

# City of Kelowna

## Regular Council Meeting

### AGENDA



Monday, June 13, 2022

9:00 am

Council Chamber

City Hall, 1435 Water Street

Pages

1. **Call to Order**
2. **Confirmation of Minutes** 3 - 4  
Regular AM Meeting - May 30, 2022
3. **Reports**
  - 3.1. **RecycleBC Update** 60 m 5 - 34  
To provide Council with supplemental information regarding an upcoming decision, required before the end of June, to determine if the City of Kelowna or Recycle BC will be responsible for recycling collection in Kelowna.
  - 3.2. **Urban Tree Canopy Enhancement Strategy** 60 m 35 - 74  
To assess current urban tree protection policies within the City of Kelowna and, based on gaps identified and present options to address the urban tree canopy goals established in the 2040 Official Community Plan.
4. **Resolution Closing the Meeting to the Public**  
THAT this meeting be closed to the public pursuant to Section 90(1) (b) of the Community Charter for Council to deal with matters relating to the following:
  - Acquisition, Disposition or Expropriation of Land or Improvements
5. **Adjourn to Closed Session**
6. **Reconvene to Open Session**
7. **Issues Arising from Correspondence & Community Concerns**
  - 7.1. **Mayor Basran, re: Issues Arising from Correspondence** 15 m

## 8. Termination



## City of Kelowna Regular Council Meeting Minutes

Date: Monday, May 30, 2022  
 Location: Council Chamber  
 City Hall, 1435 Water Street

Members Present Mayor Colin Basran, Councillors Maxine DeHart, Ryan Donn, Gail Given, Brad Sieben, Mohini Singh\*, Luke Stack and Loyal Wooldridge

Members participating Remotely Councillor Charlie Hodge

Staff Present City Manager, Doug Gilchrist\*; Deputy City Clerk, Laura Bentley\*

(\* Denotes partial attendance)

### 1. Call to Order

Mayor Basran called the meeting to order at 9:07 a.m.

### 2. Confirmation of Minutes

Moved By Councillor Wooldridge/Seconded By Councillor Hodge

**R0366/22/05/30** THAT the Minutes of the Committee of the Whole Meeting of May 10, 2022 and the Regular AM Meeting of May 16, 2022 be confirmed as circulated.

Carried

### 3. Resolution Closing the Meeting to the Public

Moved By Councillor Wooldridge/Seconded By Councillor Hodge

**R0367/22/05/30** THAT this meeting be closed to the public pursuant to Section 90(1) (a) (c) (e) (f) and Section 90(2) (b) of the Community Charter for Council to deal with matters relating to the following:

- Personal Information
- Disposition of Land
- Labour Relations
- Law Enforcement
- Confidential Information from the Province

Carried

4. **Adjourn to Closed Session**

The meeting adjourned to a closed session at 9:07 a.m.

5. **Reconvene to Open Session**

The meeting reconvened to an open session at 11:02 a.m. with Councillor Singh in attendance and the City Manager and Deputy City Clerk not in attendance.

6. **Issues Arising from Correspondence & Community Concerns**

There were no issues arising.

7. **Termination**

The meeting was declared terminated at 11:02 a.m.

\_\_\_\_\_  
Mayor Basran

lb/acm

\_\_\_\_\_  
*Amrullah*  
for

Deputy City Clerk

# Report to Council



**Date:** June 13, 2022  
**To:** Council  
**From:** City Manager  
**Subject:** Recycle BC Collection - Update  
**Department:** Utility Services

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## Recommendation:

THAT Council receives for information, the report from Utility Services dated June 13, 2022, with regard to the Recycle BC and Curbside Collection Contract.

## Purpose:

To provide Council with supplemental information regarding an upcoming decision, required before the end of June, to determine if the City of Kelowna or Recycle BC will be responsible for recycling collection in Kelowna.

## Background:

### *Previous Council Resolution*

Resolution	Date
THAT Council receives for information, the report from Utility Services dated May 2, 2022, with respect to the Recycle BC Program Update; AND THAT Council direct staff to report back to Council with a recommendation on the approach to provide recycling service, no later than the end of June 2022.	R0317/22/05/02

Staff considered various technical, financial, and operational impacts and risks of the existing City collection model against the potential options for Recycle BC to perform the collection. This review was performed with Regional and Municipal staff at the Solid Waste Technical Advisory Committee level and included research on program effectiveness and clarification of assumptions with Recycle BC. This review suggests having Recycle BC perform the collection and quality assurance will provide best value for our citizens.

The focus of this and the upcoming Reports to Council are about the time sensitive decision required in the contractual Scope of Work as to who will collect the Extended Producer Responsibility based paper and printed packaging. The City of Kelowna must notify Recycle BC by July 1, 2022 if the City intends to continue to collect recyclables in the curbside program on behalf of Recycle BC, or alternately notify Recycle BC that the City will no longer provide this collection service and Recycle BC will be responsible for the collection.

Recycle BC is the industry stewardship group that manages residential packaging and paper products (PPP) under the Provincial Extended Producer Responsibility (EPR) programs. The purpose of the ERP is to make manufacturers responsible for their materials to improve/make the final residuals more recoverable in a cost-effective manner so financial impacts would not be offloaded to municipal governments. This Recycle BC program relates solely to the contents of the blue bins and does not have any future impacts on expanding multi-family recycling programs, future products added to other Provincial EPR Programs, regional waste diversion options for organic materials such as food waste, or demolition debris recovery.

The City of Kelowna has a multi-year service agreement with Recycle BC that is coordinated by the Regional District of Central Okanagan (RDCO) for regional consistency. Under this agreement, the City operates as the Recycle BC collection contractor and collects the PPP as part of the existing curbside waste collection program. The City ensures that the contents of the blue bins are delivered to the Recycle BC material recovery facility for sorting and shipping to recyclers. There are no additional tipping fees for the processing to the City. This program is intended to be fully funded by Recycle BC and the City currently receives an incentive funding of \$35.40 per household to offset the cost of curbside collection of blue bins. This incentive is scheduled to be increased to \$37.40 on July 1, 2022. This incentive funds a portion of our collection contract, the cost of the blue bins, overhead to manage the program, and some of the education and enforcement of the recycling program.

All municipal contracts with Recycle BC in the region expire December 31, 2024.

**Discussion:**

Recycle BC will not speculate on details of the collection program or formal transition plan for Kelowna until the City has decided who will be responsible for the collection. There are complex financial and operational considerations for a program of this size and scope. It should be noted collection would be at minimum every second week and that all items allowed in the blue bins under the existing program will still be collected by Recycle BC.

If the collection program transitions to Recycle BC, they would work with the City and RDCO to ensure a smooth transition, with Recycle BC determining all details of the program. Recycle BC would determine single or multi stream, manual or automated collection, types and sizes of bins or carts, the collection routes, and days of collection. It is possible that the garbage and recycling collection may be on different days under this model as it is in the Regional District of North Okanagan (RDNO). In discussions with Recycle BC they have indicated that they work collaboratively with municipalities to align garbage and recycling schedules to benefit both collection programs.

Recycle BC has indicated that they would agree to extend our contract and fund City collection until the end of our current collection contract with E36oS on April 30, 2026. This eliminates financial risk of having contracts end at different times and allows for a smooth transition of service delivery.

In 2021, Kelowna collected just under 5,900 tonnes of recycling (approximately 145 kg per household) in the blue bins compared to 20,800 tonnes of garbage disposed (approximately 510 kg per household). An estimated 760 tonnes of recycling will be removed from the recycling program and disposed of as additional garbage due to contamination. A list of materials that is acceptable in the Blue bins is

included as Attachment 1. Recycling data below from Recycle BC and Kelowna suggests that both programs are comparable with multi stream programs typically recovering slightly more material, which could be for a variety of reasons.

Table 1 – Recycling Rates

Program	Contamination from not accepted materials	Net recycling household
Kelowna	7.4%	125 kg
All Single Stream across BC	8.8%	125 kg
All Multi Stream across BC	4.1%	139 kg

Recycle BC multi stream collection is currently used in all municipalities that have Recycle BC perform collection. Based on this existing system preference, staff predict the likely method would be a multi stream collection with a combination of carts, bins, and bags instead of the current City model of single cart collection. Recycle BC collects glass in 15 of 16 curbside programs they operate, and there is a likelihood that that glass would be included in the Recycle BC curbside collection program in Kelowna. This would be in an increase in the materials collected at curbside at no additional cost.

If Kelowna has Recycle BC take over the collection, the City would be the first single stream collection municipality to do so. As such, it should be noted that continuing with the single stream collection model is still a viable option for Recycle BC. Under the agreement, Recycle BC has the first right of refusal to keep the existing blue bins and could choose to maintain these carts and increase the recovery rate by different techniques such as increasing education and compliance at the point of pick up and improve the effectiveness of removing contamination from the existing stream. In the event that these bins would not be kept by Recycle BC, The City and RDCO would likely repurpose the bins for yard waste or other programs.

In either the single or multi stream collection process, Recycle BC would then be fully responsible to manage this waste as intended by the Province's Extended Producer Responsibility program. Having Recycle BC perform the collection would effectively be a change in the management and curbside collection contractors and would not impact the Regional goals of increasing recycling at multi-family residences or the current review of expanding organics diversion.

With respect to additional customization of a collection program, it is unlikely that Recycle BC would customize their collection system as this has not been performed in any other Recycle BC municipalities. Should the City wish to add different materials to curbside collection this would be implemented solely at the cost of the City regardless of whether the City or Recycle BC provides collection.

The Regional District Waste Reduction Office consulted with other Recycle BC Municipalities. In general, Recycle BC serviced municipalities had positive feedback and are satisfied with the responsiveness and services provided, and noted that documented service complaints were unchanged or reduced when Recycle BC took over the collection program. While an initial spike in complaints is expected during any collection transition, these are typical in any change of contractor or system and

would be expected to be resolved in a short period of time. All indications are that Recycle BC and their collection contractors have been providing good service to their customers, however; all other programs transferring to Recycle BC were already multi stream. There is no reference point for a transition process similar to ours to predict community response.

One significant benefit of having Recycle BC perform the collection is that it would result in increased capacity for City and Regional District staff. The RDCO has four waste ambassadors and two Waste Reduction Facilitators that spend a disproportionate amount of their time on contamination education, compliance, and enforcement. If Recycle BC collects the cart materials, they would also be responsible for the education and enforcement of contamination. This additional Waste Reduction Office staff capacity could be used to advance other waste reduction initiatives such as expanding the organics diversion programs and building deconstruction. Expanded organics and building deconstruction would result in a larger waste diversion from disposal than an incremental expansion of recyclables in the Curbside Collection program.

