MANAGING OUR URBAN FOREST

An urban forest is …

all of the trees, vegetation, soil and associated natural processes across our city's landscape.

It is found on both public and private lands including:
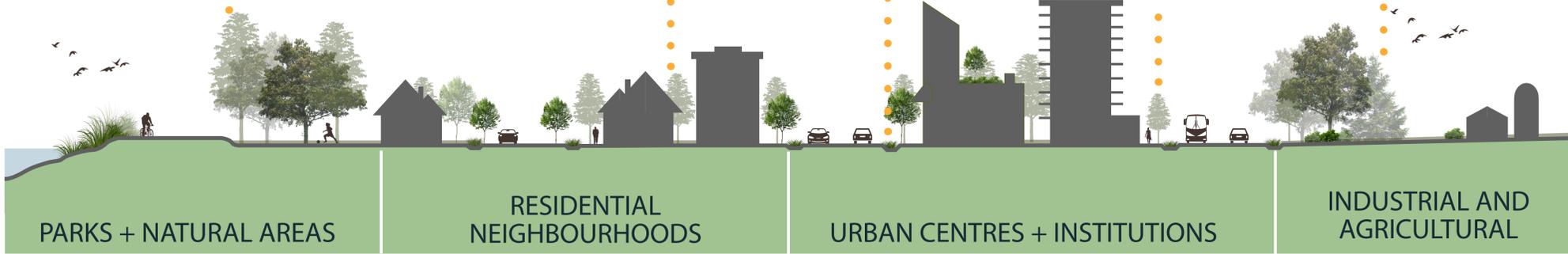
TREES IN PARKS + OPEN SPACES

