AGENDA

1. CALL TO ORDER

2. ADOPTION OF MINUTES

   .1 Minutes of the Parks, Recreation and Culture Advisory Committee meeting held February 21, 2018 (attached) (p. 2)

3. PRESENTATIONS

   None.

4. DELEGATIONS

   None.

5. BUSINESS OUT OF MINUTES

   None.

6. REPORTS

   .1 Verbal update, from the Film and Special Events Manager and the Community and Special Events Coordinator, regarding the 2018 Canada Day Parade

   .2 Verbal update, from the General Manager, Abbotsford Centre, regarding the Abbotsford Centre Year-in-Review

       PowerPoint Presentation

   .3 Report No. PRC 001-2018, April 18, 2018, from the Director, Park Services, regarding the Tree Protection Bylaw

       PowerPoint Presentation (attached) (p. 5)

   .4 Verbal update from the General Manager, Parks, Recreation and Culture, regarding Metro Vancouver Parks transfer to the City of Abbotsford

7. NEW BUSINESS

   .1 Announcement of change in the Abbotsford Community Foundation Representative

8. ADJOURNMENT
Minutes of the Parks, Recreation and Culture Advisory Committee meeting, held Wednesday, February 21, 2018, at 3:00 p.m., in Room 530, at Abbotsford City Hall

Committee Members Present: Councillor D. Loewen (Chair); B. Singh Bansal; L. Bell; N. Bergen; D. Collingridge; T. Curtis (part); A. Levy; R. Pauls (part); and C. Wiebe

Staff Present: Deputy City Manager, - J. Rudolph; Director, Recreation and Culture, - A. Friesen; Manager, Administration and MCA – D. Urquhart; Manager, Arena Services, - M. Noetzel; and Manager, Horticulture and Turf, - G. Martin

Others Present: 0

Public Present: 11+

1. CALL TO ORDER

The meeting was called to order at 3:00 p.m.

2. ADOPTION OF MINUTES

.1 Minutes of the Parks, Recreation and Culture Advisory Committee meeting held January 17, 2018

   Moved by R. Pauls, seconded by N. Bergen, that the minutes of the Parks, Recreation and Culture Advisory Committee meeting held January 17, 2018, be adopted.

   PRC 005-2018 CARRIED.

3. PRESENTATIONS

None.

4. DELEGATIONS

None.

5. BUSINESS OUT OF MINUTES

None.

T. Curtis entered the meeting at 3:06 p.m., during discussion of the following item.
6. REPORTS

.1 Rick Hansen Foundation Accessibility Assessment Report

The Manager, Arena Services, provided a PowerPoint presentation and an overview of the Rick Hansen Foundation Accessibility Assessment Report that provided a comprehensive analysis of the current accessibility status of the two recreation facilities, the Abbotsford Recreation Centre and the Matsqui Recreation Centre. From the report recommendation were provided on how to meet the criteria for three different levels of accessibility; basic access requirements, inclusive access requirements, and a full access strategy. A grant application is being prepared for funding support through the Rick Hansen Foundation to assist with the upgrades to these two recreation facilities.

Moved by C. Wiebe, seconded by A. Levy, that verbal update and PowerPoint presentation, provided by the Manager, Arena Services, regarding the Rick Hansen Foundation Accessibility Assessment Report and Grant Opportunity, be received for information.

PRC 006-2018 CARRIED.

.2 Community Grant Opportunities

The Director Recreation and Culture, provided a summary of the current grant opportunities the Parks, Recreation and Culture Department are apply for funding for additional upgrades of various amenities in community. These include; Bike BC Grant for the Cycling/Pedestrian crossing for Discovery Trail; Canadian Tire Jumpstart program for accessibility upgrade to the Matsqui Recreation Centre Pool; and the TD Green Street Grant for neighbourhood tree planting program.

Moved by A. Levy, seconded by L. Bell, that (1) the verbal update provided by the Director, Recreation and Culture, regarding Community Grant Opportunities, be received for information and (2) the Parks, Recreation and Culture Advisory Committee recommends that Abbotsford City Council support and approve these grant applications.