#### Survey results highlights

The RDCO recently completed a statistically valid survey of residents on recycling within the RDCO. Highlights of this resident survey focusing on curbside collection are:

- 91% are satisfied with the current curbside collection service
- 85% willing to sort into separate blue bins
- 78% including glass at curbside would increase likelihood of sorting
- 77% use depots at least a couple times per year
- 61% not willing to pay for curbside glass because the service is not required
- 55% not willing to pay for curbside flexible plastics because the service is not required
- 53% willing to spend 11 minutes or more per week to sort recycling

#### Financial/Budgetary Considerations

From the financial review, staff considered the best value for the City by eliminating future cost uncertainty. Expected increases in long term collection costs are likely to be greater than the incentives revenue from Recycle BC. This combined with the potential implementation of surcharges due to contamination in the recycling stream, suggests having Recycle BC perform the collection is the best financial alternative for the City if our ratepayers are not to subsidize recycling collection.

Recycle BC maintains an audit program to ensure that the collection is meeting maximum contamination levels. When contamination levels exceed the limits in the agreement, Service Level Failure Credits (surcharges) may be issued on a "per load basis" which lower the funding to the City. These surcharges are incremental based on the size of the municipality and repeated infractions. The surcharges for the City of Kelowna could start as early as 2022 at a maximum of \$120,000 per year (\$5,000/load for up to 24 loads) and would increase up to a maximum of \$480,000 per year (\$20,000/load for up to 24 loads) within 4 years. These surcharges could result in taxation increases of approximately \$12 per household per year.

The City and the RDCO are working with Recycle BC on a Contamination Reduction Plan to lower the Contamination rate from the current 12 – 14% level down to the 3% specified in the agreement. While



Recycle BC has historically not surcharged Municipalities, the Contamination Reduction Plan is the start of this process to initiate the surcharges. Even though it is unlikely to have the maximum surcharges levied every year, it is expected that there will be some impact in the future.

The increases in the City's curbside collection costs and cart purchases over the last three years is greater than increases in the incentive payments provided to us by Recycle BC. Currently Recycle BC funding covers all of the City's collection costs with a small amount left over. An increase in collection costs of 2% will require additional funding from Kelowna residents in addition to any surcharges that Recycle BC may levy. Based on historical cost increases, the city will be subsidizing recycling which is intended be fully covered under the Provincial Stewardship Program within 2 years.

Communications Comments:

Communications would be critical in the event that the City does switch collection to Recycle BC in April 2026. The details and public education required in the transition plan would be coordinated between internal Communications staff, the RDCO Waste Reduction Office and Recycle BC operations at that time.

**Conclusion:**

A summary of the benefits and challenges of switching recycling collection from the City of Kelowna to Recycle BC is provided in Attachment 2.

**Internal Circulation:**

Communications  
Financial Services

**Considerations not applicable to this report:**

Legal/Statutory Authority:  
Legal/Statutory Procedural Requirements:  
External Agency/Public Comments:  
Existing Policy:

**Submitted by:** S. Hoekstra, Manager - Landfill and Composting Operations

**Approved for inclusion:** M. Logan, Infrastructure General Manager

Attachment 1: RDCO Recycling Guide  
Attachment 2: Recycle BC – Benefits and Challenges  
Attachment 3: Recycle BC and Curbside Collection Contract Presentation

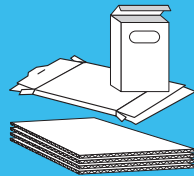
cc: Divisional Director, Corporate Strategic Services  
Divisional Director, Financial Services

## How to Sort your Recycling

### What Goes in Your Recycling Cart – Put these items loose in your cart, do not bag them



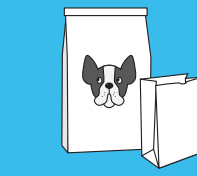
Paper, envelopes, magazines, catalogues



Cardboard and boxboard boxes



Shredded paper (put in clear plastic bag)\*  
\*only time a bag is permitted in recycling



Paper bags - single and multiple layer



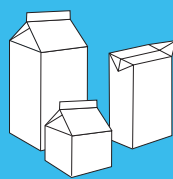
Paper and plastic drink cups and lids



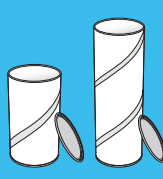
Plastic clamshells and trays



Hard plastic containers



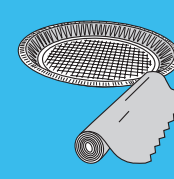
Gable-top and Tetra Pak cartons



Spiral-wound cans for chips, juice etc.



Frozen dessert boxes



Foil wrap, containers and plates

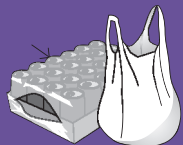


Metal cans and lids (with labels)

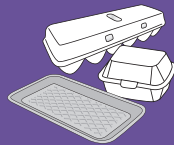


Empty aerosol cans (no paints, chemicals)

### Recycle at Depot Only – Do NOT put these items in your recycling cart, take them to a Depot for recycling only



Plastic bags and overwrap



Styrofoam containers, trays, packaging



Non-refundable glass jars and bottles



Other Flexible Packing: Chip bags and snack wrappers, cellophane, zipper bags and pouches, mesh bags and more.  
For a full list visit [RecycleBC.ca/FlexiblePackaging](http://RecycleBC.ca/FlexiblePackaging)

### What Stays Out of Your Recycling Cart – Leave these items out



NO Garbage



NO Hazardous Waste  
Take to a Recycling Depot



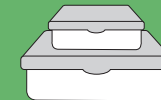
NO electronics, appliances  
Take to a Recycling Depot



NO soft or hard cover books  
Donate to charity



NO hard plastic toys  
Donate to charity



NO Tupperware containers  
Donate to charity



NO clothes, textiles  
Donate to charity

## Attachment B

Below is a summary of the benefits and challenges should Kelowna choose to have Recycle BC perform the curbside collection of recycling (packaging and paper products).

Benefits	Challenges
Removes financial risk of escalating costs and potential surcharges from high contamination levels	Transition between contracted haulers and service would require coordination between RDCO, Kelowna and Recycle BC
Would collect the same materials and frequency as existing program at a minimum	Expected multi stream collection could be seen as less convenient by some residents
Expect that multi stream collection would be preferred system, resulting in lower contamination levels	Recycle BC would make all decisions regarding collection including selection of multi or single stream collection, style of carts/bins and bags, routes, dates of service, etc.
Recovers similar or more recycling and as a higher quality material, diverts more from landfill	Should Recycle BC not use existing blue bins, potential for onetime expenses to remove carts from houses to re-purpose
Recycle BC may choose to re-use existing carts for their collection	Expect resident complaints and inquiries would increase for a period during service transition
Expect that glass collection at curbside would likely be included at no additional cost	Garbage and recycling may be collected on different days
Increases staff capacity to focus on waste reduction initiatives instead of contamination reduction and recycling education	Continued efforts to minimize contamination until Recycle BC takes over collection
Feedback from other Recycle BC serviced municipalities suggests an overall net positive outcome with Recycle BC collection	
Aligns responsibility of curbside recycling completely to the provincial Extended Producers Responsibility Program	
Expect transition to occur in conjunction with the expiration of the waste collection contract which allows for one transition plan for both programs	
Would not impact future decisions regarding waste reduction such as multi family recycling, expanding organics collection, or building deconstruction	



City of  
**Kelowna**

# Recycle BC Collection Update

June 13, 2022

# Overview

- ▶ Background
- ▶ Technical Considerations
- ▶ Other Considerations
- ▶ Financial Considerations
- ▶ Future Work



# Background

- ▶ Recycle BC is Stewardship Group for residential paper and printed packaging
- ▶ City has a contract to collect recycling for them and City receives a financial incentive
- ▶ Contract requires a commitment from the City to
  - ▶ collect for Recycle BC for an additional 5-years; or
  - ▶ return collection services to Recycle BC
- ▶ Decision due July 1, 2022
- ▶ Review suggests that having Recycle BC perform collection is best value to citizens

# Technical Considerations

- ▶ This decision is about who will collect the recycling
- ▶ Does not impact multi family recycling
  - ▶ Recycle BC works directly with interested haulers for multi family collection
- ▶ Does not impact expanded organics diversion
  - ▶ Regional waste diversion initiative

# Technical Considerations

- ▶ If Recycle BC collects recycling, they would design program and collection contracts
- ▶ City would request an extension to Recycle BC contract to April 2026
- ▶ Aligns with expiration of existing curbside contract
- ▶ Recycle BC is open to discuss the extension should the City officially request they perform collection



# Technical Considerations Contamination Levels

- ▶ Contamination rates
  - ▶ Approximately 13% total contamination
  - ▶ Approximately 7.4% not accepted materials
  - ▶ Requirement in Recycle BC contract = 3%
- ▶ Volumes recovered

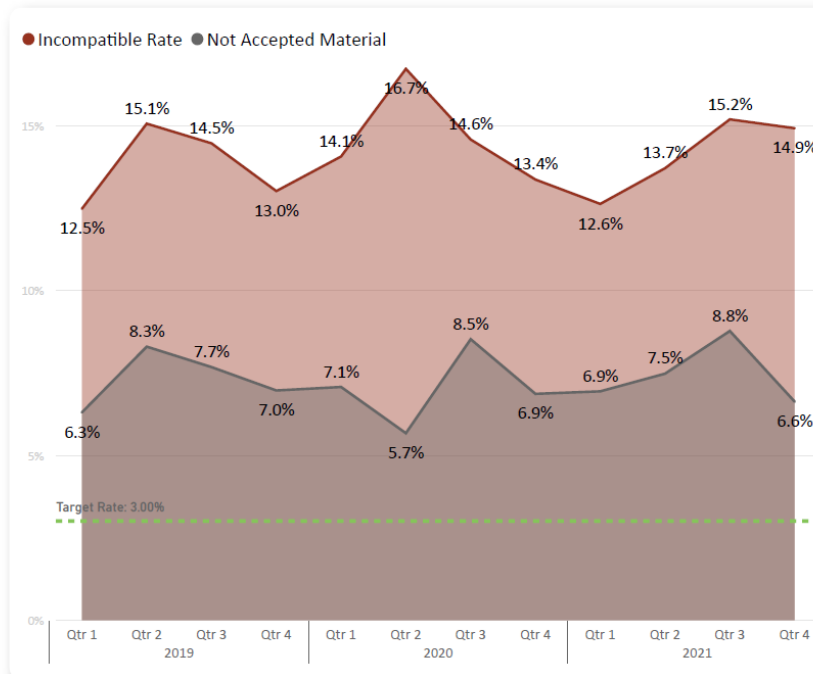
Program	Contamination from not accepted materials	Net recycling household
Kelowna	7.4%	125 kg
All Single Stream	8.8%	125 kg
All Multi Stream	4.1%	139 kg