TREES ON RESIDENTIAL AND COMMERCIAL PROPERTY

GREEN INFRASTRUCTURE

TREES ON STREETS

FOREST + AGRICULTURAL BUFFERS

PARKS + NATURAL AREAS	RESIDENTIAL NEIGHBOURHOODS	URBAN CENTRES + INSTITUTIONS	INDUSTRIAL AND AGRICULTURAL

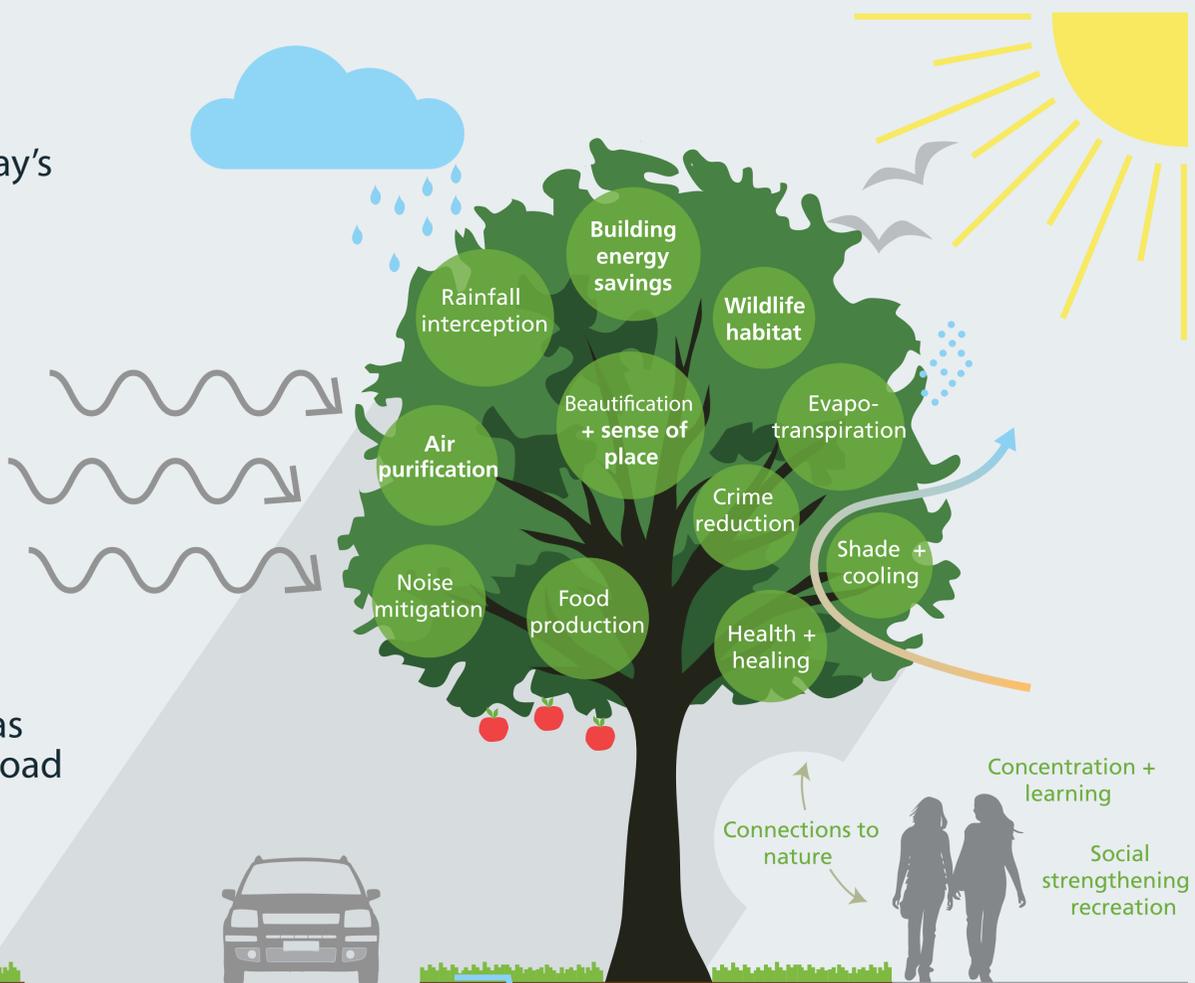## The benefits of urban forests

The urban forest is a critical part of Courtenay's appeal and livability.

Trees serve to:
- beautify and cool the city
- intercept rainwater
- remove pollutants
- provide habitat for wildlife
- connect people to nature

… among many other benefits.

These ecosystem services are as important as other infrastructure, like water, sewers and road networks that service Courtenay.

Rainfall interception

Building energy savings

Wildlife habitat

Air purification

Beautification + sense of place

Evapo-transpiration

Crime reduction

Shade + cooling

Noise mitigation

Food production

Health + healing

Connections to nature

Concentration + learning

Social strengthening recreation

Healthy soil

Improved infiltration

Carbon sequestration

Nutrient cycling

Water storage

Urban forestry is…

the art, science and technology of managing trees and natural systems in and around urban areas for benefits that contribute to the health, happiness and comfort of our communities.
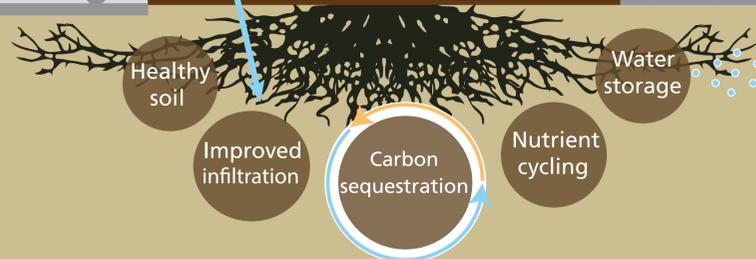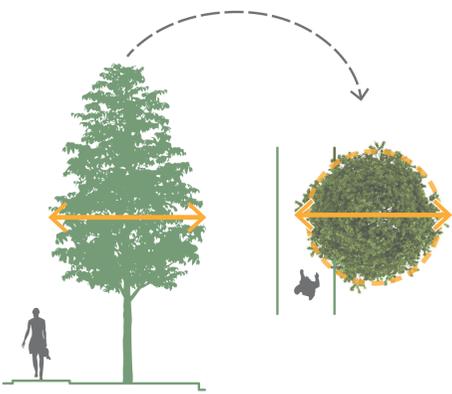
Measuring canopy cover