PRC 007-2018 CARRIED.

.3 Tree Protection Bylaw (Report No. PRC 001-2018)

The Tree Protection Bylaw (Report No. PRC 001-2018) was withdrawn by staff and will be brought forward to a future meeting.
.4 Parks, Recreation and Culture Master Plan – Stage 2 Analyze (Report No. PRC 002-2018)

The Director, Recreation and Culture provided a PowerPoint presentation and a high level overview of the Parks, Recreation and Culture Master Plan - Stage 2 Analyze report focusing on the organizational alignment with other City of Abbotsford Master Plans, the vision and guiding principles, key findings and possible directions for the Parks, Recreation and Culture department. The next step in the Parks, Recreation and Culture Master Plan is to complete Stage 3 - Draft Plan, this will include: recommendations, implementation strategies, and community engagement.

Moved by R. Pauls, seconded by L. Bell, that Report No. PRC 002-2018, dated February 1, 2018, and the PowerPoint presentation from the Director, Recreation and Culture, regarding Parks, Recreation and Culture Master Plan – Stage 2 Analyze, be received for information.

PRC 008-2018 CARRIED.

R. Pauls left the meeting at 3:35 p.m., during discussion of the following item.

.5 Meeting Topic Survey Results

The results from the Meeting Topic Survey for future Parks, Recreation and Culture Advisory Committee Meetings, was circulated to all Committee members.

7. NEW BUSINESS

.1 COR 002-2018, Amended Committee Protocol Policy

The Amended Committee Protocol Policy, adopted on January 22, 2018, was circulated to all Committee members.

8. ADJOURNMENT

Moved by C. Wiebe, seconded by A. Levy, that the Parks, Recreation and Culture Advisory Committee meeting held February 21, 2018, be adjourned. (4:42 p.m.)

Certified Correct:

Councillor Dave Loewen
Chair

Diane Urquhart
Recording Secretary
RECOMMENDATION

THAT the Tree Management Bylaw Report, and the Urban Forest Canopy Technical Analysis, as attached to the Tree Management Bylaw Report, be received for information.

SUMMARY OF THE ISSUE

A review of the Tree Protection Bylaw has been underway with staff over the previous eighteen months. The Parks, Recreation, and Culture staff have engaged internal staff from several City of Abbotsford departments, the Senior Management, and Council in discussion on issues facing the community and City regarding the management of the urban forest. This report is to share this information with the Parks, Recreation and Culture Advisory Committee and receive their input prior to the finalization of a draft bylaw update.

BACKGROUND

There has not been an update to the Tree Protection Bylaw since 2010 and the community is growing and the industry is changing with the protection and management of the urban forest issues and practices. The inclusion of former Area H, growth in the Urban Development Boundary, Agricultural lands and the right to farm, strata properties and individual owners role and responsibilities for tree management have faced the current bylaw and staff.

DISCUSSION

Staff seeks to share some data and statistics from research which was conducted on the canopy cover and implications on growth with the urban forest. Staff would like to discuss the minor changes, processes and implications within the current and proposed tree bylaw. Staff seeks to receive input from the Parks, Recreation and Culture Committee and the public on the strategies and policies that will guide the formation on the management of the urban forest in Abbotsford.
IMPACTS ON COUNCIL POLICIES, STRATEGIC PLAN AND/OR COUNCIL DIRECTION

The information in this report speaks to the four cornerstones established by Council and reflect the initiatives of developing a diverse and vibrant economy, community connect to the environment, understanding the critical role in educating and engaging community, and the importance of building community through our policies and bylaws to create a livable city.

SUBSTANTIATION OF RECOMMENDATION

That the Parks, Recreation and Culture Advisory Committee receive this report for information.

James Arden
Director, Park Services

Attachment: A Urban Forest Canopy Technical Analysis
Introduction

Context and Objectives

The City of Abbotsford is concerned about its urban forest and recognizes that significant numbers of trees have been removed in recent years. City staff began work on a new tree bylaw, but wanted to be able to justify the need for strengthening the previous tree protection bylaw.