# Kelowna Contamination Rate



## Overall Performance - Curbside

City of Kelowna



Number of Audits Performed:



All Time %

**13.9 %**  
Incompatible Rate

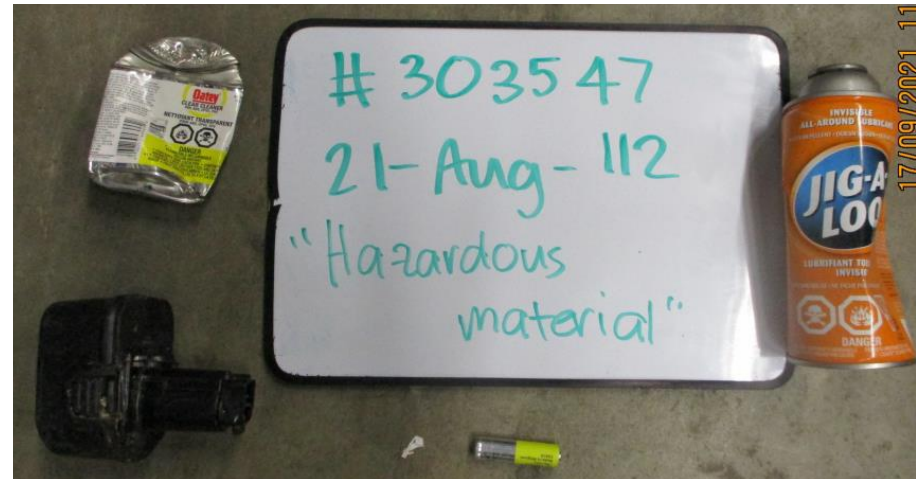
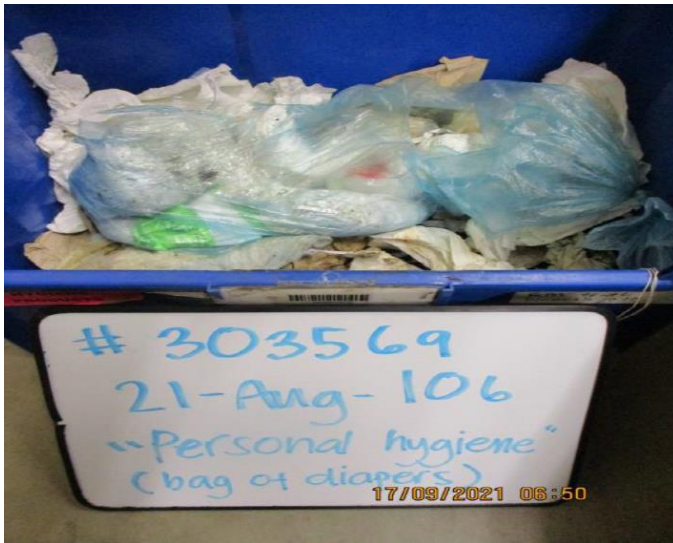
**7.4 %**  
Not-Accepted Material

**14.9%**  
Last Quarter

**6.6%**  
Last Quarter



# Examples of contamination



# Technical Considerations

## What could the program look like

- ▶ No decrease in service – may add glass to curbside
- ▶ Includes current blue bin materials and every 2 week pick up as a minimum
- ▶ Single stream or multi stream
  - ▶ Carts
  - ▶ Bins
  - ▶ Bags
- ▶ Change in pickup dates possible
- ▶ Recycle pick up may not be the same days as garbage pick ups

# Kelowna Single Stream Sorting Guide

## **GARBAGE:** (Weekly collection)

### **Include:**

- Regular garbage
- Kitchen waste
- Containers with food
- Diapers
- Animal waste, loose grit/sawdust (must be bagged)
- Tissue, napkins, paper towel
- Styrofoam chips only



## **RECYCLABLES:** (Bi-weekly collection)

### **Include:**

- Newspapers and flyers
- Paper including envelopes, paper bags, magazines
- Cardboard
- Boxboard, including cereal boxes, etc
- Plastic containers (empty and rinsed)
- Paper cups and lids
- Milk, juice and soup containers
- Aerosol cans and lids
- Aluminum foil wrap and containers
- Tin and aluminum cans



## **YARD/GARDEN WASTE:** (Bi-weekly collection, March – December)

### **Include:**

- Grass clippings
- Leaves
- Weeds
- Plant trimmings
- Pine needles and cones
- Pumpkins
- Fruit droppings
- Prunings and branches up to 5cm (2 in) in circumference AND less than 1m (3 ft) long



Yard waste  
must fit in cart  
with lid closed.




# Multi Stream Pick up NORD Sorting Guide

## PAPER

**PUT INTO YELLOW BAG OR ONE BLUE BOX**


Recycle at curbside or depot  
Clean and dry paper only  
Cut excess cardboard to 76cm x 76cm and stack beside bag or box



## CONTAINERS

**PUT INTO OTHER BLUE BOX**


Recycle at curbside or depot  
Empty and rinse containers



## GLASS

**PUT INTO GREY BOX**


Recycle at curbside or depot  
Empty and rinse glass bottles and jars



## DROP-OFF ONLY

**TAKE TO RECYCLING DEPOT**

Not accepted in your yellow bag, blue boxes or grey box



**Accepted Items:**

- Newspapers, inserts, flyers
- Magazines, catalogues, phone books
- Boxboard boxes
- Moduled paper
- Household paper
- Envelopes
- Paper bags
- Shredded paper (contain in paper bag or box first)
- Cardboard boxes

**Not Accepted:**

- Greeting cards
- Paper gift wrap
- Paper gift bags
- Paper carry-out beverage trays
- Covers from paper towel and toilet paper

**Accepted Items:**

- Plastic bottles, jugs and jugs
- Plastic trays and clamshells
- Plastic garden pots and seedling trays
- Cups, tops, lids and pumps
- Plastic or paper take-out cups, bowls and lids
- Carburetors for soup, dairy, etc.
- Metal cans
- Aerosol cans (empty)
- Foil wrap and take out containers

**Not Accepted:**

- Plastic packaging for toys, batteries etc.
- Separate plastic from paper backing
- Spiral wound cans and lids for frozen juice concentrate, chips, etc.
- Plastic pails less than 25L for laundry detergent, cat litter, etc.
- Plastic tubs for yogurt, margarine, etc.

**Accepted Items:**

- Glass bottles - clear and coloured
- Glass jars - clear and coloured

**Not Accepted:**

- Drinking glasses, dishes, cookware
- Window glass, mirrors
- Ceramic products
- Light bulbs or light fixtures

**NOT ACCEPTED**  
Do NOT place into Grey Box

**Want to recycle something not included here?**

Search Recycle BC's Waste Wizard or download a full material list at [RecycleBC.ca](http://RecycleBC.ca). To recycle items that are not packaging or paper, visit the Recycling Council of BC (RCBC) website at [RCBC.ca](http://RCBC.ca).

**Unused Medication**

Empty medication containers can be recycled with Recycle BC, but unused or expired medications can be safely disposed by returning them to community pharmacies. For more information or to find the nearest pharmacy please visit [www.healthsteward.ca](http://www.healthsteward.ca).


**Accepted Items:**

- Foam meat trays (remove absorbent pad)
- Foam take-out containers and cups
- Foam cushion packaging used to protect electronics etc.

**Not Accepted:**

- Blue or pink foam insulation, packing chips and peanuts
- Squishy or flexible foam, foam noodles

**NOT ACCEPTED**  
Do NOT place into Yellow Bag or Blue Box



**Non-paper gift wrap, foil wrap, cards or paper with glitter**

**Rubber bands, ribbons, bows**

**Packed envelopes**

**Bags and boxes with foil liners**


**Paper towels, napkins and tissues**

**Foil or plastic lined paper bags**

**NO HAZARDOUS MATERIALS**

Exclude batteries; medical sharps; bleach or aerosol containers with any contents remaining; containers with the words COMBUSTIBLE, FLAMMABLE or VERY FLAMMABLE on them (except cosmetic and beauty product containers); compressed gas cylinders, for example used propane cylinders; containers for paint, motor oil, vehicle lubricants, or antifreeze; or containers for pesticides with the words DANGER, WARNING, or POISON, and precautionary octagon or diamond symbols with skull and cross bones.

**NOT ACCEPTED**  
Do NOT place into Blue Box



**Plastic bags and overwrap**

**Hazardous waste**

**Glass**

**Electronics and appliances**

**Toys and games**

**Hanging pots, pans and other scrap metal**

**Foam packaging**

**Chip or foil bags, candy wrappers**

**Stand-up pouches**

**Packaging labeled biodegradable or compostable**

**Wiring, metal cords, hardware**


**Clothing, textiles and shoes**

**Food and yard waste**

**Characteristics of Plastic Bags and Overwrap vs. Other Flexible Plastic Packaging**

PLASTIC BAGS AND OVERWRAP	OTHER FLEXIBLE PLASTIC PACKAGING
Can Poke Your Thumb Through It	Not Crinkly
Single Material	Crinkly
Doesn't Stretch	Doesn't Stretch
Foil Lining	Foil Lining

**OTHER FLEXIBLE PLASTIC PACKAGING**



**Crinkly wrappers and bags**

**Flexible packaging with plastic seal**

**Zipper lock and stand-up pouches**

**Woven plastic bags**

**Non-food protective packaging**

**Plastic square tubs, plastic-lined paper, paper into plastic, plastic strapping**

**6-pack trays, biodegradable plastic, vinyl**

For more information, visit [RecycleBC.ca/FlexiblePackaging](http://RecycleBC.ca/FlexiblePackaging)

Source: Example Guide – RecycleBC/RDNO

# Kelowna Single Stream Cart Pick up

## Be Cart Smart



To reduce conflicts with wildlife please **DO NOT** place your carts out before your collection day.