Canopy cover is a common metric used to measure urban forests and their change over time. The map below summarizes Courtenay's canopy cover percentage by block in 2016.
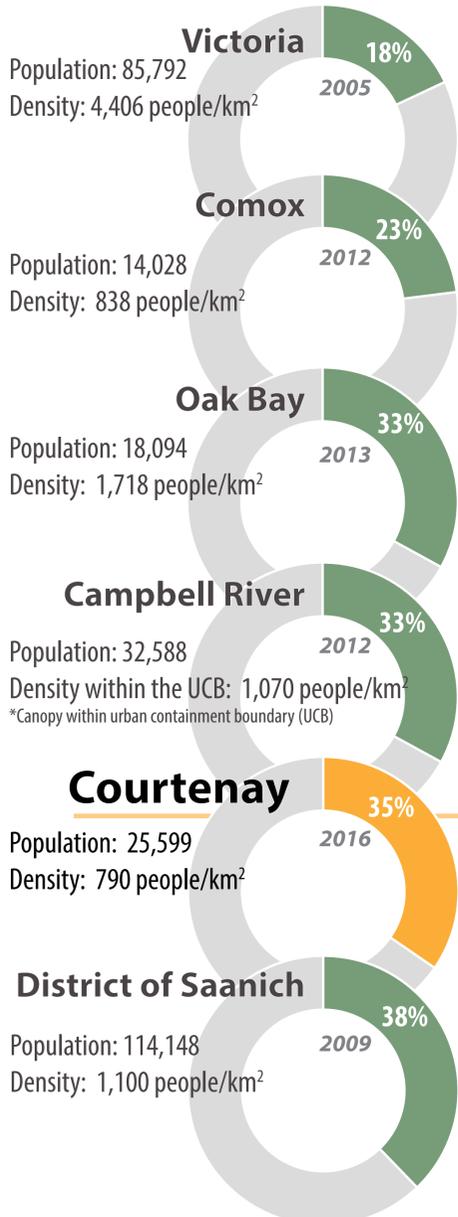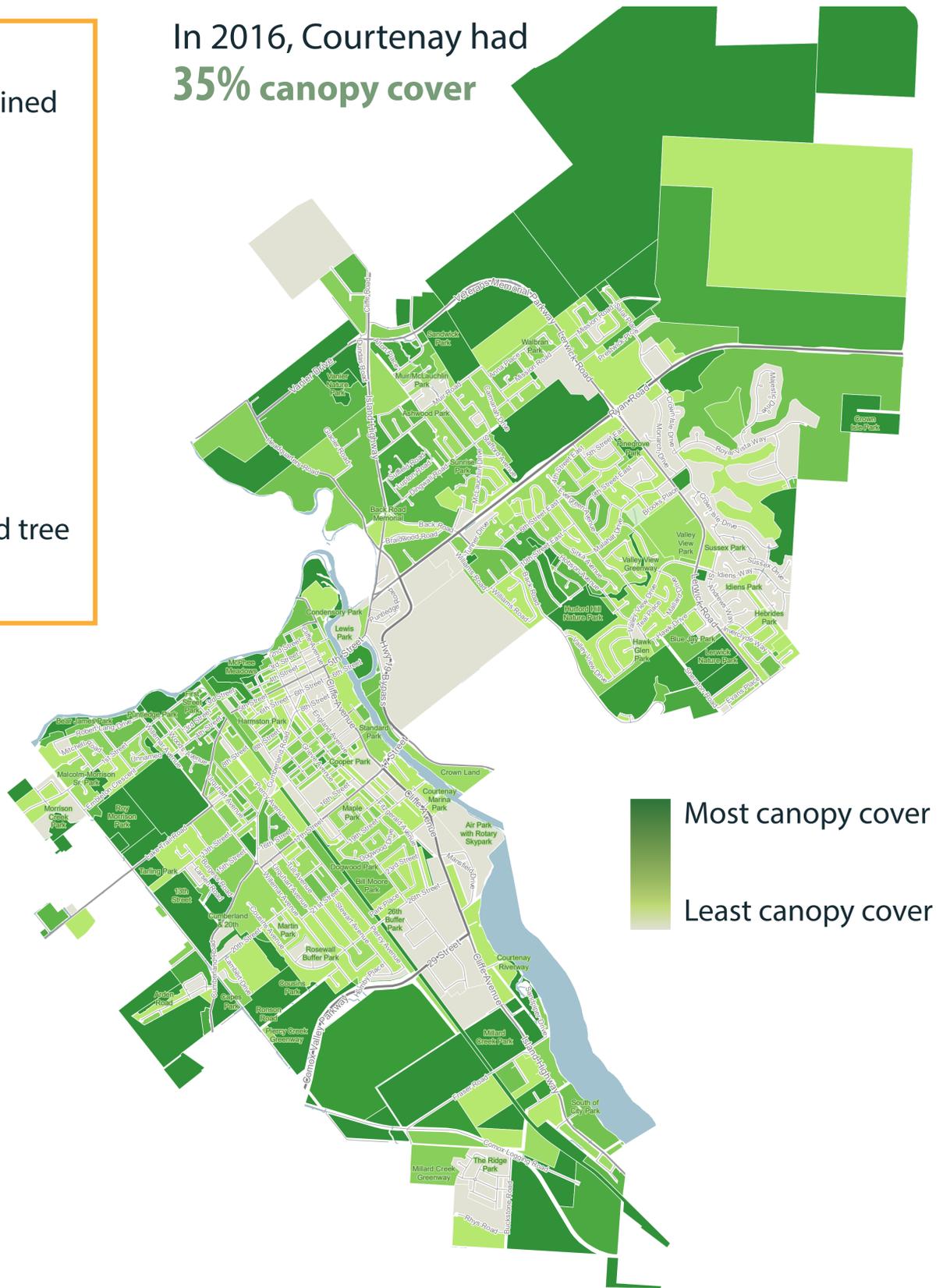
Canopy cover is ...