The purpose of this study was to provide information on the tree canopy and how it has changed over time. The objectives of the study were as follows:

- Calculate the City’s overall tree canopy for two time periods including and excluding parks
- Analyze the tree canopy in relation to different land uses and ages of development, including changes in the tree canopy for each land use and age of development over the two time periods
- Analyze key patterns contributing to changes in the tree canopy

This technical study had a limited budget and did not have access to data such as full-featured LiDAR, so the methods were selected accordingly.

Data and Analysis Methods

The data and analysis methods are described in detail in Appendix A. The following is a summary of the methods:

- Select 2005 and 2015 as the two time frames based on the quality of City air photos, and acquire digital GIS data for those time periods
- Identify 20 sample sites in collaboration with City staff to represent a range of land uses developed over a variety of decades
- Use a combination of image classification, GIS tools, and sample site digitizing to calculate and display the overall tree canopy for 2005 and 2015
- Verify the tree canopy data using another tool, iTree
- Calculate the tree canopy for the various land uses, and analyze changes in tree canopy in relation to land use and age of development

The tree canopy is the layer of tree leaves, branches and stems that cover the ground when viewed from above.
Tree Canopy Analysis

Forest Cover Results

The first analysis of Abbotsford’s tree canopy identifies areas of contiguous forest that existed in 2005 and 2015 within the Urban Containment Boundary (UCB). In 2005 approximately 23% (1,514 ha) of the UCB was covered by significant patches of forest. By 2015 that number had dropped to 21.5% (1,406 ha). The forest cover decrease represents a reduction of approximately 7% over a 10-year period. Figure 1 summarizes the distribution of the forest across land use types (generalized zoning classes) in 2015:

<table>
<thead>
<tr>
<th>Land Use Types</th>
<th>Area (ha)</th>
<th>Percent of Forest in this Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential – Rural and Suburban</td>
<td>538.5</td>
<td>38%</td>
</tr>
<tr>
<td>Parks, Open Space and Schools</td>
<td>296.1</td>
<td>21%</td>
</tr>
<tr>
<td>Residential – Urban (single detached lots)</td>
<td>266.1</td>
<td>19%</td>
</tr>
<tr>
<td>Residential – Medium Density</td>
<td>90.9</td>
<td>6%</td>
</tr>
<tr>
<td>Institutional</td>
<td>61.6</td>
<td>4%</td>
</tr>
<tr>
<td>Agriculture</td>
<td>55.2</td>
<td>4%</td>
</tr>
<tr>
<td>Industrial</td>
<td>42.8</td>
<td>3%</td>
</tr>
<tr>
<td>Commercial</td>
<td>35.9</td>
<td>3%</td>
</tr>
<tr>
<td>Comprehensive Development</td>
<td>18.5</td>
<td>1%</td>
</tr>
</tbody>
</table>

**Grand Total** 1,405.8 100%

Figure 1: 2015 Forest Area Distribution by Land Use
The neighbourhoods most affected by this reduction appear to be Aberdeen, McMillan, South Poplar, and Whatcom, as displayed in Figure 2 (areas in red represent forest removed between 2005 and 2015):

![Figure 2: 2015 Forest Area Distribution 2005 and 2015](image)

**Overall Tree Canopy Results**

The GIS analysis shows that the City’s tree canopy within the UCB was around 33.2% (2,176 ha) in 2005, and 30.6% (2,009 ha) in 2015 (Figures 3 and 4). This is a decline of approximately 2.5%, otherwise stated as an 8% reduction of the 2005 canopy (a similar trend to the contiguous forest areas).

When Parks, Open Space and Schools are excluded, the tree canopy is lower, and the decline is slightly reduced. The 2005 tree canopy for the UCB minus Parks is 30.8% and for 2015 it is 28.1%.
Figure 4: 2015 Tree Canopy
The iTree Canopy results closely mirror and confirm this trend. Using that method, the 2005 tree canopy for the UCB was 34.9%, and for it was 31.9%. This is a decline of approximately 3%.