For missed collection please call E360s at 250-868-3211.

- Place your carts properly for collection.
- Carts improperly placed may not be emptied. Keep away from fences, sheds and houses.

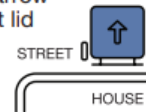
### Park it

On the street, with the wheels against the curb, or on the shoulder (if no curb).



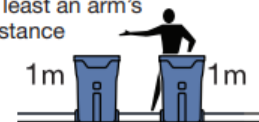
### Point it

Point the arrow on the cart lid towards the road.



### Space it

Leave at least an arm's length distance on all sides.

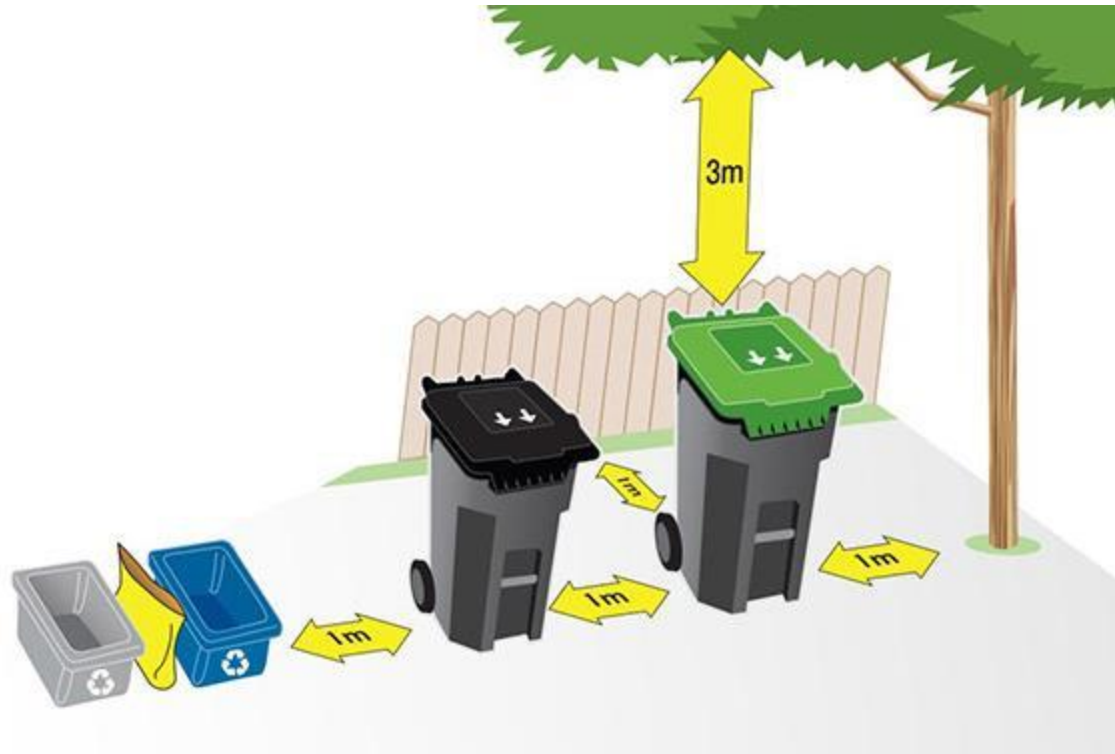


## How to Use Your Carts



- All materials must fit within the carts completely with lids closed.
- Do not block bicycle lanes or sidewalks. Carts must not be an obstacle for cyclists or pedestrians.
- **Extra garbage?** Up to two (2) additional garbage bags that display a 'tag a bag' sticker and are not inside a garbage can will be collected. (Want to buy a tag a bag? Visit page 3 for info on locations)

# Multi Stream Pick Up by Recycle BC -City of Vancouver



Source: City of Vancouver – Waste Collection Guide



# Technical Considerations

- ▶ Survey of residents shows
  - ▶ An overall satisfaction with current recycling collection
  - ▶ Strong willingness to spend time sorting recycling
  - ▶ Strong willingness to use a multi stream process
- ▶ Diminishing benefits to adding recycling beyond Federal and Provincial Programs
- ▶ Focus on waste diversion

# Technical Considerations

- ▶ Discussions with other municipalities that have returned services to Recycle BC have been positive
- ▶ Convenience of single stream
- ▶ Single and multi stream produce similar levels of recovery with less contamination in multi stream
- ▶ Kelowna could be the first single stream to convert multi stream
- ▶ Expect short term education and complaints as part of any system transition

# Other Considerations

- ▶ Extended Producer Responsibility Program
  - ▶ Eight current categories including subsets
  - ▶ Five new categories added in 2022
  - ▶ To be operational by 2026
  - ▶ Funded by deposit or fee system
- ▶ Single Use Plastics Ban
- ▶ Continued expectation to see Federal and Provincial waste elimination
- ▶ Work with RDCO under SWMP to evaluate expanded depot or recycling programs
- ▶ Benefit of additional staff capacity

# BC Current EPR List

- ▶ Beverage containers
- ▶ Lead-acid batteries
- ▶ Packaging and paper products (RECYCLE BC)
- ▶ Paints, solvents, pesticides and gasoline
- ▶ Pharmaceuticals
- ▶ Tires
- ▶ Used oil and antifreeze
- ▶ Electronics (10 sub categories)

# Provincial EPR Expansion

- ▶ Hybrid/EV and other batteries
- ▶ Mattresses and foundations
- ▶ Compressed canisters (examples - single-use camping fuel and fire extinguishers)
- ▶ Home Medical sharps
- ▶ Emerging electronics and more moderately hazardous products

# Financial Review

- ▶ Contractual obligation to have less than 3% contamination
- ▶ Potential for surcharges to the City for not meeting contamination levels
- ▶ Maximum of \$120,000 in first year
- ▶ Increases to \$480,000 in fourth year
- ▶ Unlikely to see maximum surcharges
- ▶ Lowers payments resulting in need to increase taxation to offset funding

# Financial Review

- ▶ Recycle BC pays the City an Incentive to collect the recycling on their behalf
- ▶ \$35.40/HH increasing to \$37.40/HH July 1
- ▶ Covers recycling collection, bins, some overhead and education
- ▶ City currently has a slight positive cash flow
- ▶ Assuming no surcharges are applied, recycling costs increase by 2% result in the City subsidizing Provincially mandated programs

# Financial Review

- ▶ Assuming no surcharges are applied, recycling costs increase by 2% result in the City subsidizing Provincially mandated programs
- ▶ Annual increases in costs average more than 2% per year
- ▶ Increases in costs or surcharges are directly tied to the City's financial liability
- ▶ This financial risk is mitigated if Recycle BC collects recycling



# Future Work

- ▶ Review of recycling expansion
- ▶ Review of depot accessibility
- ▶ SWMP effectiveness review
- ▶ Building deconstruction
- ▶ Expanded organics diversion



*Questions?*

For more information, visit [kelowna.ca](http://kelowna.ca).

# Report to Council



**Date:** May 30, 2022  
**To:** Council  
**From:** City Manager  
**Subject:** Urban Tree Canopy Enhancement Strategy  
**Department:** Development Planning

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## **Recommendation:**

THAT Council receives, for information, the report from the Development Planning Department, dated May 30, 2022, with respect to urban tree canopy enhancement options; and

AND THAT Council directs staff to investigate the implementation requirements for the preferred six actions and report back to Council.

## **Purpose:**

This report will assess current urban tree protection policies within the City of Kelowna and, based on the gaps identified, present options for Council's consideration to address the urban tree canopy goals established by the 2040 Official Community Plan.

## **Background:**

### *Previous Council Resolution*

Council directed staff to develop a tree preservation bylaw (R0682/20/10/19) to increase the urban tree canopy, in order to achieve established City of Kelowna tree canopy enhancement goals, and support accelerated climate action. Staff initiated work on a tree preservation bylaw based on this direction in 2020. However, research into the implementation of similar bylaws in other jurisdictions indicated the following issues to consider:

- Intensive enforcement resourcing is required to support the new level of service;
- Enforcement investigations can be challenging, as it can be difficult to determine if the tree was harmed or poisoned to encourage its decline, requiring specialized staff expertise;
- Awareness of a new Tree Bylaw coming into force in other jurisdictions has led to the loss of existing trees as property owners seek to remove trees prior to the bylaw coming into force;
- Bylaws that require preservation of trees above a specific size (trunk diameter/caliper) may encourage owners to remove trees just prior to the tree reaching that size; and
- Bylaws that allow for one (or more) tree removal per year may lead to the removal of one tree per year until all the property's trees are gone.

Focusing resources solely on a “Tree Bylaw” could result in more tree canopy loss if not approached strategically. Multiple programs, regulations, and policies may better achieve tree canopy coverage goals by addressing the root drivers of tree loss – which are: (1) development pressures and (2) safety concerns.

### Existing Policy:

Staff are seeking Council’s direction on the appropriate mix of programs and regulations to avoid the above mentioned pitfalls and achieve the City of Kelowna’s tree canopy objectives, as established in the 2040 Official Community Plan (OCP):

<b>Table 1: Tree Canopy Comparison by City Sector</b>	<b>2040 OCP Tree Canopy Goals</b>	<b>2019 Tree Canopy LiDAR Assessment</b>
<i>Urban Centres</i>	12%	11.5%
<i>Core Area</i>	20%	14.3%
<i>Suburban (Gateway, Suburban Neighbourhoods and Rural Lands combined)</i>	25%	20.1%

It should be noted that tree canopy coverage averaged across the whole City was 22.9% in 2019. This is a result of high coverage (over 40%) in some suburban neighbourhoods while coverage in the urban core was lower. This assessment highlights the urban areas of the City that need the most attention with respect to trees.

The OCP 2040 canopy coverage objectives are rooted in several of the City’s over-arching strategic plans:

- Imagine Kelowna Goal - Strengthen the protection of our land, water, and air resources.
- Community Climate Action Plan (CCAP) identified increasing urban tree canopy as a key action.
- City of Kelowna Sustainable Urban Forest Strategy (SUFS) identified the natural asset value of the urban forest at \$1.1 billion (replacement value estimate).

As a result, the City has been working towards greater protection of trees as natural assets within the larger ecosystem for years. This work includes the Permanent Growth Boundary established by the 2040 OCP – a tool critical for protecting our remaining forests by directing growth towards our urban areas. *Attachment A* summarizes existing City policy and regulations that impact the urban tree canopy, to set the context for this report.

