.

## 4.9 ADDITIONAL COMMENTS

Focus group participants offer several ideas for The City of Calgary’s consideration as deliberations on tree preservation and growth strategies are pursued. In the qualitative phase of research, these comments can be grouped into five distinct categories: educate and encourage; implement land development guidelines; offer programs and/or events; offer sponsorships and/or partnerships; and, provide incentives. Given that incentives were assessed earlier in this report (pages 48 to 50), additional comments related to the other four themes follows.

### **Programs and Events:**

- Give saplings to elementary students to plant (awareness of this ongoing initiative is minimal)
- Have an Arbor Day (awareness again is minimal)
- Continue memorial and birthplace forests and even expand upon this with “Celebration Forests” to honour other things (pets) or events
- Have a Craig’s List for available trees for transplanting
- Have a Tree Registry to identify existing trees on private lands
- Offer volunteer programs for individual citizens
- Allow trees to be counted as ‘art’ when 5% of new infrastructure development must be allocated to artwork
- Be at the Home & Garden show
- Adopt-a-tree: citizens could take care of a publicly located tree for 3 years

### **Sponsorships and Partnerships:**

- Work with nurseries to donate/offer discounts for planting
- Work with corporations to encourage employee volunteer days or to sponsor a community plant
- Partner via RFP processes with private sector labour for maintenance if same quality and less expensive

### **Educate and Encourage:**

- Offer ‘Trees for Dummies’-style information and seminars.
- Get into schools to teach children and youth, even making tree preservation and growth part of the academic curriculum
- Offer an informative website resource which includes directives, community-specific information and links to resources
- Use a campaign to encourage participation, similar to the Blue Box recycling campaign which was information and had a call to action
- Inform the public on the benefits of trees and how to care for them, much like the lawn watering campaign (“you only need 1”)
- Provide a hotline