Tree Canopy in Relation to Land Use and Age of Development

Tree canopy varies considerably in relation to land use. Figure 5 shows the average tree canopy in 2015 for selected land uses based on the 20 sample sites:

<table>
<thead>
<tr>
<th>Land Use Types</th>
<th>Tree Canopy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential – rural, suburban and urban (11)</td>
<td>15.6%</td>
</tr>
<tr>
<td>Residential – Medium Density (2)</td>
<td>11.4%</td>
</tr>
<tr>
<td>Institutional (1 site)</td>
<td>14.9%</td>
</tr>
<tr>
<td>Commercial (3 sites)</td>
<td>6.1%</td>
</tr>
<tr>
<td>Industrial (3 sites)</td>
<td>2.3%</td>
</tr>
</tbody>
</table>

Figure 5: Tree Canopy by Land Use in 2015

Generally, older developments a higher tree canopy than newer projects. The following were some of the findings for 2015:

- Older residential neighbourhoods in Abbotsford had an average tree canopy of 18.3%, while newer neighbourhoods had an average tree canopy of 12.3%
- Older Industrial areas had an average tree canopy of 2.6%, with newer industrial areas averaging 1.5%.

Key Patterns

The sample site images in Appendix B illustrate the changes in the tree canopy. Examples for industrial and residential land are illustrated in Figures 6 and 7. In most of Abbotsford, tree canopy loss from 2005 to 2015 was caused by major clearing for land development.

Some of the trends related to tree canopy challenges in other communities include the following: infill of larger houses removing trees on smaller lots, lack of tree growth in new developments, and few trees in new developments, sometimes caused by zoning regulations. When housing affordability is a focus, lot sizes can be too small to accommodate trees in addition to utilities and usable outdoor space.
Figure 6: Industrial Land in Western Abbotsford 2005 (above) and 2015 (below)
Figure 7: Residential Land Development near Sumas Mountain 2005 (above) and 2015 (below)
Closing Comments

Assuming that the tree canopy trends for the previous 10 years in Abbotsford remain constant, the tree canopy in the UCB would be approximately 28% in 2025 and 25% in 2035. There are many measures that municipalities can use to protect and enhance the tree canopy, some of which are as follows:

- Raise awareness about the importance and benefits of the urban forest among City staff, Council, developers and the public, including information on the City’s initiatives.
- Establish tree canopy targets, potentially for the city as a whole, for specific land uses, or for neighbourhoods.
- Update tree protection and other bylaws (e.g., OCP Development Permit Guidelines, Subdivision and Servicing, and Zoning) to incorporate more emphasis on the tree canopy.
- Integrate recommendations related to the urban forest into strategic plans such as the OCP and Sustainability Plans.
- Identify opportunities for protecting and planting trees on private property, and use programs and incentives to encourage this.
- Work with the agriculture community on opportunities to protect and enhance the tree canopy.
- Partner with private and government institutions to encourage more tree planting on their sites.
- Increase tree planting in existing and new parks, other City facilities, and road allowances.
- Consider requiring developers to contribute to the costs of boulevard tree planting.
- Adopt best management practices for tree planting and incorporate these into all relevant plans and policies.
- Adopt proper practices for tree maintenance and encourage private land owners to follow these practices as well.
- Monitor bylaws that require tree planting on private land.
- Support and expand stewardship programs to involve volunteers in planting and maintaining trees.

This document provides base data on Abbotsford’s tree canopy. With the data already generated, additional types of analysis are possible.
Appendix A: Study Methods

The following GIS data was acquired from the City:

- Orthophotos for 2005 and 2015
- Zoning classifications for 2005 and 2015
- Urban Containment Boundary
- Neighbourhood Boundaries
- Municipal Boundary
- Legal Parcels
- Road centrelines with construction dates

Urban Systems generated the following data:

- 20 sample sites – identified and digitized in GIS to capture a variety of land uses developed in different decades
- 20 sample sites - digitized tree canopy for each site for 2005 and 2015
- Image classification – analyzed and classified air photos from 2005 and 2015 to identify larger contiguous patches of forest

The first step in the GIS analysis involved image classification tests to determine the classification tool that yielded the best results (using the ArcGIS 10.2.2 Toolbar – Image Classification). After initial trials with Interactive Supervised Classification combined with 39 training sites, it was determined the Maximum Likelihood Classification (MLC) with 39 training sites was the preferred method.