Best practices for tree canopy enhancement identified by the *Green Bylaws Toolkit* (produced by the Stewardship Centre for British Columbia), *Metro Vancouver Regional Planning Committee Tree Regulations Toolkit*, *BC Retooling for Climate Change Regional Adaptation Collaborative* (produced by the Fraser Basin Council and BC Ministry of Environment), and *Tree Canada* were reviewed for this report, in addition to interviews with other jurisdictions. A SWOT (Strengths-Weaknesses-Opportunities-Threats) analysis of potential canopy enhancement strategies was completed against existing procedures and regulations to identify gaps. These strategies are outlined below for Council’s consideration and staff have provided a concluding recommendation on how best to proceed.

## Discussion:

In this report, staff have identified the primary intervention opportunities for tree canopy enhancement. It is important to define protection versus canopy enhancement. Tree protection is focused on preventing tree removal, through deterrents. These can include permits and financial penalties like the cost to plant multiple new trees when tree removal is necessary. Tree canopy enhancement aims to deter removal and expand tree canopy coverage by requiring new tree planting independent of any existing trees.

The SWOT analysis indicated that discovering and managing infractions on private property is challenging, hence many bylaws are enforced on a reactive (complaint) basis. Focusing staff resources on punitive private property investigations where a tree is not being well cared for may be a losing battle and an intensive program for the City to resource. As an example, the City of Surrey has seven certified arbourist positions carrying out approximately 10,000 annual inspections related to their Tree Bylaw. Staff from the Town of Oakville, Ontario noted that while significant resources have been invested in responding to removal complaints while development sites are still where the largest number of trees are being removed in their community, so they are revising their permit process to reduce the amount of time spent on reviewing permits for individual tree removals.

Proactive protection at the key moment when the City has the opportunity to intervene and negotiate with property owners – during development or building permitting – may be a more effective strategy for enhancing our urban tree canopy. In 2021, the City issued building permits for 3,187 new residential units. Figure 1 indicates the coverage of those Building Permit applications is wide spread across the City, offering an opportunity to require tree planting and tree retention in both urban core and suburban areas. Strategies that build on existing processes managed by Development and Building Permit staff may be more effective, in terms of cost and ease of implementation, over creating a new process for private property tree assessment.

As a result of the research completed by staff, four strategies for tree canopy enhancement are presented below:

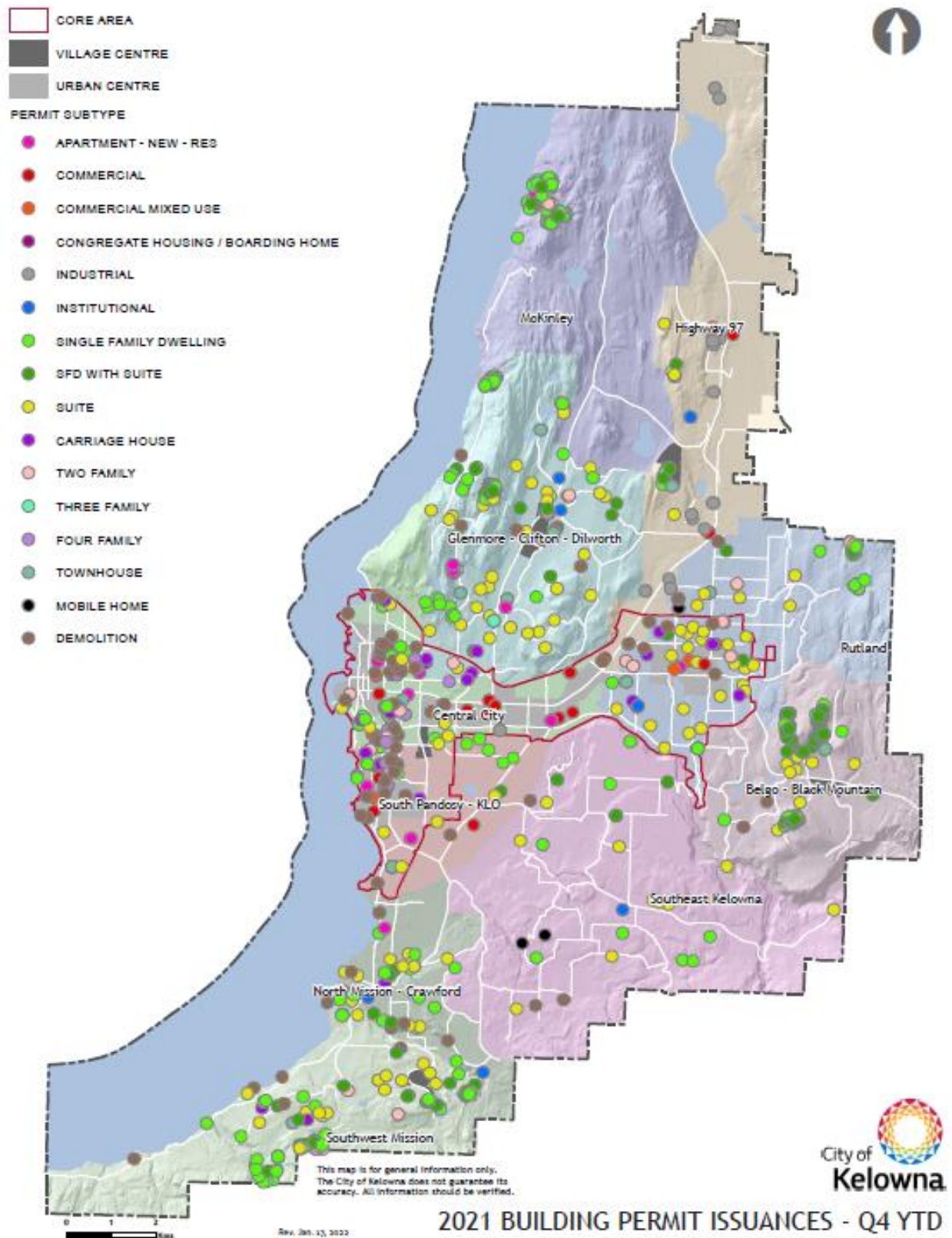
*Strategy 1 – Improve Development Regulations*

*Strategy 2 – Develop Landscape Standards Bylaw*

*Strategy 3 – Develop an Urban Tree Bylaw*

*Strategy 4 – Build on the existing NeighbourWoods Education and Tree Planting Program*

Figure 1: Geographic Distribution of 2021 Building Permits – development is widespread



Strategy 1 – Improve Development Regulations

Development pressure plays a major role in tree loss. Focusing resources on incremental improvements to existing policies, regulations, and processes allows staff to create a stepwise plan for successful implementation. Several existing City of Kelowna policies and bylaws have a role in tree retention, replacement, and canopy expansion (see *Attachment A* for detailed descriptions of these). Staff have looked for opportunities to improve upon these and address gaps in how they are currently implemented.

Trees within riparian management areas (lands adjacent to waterways) and on steep slopes (greater than 30%) are currently protected by the City of Kelowna Tree Bylaw No. 8041. It has generally been an effective tool along the City edges, where hillslopes meet forested areas, and on environmentally important riparian lands. During development on lands in those areas, a Natural Environment Development Permit (NEDP) is triggered, as required by the 2040 OCP, to provide a second layer of tree protection. This involves an environmental assessment to identify environmentally important areas (relying on Sensitive Ecosystem Inventory Mapping), waterways, and slopes exceeding 30%. This assessment is meant to direct development away from environmentally sensitive areas right from the start, directing lot layout and the eventual construction footprint. Highly ranked areas identified as No Disturbance Zones would retain trees (and associated ecological features) and direct development to areas of the property already disturbed if possible. If there are no options for avoidance, as the whole property is highly ranked environmentally, financial compensation is considered to improve natural features on-site or fund off-site restoration, including tree replacement at a 2:1 ratio.

If tree removal is desired in non-development times within the Riparian Management Areas or slopes steeper than 30%, a Tree Cutting Permit must be applied for under Bylaw No. 8041. The owner must prove the necessity of removal, due to disease or falling hazard, and commit to the 2 tree replacement requirement for each tree removed. Although restricted to riparian areas and steep slopes, this bylaw is otherwise like tree protection bylaws in other communities. As such, it is useful to look at the outcomes of its enforcement in Kelowna. Most calls received by staff are regarding safety concerns and those result in tree cutting approvals. The 2:1 tree replacement requirement appears to deter some – several cutting permit inquiries have not resulted in applications. However, staff do not have the capacity to visit these properties to investigate whether tree cutting has gone ahead anyway.

For Natural Environment Development Permits and some tree cutting permits (where the replacement tree cannot be planted prior to removal of the existing tree), staff hold a performance bond (financial) from the property owner. This bond covers 125% of the cost to plant and maintain a tree or restoration area, to ensure plant establishment in our dry climate. A portion of the bond is returned if planting has gone well after one year. The City holds on to a significant percentage of the bond to encourage the owner to continue to water and weed for two to three years after planting. Bond holdback is an important proactive tool that protects new plants and trees. However, Bylaw No. 8041 is currently over 15 years old and would benefit from updating and modernizing to be consistent with the objectives of the 2040 OCP. In particular, the bylaw would benefit from updates to include tree planting soil volume requirements and a formal definition of a Significant Tree consistent with the OCP 2040 definition.

There is no formal protection of trees in the urban areas of the City, although there is a strong culture amongst staff to seek to retain trees or add new trees as much as possible, and staff highlight tree protection as an added value, along with other infrastructure, to owners. An example of how tree protection has been implemented can be seen at 880 Saucier Ave (Figure 2).



*Figure 2: Copper Beech tree protected as part of development at 880 Saucier Ave*

Trees proposed as part of Urban Form & Character reviews (development permits on multi-unit residential, commercial, or industrial properties in non-NEDP areas) are only followed by staff for one year and there is no requirement to replace existing trees. The relatively low cost to pay for off-site replacement trees, if caught removing trees or not planting the new trees proposed, is not a significant financial incentive particularly in some commercial or large-scale multifamily development sites.