**Verbatim Comment From the Focus Groups:**

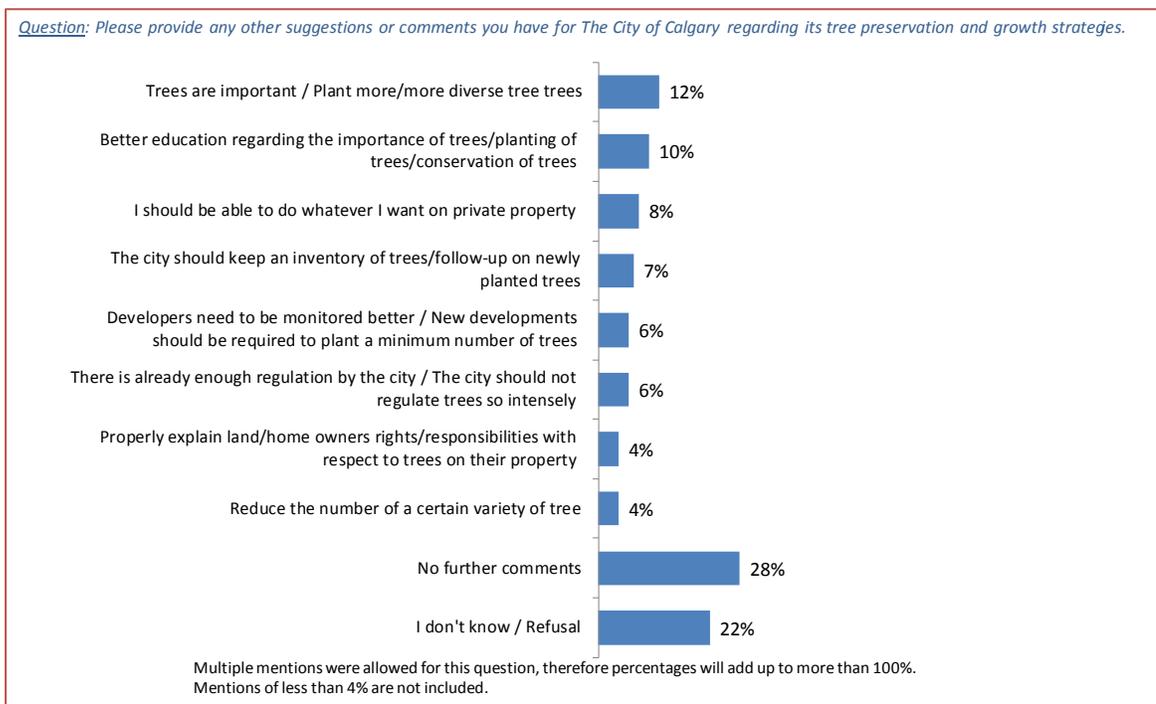
*“We don’t know where to start.”*

**Land Development Guidelines:**

- Ensure adequate space requirements for trees in new developments
- Give developers tree guidelines that are tied to permits
- Improve urban planning to account for possible future infrastructure needs; try to avoid clear-cutting existing trees and instead build around them
- Vertical builds should have rooftop greenery guidelines

The survey research also allowed respondents an opportunity to provide additional suggestions, advice or comments regarding The City of Calgary’s tree preservation and growth strategies. One-half (50%) of respondents do not offer additional commentary.

**Figure 22: Additional Commentary from Survey Respondents**



Among respondents who took the time to present suggestions, the most common advice relates to citizens’ desires to see more trees planted (12%) and to receive more information about trees (10%). Also, certain respondents advise that landowners should be able to treat trees as they wish on their own property (8%), that The City should keep an inventory of trees and follow-up on newly planted trees (7%), and that developers need to be monitored (6%). Certain comments (6%) suggest that The City should not regulate trees “intensely”.

Additional suggestions are vary and encompass wishes for The City to explain tree regulations to citizens, to reduce the number of specific varieties of trees (poplars), to engage the community and to offer incentives.

Examples of survey respondents' additional comments are listed below.

**Verbatim Comments From Survey Respondents:**

*"[They] should be watching these new land developers that go in and kill every tree on the land. It is very sad to see all those trees that took years and years to grow, just get wiped out in a blink of an eye. Please save more trees! We need them! It's so nice to go around The City and enjoy all the different trees and life that comes with them."*

*"We do need more trees around The City. We don't have enough trees and the sick and dying trees should be cut down and replaced with new healthy trees."*

*"[They should] make the citizens more aware of the strategies already in place."*

*"[They should] encourage planting and preservation of trees in elementary school properties thus involving young children in this process."*

*"My preference is for info about trees on personal property. I love them but do not understand how to look after them. Longevity? Watering? Plus it is very expensive to have them taken down. [I] would like a good reference - website, phone number, etc."*

*"I don't feel that the city has a right to put guidelines on private property – though I feel that they could encourage property owners to plant/care for trees through incentives."*

*"I think it is vital that new developments are curtailed in size to ensure that there is always room on lots to plant several trees and/or ensure that existing trees are maintained - including for several years after construction. If roots are damaged, the trees die, but not immediately."*

*"I think Calgary is doing quite well with its "green space". It is one of the things I love about living here."*

## **5 ONLINE SURVEY QUESTIONNAIRE**

### **Parks Urban Forestry**

#### **Tree Preservation and Growth Survey**

- Leger will send the invitations to a random stratified sample of Calgarians
- Leger will host the online survey

**Subject Line:** Important Tree Preservation Survey for The City of Calgary

#### **INTRODUCTION:**

The City of Calgary is currently reviewing possible initiatives to undertake for tree preservation and growth strategies. Your valuable input can help inform The City's policies and plans to ensure that we have an 'urban forest' that all citizens can be proud of, and cherish.

The survey will take 10 to 15 minutes to complete, your responses will be treated confidentially under FOIP requirements (can spell this out).

Should you be interested in participating in this survey, please click on the following link: xxxxxxxx.

[FOR CLIENT LINK: "Your feedback will help the City of Calgary develop effective strategies for tree preservation and growth initiatives for the future.