The results from the MLC process were then reclassified from 39 to 8 classes. This simplified results based on common characteristics. For example, several different sample sites were generated to represent the various roofing types found in the city. The image classification results for all types of roofs were then aggregated into a single reclassified value. Various forest sample results (deciduous vs coniferous) were reclassified into a single forest class, and so on.

The next step was to select the subset representing forest polygons and to clip the results to the Urban Containment Boundary (UCB). This made the dataset far more manageable. The next step was to convert the clipped UCB raster to polygons (needed for eventual overlay with other polygonal data like zoning). Polygons were then dissolved and forest patches less than 1,800 m² were removed to further improve manageability for quality control. Each of the remaining approximately 900 polygons were then visited and quality controlled for accurate classification. Contiguous forest areas missed by the image classification results were onscreen digitized, resulting in a final 721 polygons (most errors were due to shadows on the 2005 imagery).
The final 2005 contiguous forest polygons (over 1,800 m²) were then refined by on-screen digitizing using the 2015 orthophoto to remove or refine areas where deforestation had taken place for agriculture, commercial / industrial, or residential development purposes.

Concurrent to the image classification work, 20 sample sites were selected with input and review by City Staff. These sample sites attempt to represent various land uses, across development dates (older 1960s, 70s and 80s developments vs newer 1990 to present developments), across differing neighbourhoods. The 20 sample sites were weighted mostly towards residential development (13 sites), then commercial and Industrial development (3 sites each), with one representative Institutional site. Within the sample sites, onscreen digitizing was conducted to identify the tree canopy in 2005 and 2015. Google Street View was employed as an additional tool to identify whether vegetation was legitimate trees (more than 6 ft in height) vs. low shrubs or hedges.

The last GIS step was to integrate the results of the sample site digitizing and the image classification forest polygons. To achieve this, some work on the 2005 and 2015 zoning layers was required. For both years, the detailed zoning classes were generalized to the following categories:

- Agricultural
- Commercial
- Comprehensive Development
- Industrial
- Institutional
- Parks, Open Space and Schools
- Residential – Rural and Suburban
- Residential – Urban
- Residential – Medium Density

Average road construction dates by zoning polygon were then used to classify whether the development was older (pre-1990), or newer (>= 1990). The image classification forest polygons were then overlaid in GIS with the age classified and generalized zoning polygons for the two time periods. Areas with 100% canopy cover (contiguous forest) were temporary ignored, and average tree canopy numbers were generated from the sample site summary results for older and newer types of development. These averages were then applied to the remaining zoning classifications (net non-contiguous forest areas), by age class to complete the tree canopy analysis.
Assumptions for non-sample site land use types were as follows:

- Agriculture – industrial averages used as proxy
- Parks, Open Space and Schools – institutional averages used as proxy

Single resultant layers for 2005 and 2015 were then summarized to identify tree canopy percentages for the entire UCB, with and without parks.

To verify the results, iTREE Canopy surveys (v6.1) were also run for 2005 and 2015, using the recommended 1,000 sample points, with the Urban Containment Boundary defining the project area.
Appendix B: Sample Sites
### SITE 1 - Industrial

<table>
<thead>
<tr>
<th>Site Name / Zoning</th>
<th>Age Category</th>
<th>2005 Canopy Cover</th>
<th>2015 Canopy Cover</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 1 - Industrial</td>
<td>Newer</td>
<td>2.5%</td>
<td>1.5%</td>
<td>-1.0%</td>
</tr>
</tbody>
</table>
### SITE 2 Residential