Despite staff requests for new trees, they can be challenging to retain when assessed against the numerous other considerations in the development process. Trees may be seen as a lower priority element over providing additional parking, placing an electrical transformer box, or addressing garbage storage/access when the cost to meet those obligations are compared to the cost of removing a tree and potentially not having to plant a replacement. Based on the gap analysis completed, staff may ask for tree retention and additions but lack:

- resources to increase the frequency of inspections during construction (to prevent paving/building in landscape areas);
- resources to extend the inspection period beyond 1 year;
- the regulatory ability to request tree retention or additions for small scale construction that only require a Building Permit (e.g. Single Detached Dwellings (SDD) do not require a Development Permit);



- the regulatory force to require applicants to identify trees on site pre-development through a tree survey and arbourist report on all development sites; or
- significant financial disincentives to discourage the omission/removal of new trees.

As part of the Zoning Bylaw update, there will be enhanced minimum ground cover and tree requirements within landscape areas required as part of multi-family, subdivision, and commercial development. This includes the front and rear setbacks to ensure that setbacks are appropriately landscaped and provides for masking or separation of various land uses. A tree is also required within each landscaped island that must be placed at the end of each parking aisle or every 15 spaces in parking lots. However, additional changes are suggested for Council's consideration to provide stronger tree protection:

- A. Increase staff time dedicated to inspecting installations - frequency of inspections to mirror Building Permit (BP) mid-construction inspection schedule. Work with BP staff to set up automated alerts. Expand site inspection period from one to three years following planting and reduce the amount of bonding returned in Year 1 from 90% to 40%. These actions require an amendment to Procedures Bylaw No. 12310.
- B. Add a requirement in the new Zoning Bylaw for 1 tree to be planted per lot in the low-density zones (RR1, RR2, RU1, RU2, RU3). This would be triggered by submission of a Building Permit but followed by Development Planning staff to inspect for Zoning Bylaw compliance.
- C. Offer density incentives for tree retention via the Zoning Bylaw, such as establishing a tree protection covenant in exchange for one extra story or reduction of setbacks by 10%, without requiring a variance. As this would be a significant incentive, its offer should be limited to the protection of Significant Trees, with a combined trunk diameter over 100 mm measured from 1 m above grade, as defined in the 2040 OCP as any tree that meets one or more of the following criteria and is not identified as an invasive species:
  - A tree listed as having heritage or cultural significance on a list approved by Council;
  - Any tree that contributes significantly to the location due to few adjacent trees and/or limitations posed by surroundings; and/or
  - A tree of locally rare species or unique character that enhances the diversity of the urban forest.

These regulations would likely lead to increased workload for staff and 1 additional position (1 FTE – Full Time Equivalent position) would be required, primarily to support inspection time. It will be important to monitor impacts to permit processing times and assess staffing needs as these changes are made.

### ***Strategy 2 – Develop Landscape Standards Bylaw***

This strategy builds on the previous one by linking trees to the complete green infrastructure system of a site and providing clear guidance on how to plant and maintain trees to support the long-term growth of our urban tree canopy. Key tree planting requirements, like soil volume, could be better regulated by linking to landscape permeability requirements and stormwater management, instead of trees being looked at in isolation. The City of Surrey has noted its success in improving tree retention when paired with permeable surface assessments. Metro Vancouver undertook a study in 2019 that found a strong inverse relationship between tree canopy and impervious surfaces. Where a city block had 50% or more impervious surface, the tree canopy of that area was less than 10%. Aiding property owners in

establishing the right tree species, suited to our dry climate, in the right place through a Landscape Standards Bylaw would help promote urban canopy longevity.

Replacement ratios and compensation, as a key deterrent to tree loss, could be incorporated into a Landscape Standards Bylaw. While this bylaw would primarily be triggered during development, it can impact trees pre- and post- development. A requirement to complete a pre-development tree inventory based on recent air photos (e.g. within last 5 years) may deter pre-development tree clearing. Applicants may be more willing to look at planning the site to accommodate existing trees as awareness increases of the potential costs for multiple replacement trees or compensation fees levied prior to development permit approval. As higher density residential and commercial/industrial sites must already supply a Landscape Plan from a certified professional, this additional step (completing an existing tree inventory) would be a minor addition to the regular requirement for a tree protection plan. It would also improve the quality of landscape plans as staff would be in a better position to encourage the retention of existing mature trees that provide higher value environmental services. Post-development tree protection could be enforced through a regulation in this proposed bylaw that protects trees planted as a requirement of City permitting. This approach focuses tree protection on trees that should be the right species for our climate planted in the best location for long term survival.

Creating a Landscape Standards Bylaw also provides an opportunity to require Landscape Construction Plans and formal schedules for all developments. Currently conceptual landscape plans are required as part of the Form & Character Development Permit for larger development projects, but often lack the soil volume and other details needed for successful tree planting. More thorough drawing requirements may help improve the enforcement of Water Conservation Reports already required by the City as part of its WaterSmart Program. However, a Development Permit is not required for Single Detached Dwellings (SDD) so there is no opportunity for the City to intervene in landscaping. Through coordination with Building Permit staff, a landscape review and inspection procedure for SDD could be undertaken by Development review staff if set out in a Landscape Standards Bylaw. This is a common procedure in many other BC municipalities.

Clear standards are needed to implement the high-level policies set out by the 2040 OCP and guide construction of Zoning Bylaw requirements. Landscape Standards Bylaws are a critical tool to guide the on-the-ground construction of the many green infrastructure elements the City has identified as important for climate resilience - healthy soils, pollinator-friendly landscapes, water conservation, and tree protection. This work would require a dedicated staff member to develop the bylaw over the course of 2022-2023 and a new position (1 FTE) to regularly review the Landscape Plans in detail.

### ***Strategy 3 – New Urban Tree Bylaw***

Based on urban tree bylaws used in other municipalities, and in consultation with staff in Parks Planning and Urban Forestry, a new tree protection bylaw was drafted to support staff in determining implementation requirements. All bylaw examples reviewed had specific requirements for which trees the bylaw would apply to on private properties. As such, the drafted bylaw focused on:

- Protection of trees with a trunk diameter larger than 100mm at 1m above grade (Diameter at Breast Height – DBH) or a replacement tree previously required by the City staff (e.g. through a development permit).
- Exemption for tree species that are invasive or a tree part of a farm crop (e.g. fruit trees or commercial tree growing operation).

These specifications help to focus protection on trees that have high value as well as avoiding the retention of trees that are environmentally problematic, like invasive species that prevent the establishment of habitat valuable to local wildlife.

It is important to note that the draft bylaw, as per the best practices reviewed in other municipalities, allows for tree removals if:

- a) the tree is proven to be a safety hazard by a qualified professional;
- b) the replacement trees proposed meet the requirements set by the City; or
- c) the owner is willing to pay the required compensation.

A tree replacement ratio must be set in the bylaw to ensure the services provided by the trees allowed to be removed are replaced equitably, but to also act as a disincentive to the removal of mature trees. Mature trees provide significantly more habitat, shading, air quality improvements, among other services than new trees. As noted above, municipalities commonly utilize a simple replacement ratio of 2 trees to replace each 1 removed (2:1). However, this ratio has not been shown to be a significant incentive to retain trees.

An alternative used by the Province of B.C. requires tree replacements (relating to their wildlife and fisheries legislation) based on size. The larger the tree, the greater the ratio.

This higher cost replacement ratio may help address the limited effectiveness of current tree retention efforts. However, if established in a Tree Protection Bylaw this cost will impact all land owners, not just those expecting to profit from new development. Penalties for cutting or damaging a protected tree, without a permit, should include a higher replacement ratio requirement. Replacement trees can be requested during development approvals based on a ratio like this through Zoning or Landscape Standards Bylaws. The difference with a tree bylaw would be that this replacement requirement would apply to all properties, not just those under development, increasing staffing needs for inspections to investigate tree damage complaints, to determine replacement requirements, and to undertake follow up replacement inspections.

As tree removals will be a reality in some circumstances, an option to compensate for an inability to plant a replacement tree on site is needed. The drafted bylaw includes a clear, simple to administer financial formula for the property owner to make a compensation payment to the City: \$500 per Suburban tree, \$1000/tree in the Urban Core (due to the higher planting cost required for soil cells). This compensation option should only be provided if there is no possibility of including all replacement trees on the lot due to reasonable lot size limitations. The draft bylaw recommends that compensation trees should be planted in a location identified by the City as needing more trees. A compensation fund would need to be established to hold collected funds specific to this purpose. This fund could help support existing programs like NeighbourWoods, building the private property tree canopy and reducing tree maintenance costs for the City, in addition to the boulevard and park tree planting program.

This new bylaw would require a major adjustment in staffing to support effective enforcement. Based on staffing in other municipalities, 2-3 new FTE positions would be required for arbourists inspections plus 1 to 1.5 FTE to support administration. Increased resourcing from Communications would also be needed to support public education on this new bylaw applying to all properties.

#### ***Strategy 4 – Education and Planting Program***

The City of Kelowna operates two programs to support property owners in managing their landscaping – NeighbourWoods and WaterSmart. Greater support to integrate these two programs could help to

increase tree retention and re-planting on private property. These programs target homeowners (through low-cost tree sales) and landscape professionals (via WaterSmart training and irrigation permit requirements) to promote sustainable yard care. Both have a significant role to play in tree protection, as homeowners rely on the advice of landscaping professionals to determine whether it is worth removing a tree. The WaterSmart program includes training for landscape professionals, which could include the benefits of trees and opportunities to promote the NeighbourWoods program as an added value to the landscaper's services.

Staff from the Town of Oakville, Ontario, note the high value they've gained from staff involvement in industry education and planting recommendations. Offering support in selecting the appropriate tree species and planting location will help promote healthy trees grown in the best place to minimize property damage risks. Their municipal staff have the mandate to spend time on encouraging tree retention and initiating challenging conversations with owners seeking tree removal permits, without the profitability pressure private contractors experience. They have also developed a business licencing program that ensures arbourists have certification and training on local bylaw requirements. Such training is similar to Kelowna's WaterSmart program, but with the added incentive of licencing to encourage businesses to commit to training.

Instead of funding bylaw inspections or staff time for permit review/processing, Council could allocate funds to offering more trees through these programs. This approach tackles a key gap in efforts to increase the urban tree canopy – private property not being developed/re-developed. It may also prevent the safety concerns that often come up when residents contact the City – falling risk due to poor choice in tree species or planting location. However, this program is completely reliant on voluntary homeowner participation. It does not address tree loss due to development pressures.