The extent of the urban forest, determined by measuring the area of tree canopy.

Think: the layer of leaves, branches and tree stems when viewed from above.

In 2016, Courtenay had
35% canopy cover

Most canopy cover

Least canopy cover

Victoria
Population: 85,792
Density: 4,406 people/km²
18%
2005

Comox
Population: 14,028
Density: 838 people/km²
23%
2012

Oak Bay
Population: 18,094
Density: 1,718 people/km²
33%
2013

Campbell River
Population: 32,588
Density within the UCB: 1,070 people/km²
*Canopy within urban containment boundary (UCB)
33%
2012

Courtenay
Population: 25,599
Density: 790 people/km²
35%
2016

District of Saanich
Population: 114,148
Density: 1,100 people/km²
38%
2009

By comparison,

Courtenay's urban forest cover is relatively similar to reported canopy cover for several other communities in the region. Victoria and Comox are lower, likely due to population density and land use respectively. Based on a 2001 nation-wide study from the United States, canopy cover variation in urban areas is explained mostly by ecoregion type (i.e., forested, grassland, desert), population density and land use. Across all urban areas in forested ecoregions in the US, canopy cover averaged 34%.

MANAGING OUR URBAN FOREST

Canopy is dynamic

Canopy cover changes over time depending on the rate of planting, growth and death in the population.

Canopy gain occurs as existing trees grow or as new trees are added to the landscape.

Canopy loss occurs primarily due to removal of ageing or unhealthy trees, or due to development. Disturbances like drought, flood, widlfire and insect and disease outbreak can also cause unexpected and widespread tree mortality. Climate change may increase the frenquency or extent of disturbance events in Courtenay's forests.

Changes to canopy cover were measured using i-Tree Canopy and Courtenay's 1996, 2014 and 2016 imagery.

Since 1996, canopy has declined by approximately 3.7 percentage points (±1.5), or 121 hectares.