All of your answers will be kept confidential and should you have any questions, please contact 3-1-1 and mention "Tree Preservation and Growth Survey."]

**INTRODUCTORY SCREEN:**

Welcome to Leger Marketing, an international public opinion and research firm.

We thank you for taking the time to complete this brief survey. Your feedback will help The City of Calgary develop effective strategies for tree preservation and growth initiatives for the future. All of your answers will be kept confidential and should you have any questions, please feel free to contact:

Erin Roulston

erinroulston@shaw.ca

Senior Research Consultant, Leger Marketing

808 4th Ave SW, Calgary, AB T2P 3E8

403-818-3227

**NOTE: QUOTAS TO BE APPLIED PER QUADRANT**

## DEFINITIONS

To begin, the term “**tree preservation**” used in this survey refers to the preventative or proactive measures that can be taken to limit the removal of mature trees and to preserve existing trees. In this survey, the term “**growth**” simply means increasing the number of trees in The City.

## AWARENESS:

The first few questions are about your awareness and knowledge of tree preservation and growth. Please remember that there are no right or wrong answers.

1. How knowledgeable do you think you are about each of the following aspects of tree preservation and growth?

### [RANDOMIZE]

What time of year to prune tree branches?

Where to best plant trees?

How to prevent tree disease?

How to control tree disease?

How to transplant trees?

How to effectively water trees?

How to keep trees healthy during construction that surrounds them?

How to save mature trees that are part of lands under development?

Very knowledgeable

Somewhat knowledgeable

Not very knowledgeable

Not at all knowledgeable

Don't know/Not applicable

2. Overall, how knowledgeable do you feel you are about tree preservation and growth initiatives? Please click below.

Very knowledgeable

Somewhat knowledgeable

Not very knowledgeable

Not at all knowledgeable

Don't know/Not applicable

3. To the best of your knowledge, what percentage of The City of Calgary is currently covered in trees? That is, just trees and not green spaces or grass. Please enter your best estimate out of 100% below.

\_\_\_\_\_ % / 100% [DROP-BOX]  
Don't know/Not applicable [SKIP TO Q.5]

4. You said that you believe that \_\_\_\_\_% [INSERT ANSWER FROM Q3] of The City of Calgary is currently covered in trees. Do you feel that The City of Calgary should increase, maintain or decrease this percentage of tree coverage?

[ROTATE SCALE RANDOMLY]

Increase this amount of tree coverage

Maintain this amount of tree coverage

Decrease this amount of tree coverage

Don't know/Not applicable

#### **PERSONAL INVOLVEMENT IN TREE PRESERVATION INITIATIVES**

The next questions are about your own personal involvement in any tree preservation initiatives.

5. Within the past year only, please indicate whether you have participated in any of the following activities:  
[N.B. FOR ANALYSIS WE WILL TALLY "YES" TO ANY FOR A TOTAL INCIDENCE SCORE.]

#### **[RANDOMIZE LIST]**

Planted a tree on private property

Transplanted a tree

Applied insecticides for disease control or prevention

Assisted a family member or neighbour with their tree needs

Arbor Day activities, including planting a seedling

Watered trees

Neighbourhood tree "clean-ups" through your local Community Association

The City sponsored "Neighbourwoods" tree planting program?

Yes

No

Don't recall

6. And have you participated in any of the following City of Calgary “green initiative” programs within the past year?

[RANDOMIZE LIST]

Adopt-a-park

Community stewardship for biodiversity

Community orchards

Community gardens

Plant in Place (PIP) tree planting program

Symbolic tree program

Other planting partnerships with The City (through sponsorships/Tree Canada)

Nature programs

Healthy yards

Pathway and river cleanup

Yes

No

Don't recall

#### **PERSONAL CHALLENGES WITH TREE PRESERVATION INITIATIVES**

7. For each of the following statements, please indicate whether you strongly agree, somewhat agree, somewhat disagree or strongly disagree.