<table>
<thead>
<tr>
<th>Site Name / Zoning</th>
<th>Age Category</th>
<th>2005 Canopy Cover</th>
<th>2015 Canopy Cover</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 2 - Residential</td>
<td>Older</td>
<td>8.1%</td>
<td>10.1%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Site Name / Zoning</td>
<td>Age Category</td>
<td>2005 Canopy Cover</td>
<td>2015 Canopy Cover</td>
<td>Change</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------</td>
<td>-------------------</td>
<td>-------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Site 3 - Residential</td>
<td>Older</td>
<td>12.9%</td>
<td>14.5%</td>
<td>1.5%</td>
</tr>
</tbody>
</table>
**SITE 4**

**Industrial**

<table>
<thead>
<tr>
<th>Site Name / Zoning</th>
<th>Age Category</th>
<th>2005 Canopy Cover</th>
<th>2015 Canopy Cover</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 4 - Industrial</td>
<td>Older</td>
<td>1.5%</td>
<td>1.4%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Site Name / Zoning</td>
<td>Age Category</td>
<td>2005 Canopy Cover</td>
<td>2015 Canopy Cover</td>
<td>Change</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------</td>
<td>-------------------</td>
<td>-------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Site 5 - Residential</td>
<td>Newer</td>
<td>7.4%</td>
<td>14.0%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Site Name / Zoning</td>
<td>Age Category</td>
<td>2005 Canopy Cover</td>
<td>2015 Canopy Cover</td>
<td>Change</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------------</td>
<td>-------------------</td>
<td>-------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Site 6 - Residential</td>
<td>Newer</td>
<td>48.0%</td>
<td>10.8%</td>
<td>-37.1%</td>
</tr>
<tr>
<td>Site Name / Zoning</td>
<td>Age Category</td>
<td>2005 Canopy Cover</td>
<td>2015 Canopy Cover</td>
<td>Change</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------------</td>
<td>-------------------</td>
<td>-------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Site 7 - Residential</td>
<td>Newer</td>
<td>9.1%</td>
<td>15.3%</td>
<td>6.2%</td>
</tr>
</tbody>
</table>
## SITE 8 Residential

### Site Name / Zoning | Age Category | 2005 Canopy Cover | 2015 Canopy Cover | Change
--- | --- | --- | --- | ---
Site 8 - Residential | Older | 25.2% | 28.6% | 3.4%

Urban Forest Canopy Technical Analysis | Page B-8
**Site 9 - Residential**

### Site Name / Zoning | Age Category | 2005 Canopy Cover | 2015 Canopy Cover | Change
---|---|---|---|---
Site 9 - Residential | Newer | 9.6% | 17.1% | 7.5%
### Site 10 - Residential

<table>
<thead>
<tr>
<th>Site Name / Zoning</th>
<th>Age Category</th>
<th>2005 Canopy Cover</th>
<th>2015 Canopy Cover</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 10 - Residential</td>
<td>Older</td>
<td>15.9%</td>
<td>21.1%</td>
<td>5.2%</td>
</tr>
</tbody>
</table>

The image shows a comparison of the urban forest canopy in 2005 and 2015 for Site 10, which is a residential area. The data indicates an increase in canopy cover from 15.9% in 2005 to 21.1% in 2015, resulting in a 5.2% change.
### Site 11 - Commercial

<table>
<thead>
<tr>
<th>Site Name / Zoning</th>
<th>Age Category</th>
<th>2005 Canopy Cover</th>
<th>2015 Canopy Cover</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 11 - Commercial</td>
<td>Newer</td>
<td>6.9%</td>
<td>10.4%</td>
<td>3.6%</td>
</tr>
</tbody>
</table>

Urban Forest Canopy Technical Analysis | Page B-11
### Site 12 - Commercial

<table>
<thead>
<tr>
<th>Site Name / Zoning</th>
<th>Age Category</th>
<th>2005 Canopy Cover</th>
<th>2015 Canopy Cover</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 12 - Commercial</td>
<td>Older</td>
<td>4.8%</td>
<td>4.8%</td>
<td>-0.1%</td>
</tr>
</tbody>
</table>

Urban Forest Canopy Technical Analysis | Page B-12
### Site 13 - Residential - Medium Density