In terms of funding, NeighbourWoods would not likely require additional staff to be able to increase operations. However, funding would be needed to support the logistics of supplying trees as well as outreach resources to increase awareness of the program.

### **Recommended Approach:**

Staff are seeking direction from Council on the combination of strategies to pursue to improve our urban tree canopy coverage. Table 2 summarizes the strategies above to highlight key implications.

<b>Table 2: Strategy Comparison</b>		<b>Pro</b>	<b>Con</b>
<b>Strategy 1</b>	<b>Improved Development Regulations</b>	<ul style="list-style-type: none"> <li>• Financial incentive to retain trees (reduce new planting costs).</li> <li>• Improve enforcement of existing regulations to add and retain trees.</li> <li>• Seek compensation for tree losses prior to development.</li> <li>• Improved new tree establishment through longer period of maintenance inspections.</li> </ul>	<ul style="list-style-type: none"> <li>• New trees can only be requested at time of development– if less development occurring, fewer new trees.</li> <li>• Increased inspection time may delay permit approval if not supported by new staff.</li> <li>• Does not apply to established private property (not under development).</li> </ul>

<b>Strategy 2</b>	<b>Landscape Standards Bylaw</b>	<ul style="list-style-type: none"> <li>• Add and retain trees proactively.</li> <li>• Manage multiple natural features - stormwater, soil.</li> <li>• Standards and regulations get the right tree in the right place for long term canopy expansion.</li> <li>• Financial incentive to support tree establishment (Performance Security).</li> <li>• Financial penalties for non-compliance.</li> </ul>	<ul style="list-style-type: none"> <li>• Primarily applies at time of development but new inspections staff could monitor trees planted post-development.</li> <li>• Development Permit processing time many increase if staff resources not increased.</li> </ul>
<b>Strategy 3</b>	<b>Tree Bylaw</b>	<ul style="list-style-type: none"> <li>• Broad protection - a regulatory tool all staff can use.</li> <li>• Ticketing/Fines incentivize tree retention.</li> <li>• Some tree canopy expansion if compensation requirement set high, but trees will be young.</li> </ul>	<ul style="list-style-type: none"> <li>• Focus on retention, not expansion of tree canopy.</li> <li>• Punitive enforcement approach on non-development properties, leads to confrontational relationship between neighbours/City.</li> <li>• Focus on reactive enforcement instead of proactive site planning.</li> <li>• Development Permit processing will be slowed if staff resourcing not increased to handle complaint investigations and development site inspections.</li> </ul>
<b>Strategy 4</b>	<b>Education &amp; Planting Program (NeighbourWoods)</b>	<ul style="list-style-type: none"> <li>• Focused on canopy expansion - planting more trees.</li> <li>• Minimal to no increase to staffing - budget needed to support logistics of getting more owners interested in planting.</li> <li>• Focus program on neighbourhoods needing more trees.</li> </ul>	<ul style="list-style-type: none"> <li>• No regulatory incentive to retain trees.</li> <li>• Dependent on interest of owner.</li> <li>• Difficult to add trees to higher density new development that doesn't include space for trees.</li> </ul>

In recognition of the limited resources available, the City will likely need to take an incremental approach to tree protection. The budgetary implications of each strategy with respect to staffing are summarized in the following table:

<b>Table 3: Staffing Comparison</b>	<b>Expected Staffing Requirements (FTE – Full Time Equivalent position)</b>
<b>Strategy 1</b> Improved Development Regulations	Development Permit (DP) Application review and site inspection staff (1 FTE)
<b>Strategy 2</b> Landscape Standards Bylaw	DP/BP review and inspection resources (1 FTE Landscape Architect in addition to Strategy 1 inspections FTE).
<b>Strategy 3</b> Tree Bylaw	Investigation resources (2-3 FTE Inspectors; 1 FTE Landscape Architect for site plan review).
<b>Strategy 4</b> Education & Planting Prog. (NeighbourWoods)	Supplying trees and Outreach (may fund through Compensation Bank replenished via increased tree compensation requirements based on results of Strategies 1-3)

There is a great deal of support from the public for tree protection. Staff time can be directed to proactive protection and tree replacement in areas of new development, building on the existing Development/Building Permit point of connection to private lands. Or staff can focus on bylaw enforcement to investigate unauthorized tree removals with the goal of discouraging tree loss more broadly, but often retroactively to address tree removals. A combination may be desired.

Staff recommend the following prioritization of actions to develop an Urban Tree Canopy Enhancement Strategy, based on the analysis above:

Action 1. Support initial tree protection changes included in Zoning Bylaw update.

- a. As part of the current draft of the updated Zoning Bylaw, staff propose to enhance minimum ground cover and tree requirements within landscape areas required as part of multi-family, subdivision, and commercial development. A tree is also required within each landscaped island that must be placed at the end of each parking aisle or every 15 spaces in parking lots.

*Implementation – report to Council in June 2022.*

Action 2. Update Bylaw No. 8041 – Environmentally Sensitive Areas Tree Protection Bylaw

- a. Increase tree replacement requirements, to strengthen tree protection in environmentally sensitive areas, and make bylaw consistent with the OCP 2040.

*Implementation – report to Council in Summer 2022.*

Action 3. Amend Procedures Bylaw No. 12310 to allow an increase in staff time dedicated to inspect tree installations required by existing Zoning Bylaw regulations.

- a. Require existing tree survey and Qualified Professional (e.g. arbourist) report for all development permits.

- b. Establish a multi-year site inspection period and reduce the amount of bonding returned after the first growing season to encourage ongoing watering and weeding for support successful tree establishment.
- c. Consider staffing resources (1 FTE), through the budgeting process and to increase the frequency of inspections.

*Implementation – Consider FTE in 2023 budget process and implement in 2023 if the position is successful.*

Action 4. Increase tree planting requirements in the Zoning Bylaw.

- a. A requirement for 1 tree to be planted per new lot on low density lots that only need a Building Permit (e.g. Single Detached Dwellings). Coordinate with WaterSmart/NeighbourWoods programs to incentivize new drought-tolerant trees.
- b. Develop incentives for tree retention or new tree planting (through tree protection covenant) in exchange for 1 extra story or reduction of setbacks by 10%, without requiring a variance.

*Implementation – Develop recommendations for amendments to the Zoning Bylaw for Council's consideration in Fall 2022.*

Action 5. Support the implementation of tree planting/retention requirements in other bylaws by developing a Landscape Standards Bylaw.

- a. Establish clear landscaping requirements, such as minimum soil depths and soil cell installation guidelines, to aid staff in reviewing landscape plans.
- b. Require landscape plans to include an inventory of existing trees.
- c. Investigate mechanisms needed to promote effective maintenance of landscaping as many new plants die in Kelowna's dry climate without weeding and irrigation.
- d. Expand Landscape Plan requirements to include new Single Detached Dwellings (SDD).
- a. Require landscaping plans to identify landscaping solutions (green infrastructure) to support climate resilience – shade, stormwater pollution abatement, etc.
- b. Outreach and Communications resources should also be committed to enhance industry awareness of tree protection requirements via coordination with City of Kelowna WaterSmart Program Qualified Water Efficient Landscaper professional training.

*Implementation – develop bylaw and staffing recommendation for Council consideration in early 2024.*

Action 6. Monitor tree canopy and assess against OCP 2040 Objectives

- a. Track changes in the urban tree canopy, through the Sustainable Urban Forestry Strategy 2022-2023 Project, with goal of differentiating canopy loss/gain on private property in times of development and non-development.
- b. If tree canopy loss on non-development properties is significant, determine if NeighbourWoods Program can be funded through tree compensation fund to target low canopy areas. Funding contributions received from tree compensation payments, following implementation of the above Actions, could be used to increase outreach (door-to-door).
- c. Concurrently, investigate costs and long term need to resource a private property tree bylaw.

*Implementation – assess canopy status in 2022- 2023 and report to Council in 2026 on impact of development regulations.*

## **Conclusion:**

The above recommendations are based on the direction provided by the 2040 OCP – to establish clear development design guidelines that allow development to benefit our community now and in the future. While a standalone Tree Bylaw can also be used as a tool by development approvals staff, creating an implementation framework through improved development review and inspection procedures with a Landscape Standards Bylaw will allow staff to work with property owners to protect trees as part of the green infrastructure system. This year is an important opportunity to make changes to development review procedures as part of the Zoning Bylaw update and 2040 OCP adoption. Focusing on the opportunity to manage trees alongside other landscaping elements during development offers a more constructive moment to engage with property owners instead of at an adversarial time during a bylaw enforcement visit. Through the creation of landscaping policies and regulations using the recommended stepwise approach, staff will be in a better position to offer the community clear and consistent advice.

Establishing a tree protection bylaw may offer the broadest tree protection, but it may draw resources to losing battles for trees that will not be well maintained instead of directing staff resources to support property owners in getting the right tree in the right place, strengthening our urban tree canopy in the long term. For these reasons, a standalone tree bylaw is not recommended at this time.

## **Considerations applicable to this report:**

### ***Stakeholder Engagement:***

Once direction is provided by Council, an engagement process will be needed to investigate implementation constraints and opportunities.

Asking community partners to identify the support they need to implement changes in their operations to meet these regulatory requirements help focus staff efforts but also encourages those stakeholders to recognize their role in tree protection. It is recommended that staff engage with the development community as part of plans to engage on the implementation of the 2040 OCP and new Zoning Bylaw as discussed at the February 28, 2022, Council meeting.

### ***Future Considerations – Natural Asset Management:***

As noted, trees are often low priorities when compared to parking, utility service right of ways, and the numerous other development considerations. The minimum outdoor amenity area, 10% of townhouse and infill properties for example, is asked to accommodate seating, play space, and other elements in addition to trees. As with many ecological services, trees are undervalued.

Municipal natural asset management can help address this as trees would be included as an asset in the infrastructure system. A tree is a part of the stormwater management infrastructure, creating space for water infiltration, and having that role also helps the tree have access to water and more root space. Funding mechanisms, like a stormwater utility, that identify the specific natural assets being funded can help property owners see the direct value of those services. A financial model can be developed to show the value of natural assets in reducing wear and tear on pipes in the ground, or even avoid the costs of installing grey infrastructure. Additional analysis is still required to better understand the hydrologic benefits of an increased tree canopy.