[RANDOMIZE STATEMENTS]

I'm not motivated to put the time and effort into tree preservation and growth.

I don't have enough knowledge to care for trees.

I don't have enough time to properly care for trees.

I can't afford to maintain healthy trees.

I can't afford to buy new trees.

I would volunteer to plant or help care for trees if I knew how to volunteer.

I know how to properly take care of trees.

I would like to know more about how to properly take care of trees.

I would like to know more about how to properly plant trees.

I am not interested in tree preservation and growth strategies.

I would like to know more about how to properly save trees during land development.

Strongly agree

- Somewhat agree
- Somewhat disagree
- Strongly disagree
- Don't know/Not applicable

## **AWARENESS & OPINIONS OF CITY TREE PRESERVATION INITIATIVES**

The next few questions are about The City of Calgary's tree preservation and growth initiatives.

8. First, how aware would you say you are about The City of Calgary's overall tree preservation and growth initiatives?

- Very aware
- Somewhat aware
- Not very aware
- Not at all aware
- Don't know/Not applicable

9. How interested are you in learning more about The City of Calgary's tree preservation and growth initiatives?

- Very interested
- Somewhat interested
- Not very interested
- Not at all interested
- Don't know/Not applicable

## **TREE BENEFITS**

10. In your own words, what would you say are the *benefits* of trees in The City? What purpose do they serve?  
[PLEASE PROVIDE UP TO 5 RESPONSES IF YOU'D LIKE.]

- [OPEN-ENDED QUESTION. WILL BE CODED FOR ANALYSIS]  
Don't know/Not applicable

11. And to what degree do you agree or disagree with each of the following statements about the benefits of tree preservation and growth?

[RANDOMIZE STATEMENTS]

We all have to contribute to tree preservation and growth to ensure the quality of air in the city of Calgary.  
Trees add significant monetary value to our home property values.  
Having trees helps us to ensure that wildlife and eco-systems can live in The City.  
Trees make me feel relaxed.  
I believe that the presence of trees enhances my quality of life.

- Strongly agree
- Somewhat agree
- Somewhat disagree
- Strongly disagree
- Don't know/Not applicable

**CHALLENGES:**

The following questions are about the challenges that might get in the way of The City's tree preservation and growth initiatives.

12. Please indicate the degree to which you agree or disagree with each of the following statements.

[RANDOMIZE LIST]

The smaller lots in newer communities do not have enough space to plant trees.  
It is difficult to successfully undertake tree preservation and growth initiatives in Calgary because of our climate.  
It is expensive to maintain healthy trees.  
New or "infill" developments which place larger homes on smaller lots in older communities limit opportunities to save existing trees.  
It is expensive and difficult to save trees that are part of lands under development.

- Strongly agree
- Somewhat agree
- Somewhat disagree
- Strongly disagree
- Don't know/Not applicable

**POSSIBLE CITY INITIATIVES FOR TREE PRESERVATION AND GROWTH**

13. There are a number of possible approaches The City could take with respect to tree preservation and growth. Please indicate how likely you may be to participate in each of the following options:

[RANDOMIZE LIST]

Attend a free “trees for dummies” seminar to learn about tree preservation and growth.

Go to a website that has resource information for tree preservation and growth.

Celebrate an annual “Tree Day” by either planting or caring for a tree.

Plant a tree in a memorial, birthplace or celebration forest to commemorate someone or something.

Sponsor a heritage tree’s maintenance and care for a year, with your efforts being publicly recognized.

Register the trees I have on my private property with The City so they can monitor their existence and growth.

Adopt a tree wherein you could care for a tree on public grounds for a set period of time (e.g. 1–3 years at a time).

Very likely

Somewhat likely

Not very likely

Not at all likely

Don’t know/Not applicable

14. And how likely would you be to participate in tree preservation and growth strategies if:

[RANDOMIZE LIST]

The City offered tax benefits for planting trees on private lands.

The City offered a rebate on the purchase of trees to plant on private property.