- **Site Name / Zoning:** Site 13 - Residential - Medium Density
- **Age Category:** Older
- **2005 Canopy Cover:** 10.8%
- **2015 Canopy Cover:** 14.5%
- **Change:** 3.7%
### Site 14 - Residential

<table>
<thead>
<tr>
<th>Site Name / Zoning</th>
<th>Age Category</th>
<th>2005 Canopy Cover</th>
<th>2015 Canopy Cover</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 14 - Residential</td>
<td>Older</td>
<td>15.4%</td>
<td>20.6%</td>
<td>5.3%</td>
</tr>
</tbody>
</table>
### Site 15

**Residential | Medium Density**

<table>
<thead>
<tr>
<th>Site Name / Zoning</th>
<th>Age Category</th>
<th>2005 Canopy Cover</th>
<th>2015 Canopy Cover</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 15 - Residential - Medium Density</td>
<td>Older</td>
<td>6.9%</td>
<td>8.2%</td>
<td>1.3%</td>
</tr>
</tbody>
</table>

Urban Forest Canopy Technical Analysis | Page B-15
### Site 16 - Commercial

<table>
<thead>
<tr>
<th>Site Name / Zoning</th>
<th>Age Category</th>
<th>2005 Canopy Cover</th>
<th>2015 Canopy Cover</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 16 - Commercial</td>
<td>Older</td>
<td>2.2%</td>
<td>3.2%</td>
<td>1.0%</td>
</tr>
</tbody>
</table>
### SITE 17 Residential

<table>
<thead>
<tr>
<th>Site Name / Zoning</th>
<th>Age Category</th>
<th>2005 Canopy Cover</th>
<th>2015 Canopy Cover</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 17 - Residential</td>
<td>Older</td>
<td>12.4%</td>
<td>15.1%</td>
<td>2.7%</td>
</tr>
</tbody>
</table>
### Site 18 - Industrial

<table>
<thead>
<tr>
<th>Site Name / Zoning</th>
<th>Age Category</th>
<th>2005 Canopy Cover</th>
<th>2015 Canopy Cover</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 18 - Industrial</td>
<td>Older</td>
<td>3.3%</td>
<td>3.8%</td>
<td>0.5%</td>
</tr>
</tbody>
</table>

---

Urban Forest Canopy Technical Analysis | Page B-18
SITE 19
Residential

<table>
<thead>
<tr>
<th>Site Name / Zoning</th>
<th>Age Category</th>
<th>2005 Canopy Cover</th>
<th>2015 Canopy Cover</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 19 - Residential</td>
<td>Newer</td>
<td>43.8%</td>
<td>4.3%</td>
<td>-39.4%</td>
</tr>
</tbody>
</table>
### Site 20 - Institutional

<table>
<thead>
<tr>
<th>Site Name / Zoning</th>
<th>Age Category</th>
<th>2005 Canopy Cover</th>
<th>2015 Canopy Cover</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 20 - Institutional</td>
<td>Newer</td>
<td>23.5%</td>
<td>14.9%</td>
<td>-8.6%</td>
</tr>
</tbody>
</table>
Parks, Recreation and Culture Report 001-2018

Tree Management Bylaw
Official Community Plan

#5 of 7 Big Ideas

Improve Natural and Built Systems
5.2 Urban Forest and Tree Canopy

- Establish a tree canopy coverage target
- Require tree conservation strategies, and street tree plantings and landscaping in all development and infrastructure projects
Tree, Zoning and Development Bylaws

Currently conflicting
Bylaw to Bylaw

• TPB needs to speak to Zoning and Development Bylaw

1. Zoning- what is afforded
   • Trees on adjacent properties

2. Development- what we are requiring and what are we getting
   • Removal of trees to replace trees
Policy vs. Bylaw

Agricultural Land Reserve
Non Agricultural Land Reserve
Urban Development Boundary
Cultural Corporate Shift

• A time and a place for trees - missed opportunities
• Tree protection is land preservation
• Credits or incentives
• Tree bylaw alone will not protect trees
What Kind of City Do You Want?