38%   36%   35%
1996   2014   2016

Percent canopy cover

Credit: Province of BC
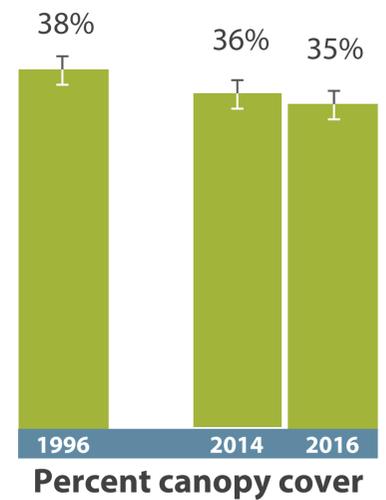
Examples of canopy changes

1996   2014   2016
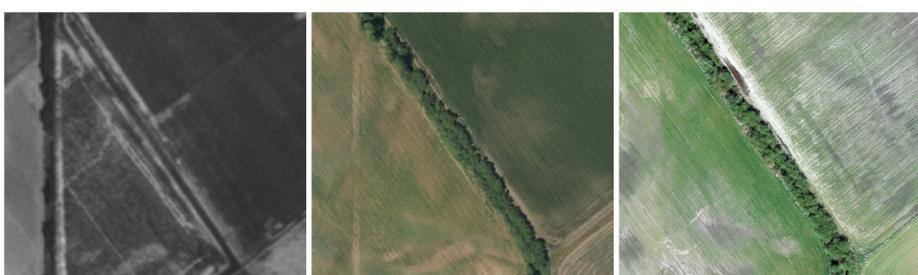**Canopy growth |** Field reforestation

1996   2014   2016
Canopy loss | Commercial development

Canopy growth | Backyard tree planting

Canopy loss | Residential development

Canopy growth | Agricultural buffer planting

Canopy loss & growth | Development and field reforestation

MANAGING OUR URBAN FOREST

A snapshot of Courtenay's urban forest values

Courtenay's urban forest is shaped by both natural processes and human influences. Climate, soils, natural disturbances such as flood and wildfire, and humans have driven the extent, species and age diversity of the urban forest.

Since time immemorial, the K'ómoks people have managed the landscape in this "land of plenty". For example, the unique Tsolum River Garry oak woodland community was maintained by First Nations' burning practices to enhance edible plant and hunting resources.

European settlement led to major landscape changes caused by logging and clearing, agriculture, urbanization and planting non-native vegetation. Today Courtenay's urban forest is a mixture of native forests, ornamental landscapes and everything in between.

Garry oak woodlands
The Vanier Park area's Garry oak woodland represents the northernmost extent of Garry oak **in North America**. The woodlands and individual trees are remnants of a unique and prominent pre-settlement forest type.

This map highlights just a few of the ecological, cultural and character values of our urban forest

Mature forest
Lerwick Park's forest, logged in the early 1900s, is about 100 years old. The forest is beginning to develop characteristics found in old-growth forests – a thick understory, layered canopy and dead trees.

If we preserve our older forests, opportunities to experience old-growth forest in Courtenay will return within our children's lifetimes.

Downtown trees
Trees at the plaza at Cliffe & 4th make it a popular place to sit in the summer

Young forest
Forests in Hurford Hill Nature Park are recovering from logging around 60 years ago. The overhead canopy is fairly dense and shades the understory, dead trees and downed wood are relatively uncommon.

How would Duncan Street feel with more trees?

Regenerating forest
This forest near the Comox Valley Logging Road appears to have been clear-cut harvested in the late 1990s. The stand is dense and has not yet started to form distinct canopy layers.

Neighbourhood sequoias
A resident planted 8 giant sequoias in the 1960s from California seedlings on what was then an 18 ha property; at least 5 remain.