The City organized contests or competitions amongst Community Associations and awarded prizes or grants for the winners.

The City publicly recognized your individual contribution via plaques, certificates or newspaper notices.

The City offered tax benefits to developers who save trees during the development process.

Very likely

Somewhat likely

Not very likely

Not at all likely

Don’t know/Not applicable

## MUNICIPAL TREE BYLAWS & REGULATIONS

15. To the best of your knowledge, does The City of Calgary have any legislation, bylaws or regulations in place to preserve trees on **public lands**?

Yes

No

Don't know

16. And to the best of your knowledge, does The City of Calgary have any legislation, bylaws or regulations in place to preserve trees on **private property**?

Yes

No

Don't know

17. Also, and again to the best of your knowledge, does The City of Calgary have any legislation, bylaws or regulations in place to preserve trees in **new residential home developments**?

Yes

No

Don't know

18. Please review the series of statements below and indicate to what extent you would agree or disagree with the idea.

[RANDOMIZE LIST]

The City should mandate that lot sizes in new communities accommodate space for 2-3 trees per lot.

The City should mandate that developers plant a certain number of trees on each newly developed lot.

On private property, a landowner should be able to remove a diseased tree without permission from The City.

On private property, a landowner should be able to remove an old and dying tree without permission from The City.

On private property, a landowner should be able to remove a mature, healthy tree without permission from The City.

The City should be actively monitoring developers to ensure that they planted what they promised.

Fines should be imposed upon developers who do not comply with municipal tree preservation guidelines.

I think it would be a good idea to have a policy in place to obtain permission to cut down trees on private property.

New commercial or retail buildings should have guidelines mandating greenery on their rooftops.

If trees are removed to replace older homes with new or "infill" homes in established communities, the property owner should be mandated to replace the same number of trees on the property.

Strongly agree

Somewhat agree

- Somewhat disagree
- Strongly disagree
- Don't know/Not applicable

**WRAP-UP**

19. Please provide any other suggestions or comments you have for The City of Calgary regarding its tree preservation and growth strategies in the space below.

[OPEN-ENDED. TO BE CODED]

**DEMOGRAPHICS**

Thanks for your input on the Urban Forest in Calgary. We would like to ask you a few more questions which will help us profile the results of this study among different segments of the population in Calgary. This is standard information that we collect for every study to better understand opinions. We appreciate your time in providing your last few responses.

20. GENDER. Please indicate whether you are:

- Male
- Female

21. Do you rent or own your current residence in Calgary?

- Rent
- Own

22. Please indicate which of the following types of dwellings best describes your current residence:

Single family home

- Detached home
- Townhome or villa
- Apartment-style condominium
- Apartment
- Other [PLEASE SPECIFY]\_\_\_\_\_

23. Thinking of your current neighbourhood, approximately how old is the home or building in which you currently live?

- Less than 3 years
- 4 to 10 years
- 11 to 20 years
- 21 to 39 years
- 40 years or older
- Don't know

24. And what is the name of the community in which you currently live?

[OPEN – WE HAVE A PRE-CODED LIST FROM WHICH TO MATCH RESPONSES]

25. For how many consecutive years have you lived in the City of Calgary, counting from today?

- Less than one year
- 2 to 5 years
- 6 to 14 years
- 15 to 24 years
- 25 years or more
- Don't know

26. Finally, please indicate which category best describes the total annual household income of all residents in your household.

- Under \$30,000
- \$30,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 to \$149,999
- \$150 or more
- Don't know/prefer not to answer

27. What is the last year of education you have completed? Is it...

- Elementary (7 year or less)
- High school, general or professional (8 to 12 years)
- College pre-university, technical training, certificate (CEP), accreditation (ASP) or proficiency diploma (DEP) (13 to 15 years)
- University certificates or diplomas
- University Bachelor (including classical studies)
- University Master's

University Doctorate (PhD)

I prefer not to answer

Thank you very much for your feedback. Your input is appreciated!