Check out some of Courtenay's favourite urban forest places and add your own photos at:
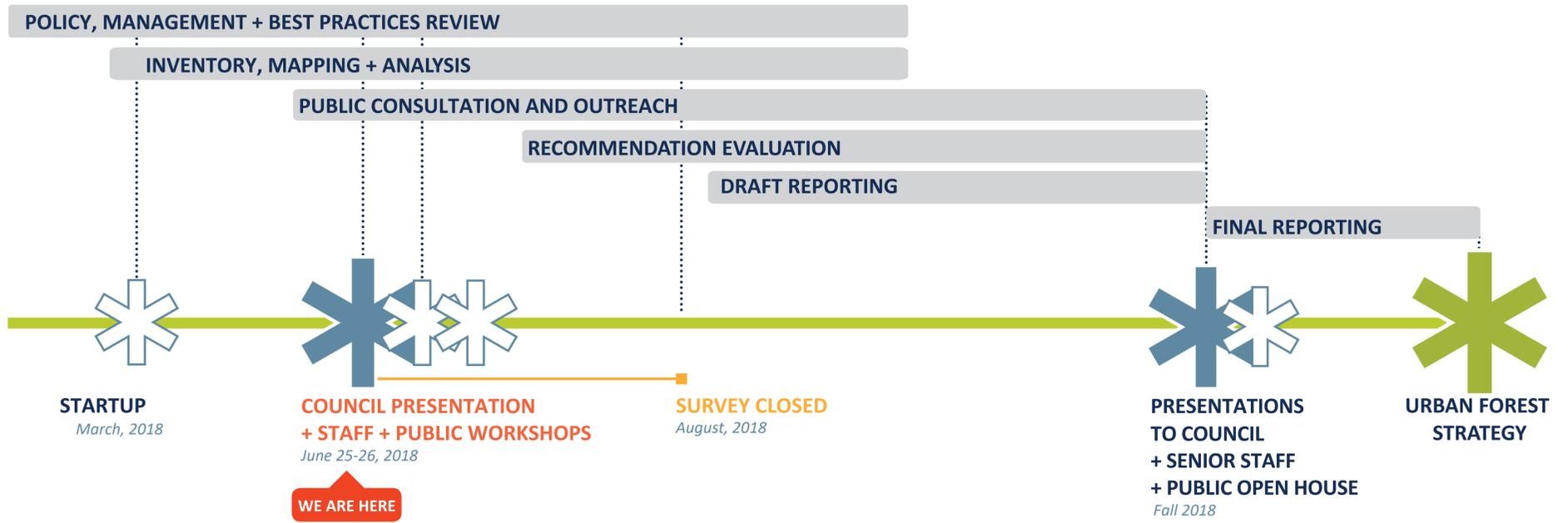**www.courtenay.ca/urbanforest**

MANAGING OUR URBAN FOREST

The Urban Forest Strategy is due for completion later this year. It will provide the City of Courtenay with:

1. An understanding of the urban forest resource we have today
2. A vision for what our future urban forest will be
3. A framework for how we get there

Strategy timeline

POLICY, MANAGEMENT + BEST PRACTICES REVIEW

INVENTORY, MAPPING + ANALYSIS

PUBLIC CONSULTATION AND OUTREACH

RECOMMENDATION EVALUATION

DRAFT REPORTING

FINAL REPORTING

STARTUP
March, 2018

COUNCIL PRESENTATION + STAFF + PUBLIC WORKSHOPS
June 25-26, 2018

WE ARE HERE

SURVEY CLOSED
August, 2018

PRESENTATIONS TO COUNCIL + SENIOR STAFF + PUBLIC OPEN HOUSE
Fall 2018

URBAN FOREST STRATEGY

Policy context

The Urban Forest Strategy will work alongside Courtenay's higher level plans and planning tools to ensure that trees are a valued and integrated part of the city's eco-assets.

HIGHER-LEVEL PLANS

Official Community Plan

Comox Valley Regional Growth Strategy

Urban Forest Strategy

Parks & Recreation Master Plan

Council Strategic Plan

Connecting Courtenay

Downtown Courtenay Playbook

Local Area Plans

Tree Bylaw

Heritage Register

Dev. Permit Areas

Spec. & Standards Bylaw

Zoning Bylaw

PLANNING TOOLS

How we get there...

- Review policies, management and best practices

- Map and measure the urban forest resource and opportunities

- In consultation with the Council, City staff and the public, establish a vision with goals and objectives

- Draft an urban forest strategy and action plan to update policy and practices to achieve Courtenay's urban forest vision