***Legal/Statutory Authority:***

LGA S.527 (1) A local government may, by bylaw, require, set standards for and regulate the provision of screening or landscaping for one or more of the following purposes: ... (b)preserving, protecting, restoring and enhancing the natural environment; and (c)preventing hazardous conditions

LGA S.523 (2) A local government may, by bylaw, establish the maximum percentage of the area of land that can be covered by impermeable material.

Community Charter (15.2) allows Council to establish a standard based on a provincial standard such as the Canadian Landscape Standard as utilized by the B.C. Society of Landscape Architects and the B.C. Landscape and Nursery Association.

**Considerations not applicable to this report:**

***Legal/Statutory Procedural Requirements:***

***Financial/Budgetary Considerations:***

***External Agency/Public Comments:***

***Communications Comments:***

***Internal Circulation:***

Submitted by: J. Miles, Environmental Coordinator

**Approved for inclusion:**



D. Strachan, Community Planning and Development Manager

**Attachments:**

Attachment A - Summary of Existing City of Kelowna Policies/Regulations Relating to Trees

## Attachment A

### Summary of Existing City of Kelowna Policies/Regulations Relating to Trees

Bylaw/Policy	Tree Retention	Tree Replacement	New Trees
Zoning Bylaw No. 8000	None	None	<p>Landscape buffer including a tree every 10-12m required for RU4-6 (multi-unit ground-oriented housing) and RM1-7. Commercial/Industrial Zones have similar buffer requirement along lot edges.</p> <p>No tree requirement for single detached housing since a DP is not required.</p>
Procedures Bylaw No. 12310	None	None	<p>Landscaping Bond (125% of installation cost) held until plants installed (90% of bond returned) with 1 year warranty (remaining bond returned). If landscaping not installed as designed, ask for cash-in-lieu at 2:1 ratio.</p>
Subdivision, Development & Servicing Bylaw No. 7900	<p>Preliminary Layout Review process – subdivision layouts are assessed by staff to encourage clustering development away from trees.</p> <p>Natural area protection based on Environmental Impact Assessment and Geotechnical Assessment is ESA 1 or 2 areas identified by staff.</p> <p>No Disturb Covenant or Land Dedication can be established.</p> <p>Most successful when steep slope erosion protection required. Also as part of parks land dedication.</p>	<p>Replacement of trees based on Environmental Impact Assessment (minimum of 2:1 trees or 3:1 area). Usually only properties with slopes &gt;30% or QEP identified environmentally sensitive areas.</p> <p>No replacement requirement if Natural Environment/Hazardous Condition Development Permit not triggered.</p>	<p>Development Engineering Servicing Agreement – require trees on boulevards via Development Engineering review process for roads.</p>

Bylaw/Policy	Tree Retention	Tree Replacement	New Trees
Tree Protection Bylaw No. 8041	<p>Tree removal prohibited in Riparian Management Areas (RMAs) and slopes steeper than 30%, unless tree meets dangerous/dead/diseased criteria (Tree Cutting Permit required).</p> <p>Only applies to trees larger than 150mm diameter measured at 1m above grade (DBH).</p>	<p>Requires 2 trees to replace 1 tree removed (2:1 replacement ratio) on specified lands.</p> <p>Replacement not required if tree deemed hazardous.</p>	Does not apply
Municipal Properties Tree Bylaw No. 8042	Tree Cutting Permit discourages tree removal on public lands – parks and boulevards (street trees).	Requires 2 trees to replace any 1 tree removed (2:1), either on site or at another suitable location on City property.	Does not apply
<p>2040 OCP Permanent Growth Boundary</p> <p>Objective 14.2 <i>Protect and expand a healthy and viable urban forest</i></p> <p>Objective 14.5 <i>Protect and restore environmentally sensitive areas from development impacts</i></p>	<p>Permanent Growth Boundary sets the limits outside of which urban development is not supported, to protect existing natural spaces like our forests.</p> <p>Riparian Management Areas (RMA) – strict no disturbance area, unless it is lower value habitat that can be exchanged for protecting more higher value areas outside minimum RMA.</p> <p>Encourages covenants to establish No Disturbance Areas (environmentally sensitive and steep slope areas).</p> <p>Encourages cluster housing and density transfer in exchange for tree retention.</p>	<p>No disturbance is first priority.</p> <p>Where unavoidable a tree replacement ratio would be established to meet OCP No Net Loss criteria, meaning that the ratio is set based on the advice of the QEP and may exceed the minimum of 2:1 if the site will be difficult to restore or is in an area of high environmental value.</p>	Multiple OCP policies encourage tree canopy expansion to meet climate action and ecosystem resilience goals.
Form and Character Development Permit Guidelines (Updated following 2040 OCP)	<p>Retention is encouraged during review of larger development applications (multi-family, commercial/industrial).</p> <p>Design Guidelines for infill and multi-unit residential recommend tree retention through site planning and open space requirements (Sections 3.1.3, 3.3.3, 3.3.4)</p>	Encourages space to be made for new trees but no strict replacement ratio.	New landscaping including trees are encouraged to soften edges and frame buildings. Space must be made to allow trees to reach mature size (Sections 3.1.5, 3.3.4)

# Council Workshop: Urban Tree Canopy Enhancement Strategy

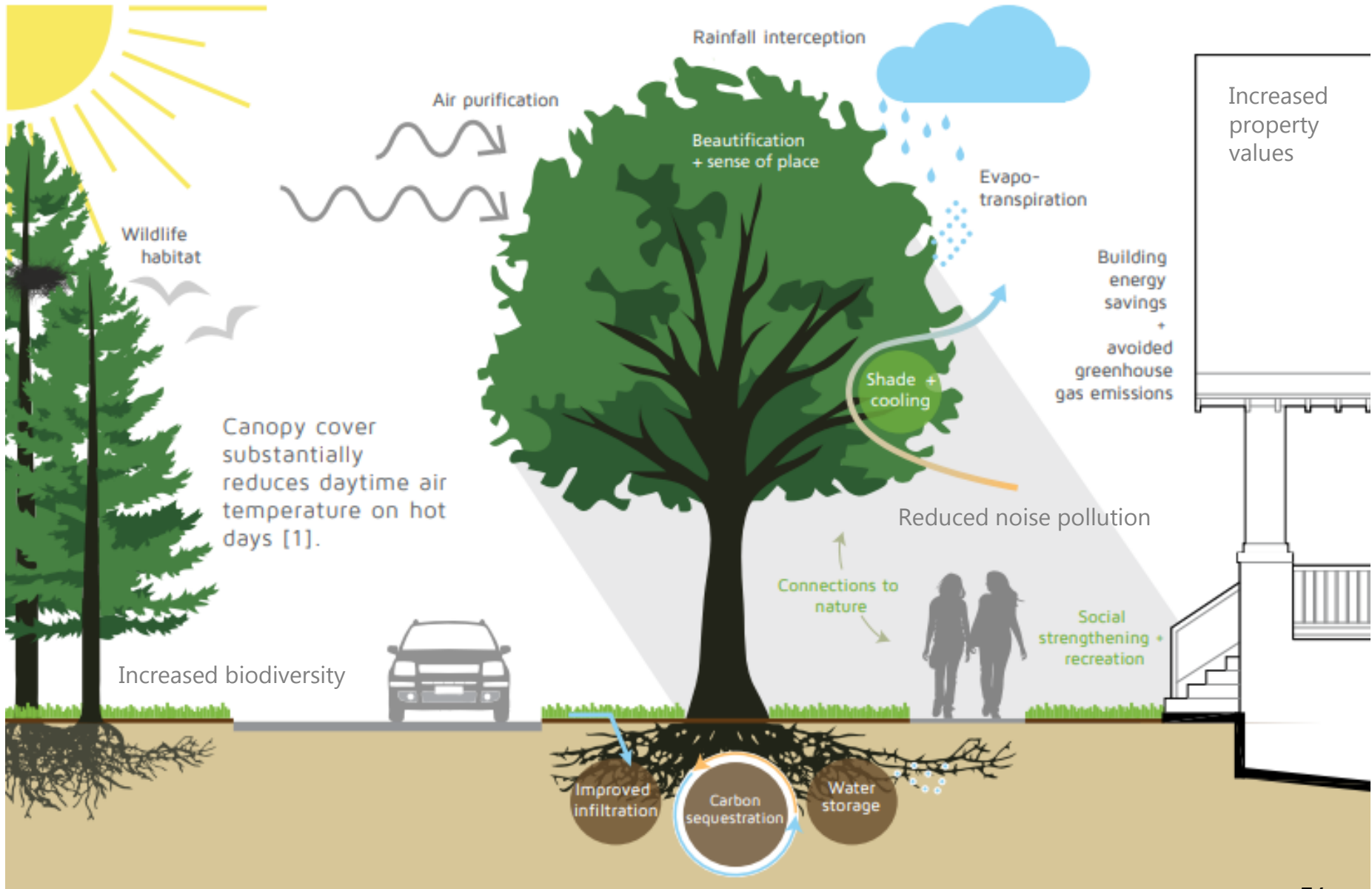




## Purpose

- ▶ To assess current urban tree protection policies within the City of Kelowna and, based on the gaps identified, present options to achieve the urban tree canopy goals established by the 2040 Official Community Plan (OCP).

# Services Provided by Trees...



Source: Columbia Basin Trust, "Adapting Community Tree Management to Climate Change, April 2020.





## Primary drivers of tree loss:

- ▶ Safety concerns
- ▶ Development pressures

# Protection Strategy - Tree Bylaw

- ▶ Clear penalty for tree removal – before, during, and after development.
  - ▶ Requires intensive enforcement in often complex situations.
  - ▶ Awareness of a new Tree Bylaw in other cities led to:
    - ▶ Cutting trees prior to adoption as owners seek to avoid bylaw.
    - ▶ Owners removing trees prior to reaching minimum protection size.
    - ▶ Allowances for one tree removal per year lead to the removal of one tree per year until all the property's trees are gone.
- ▶ *Focusing solely on a Tree Bylaw may not reduce canopy loss if not approached strategically.*



# Protection Strategy - Tree Bylaw

- ▶ *Does not PROHIBIT tree removal.*
- ▶ Common requirement - replace each tree removed with 2 or more new trees or pay compensation.
- ▶ Other jurisdictions identified as having strong protections allow tree cutting if:
  - ▶ Tree is deemed hazardous by a qualified professional – this can include safety hazards like falling risk and wildfire.
  - ▶ Tree is within a proposed building envelope, and it is not possible to change the building envelope.
  - ▶ Tree is impacting the access and servicing of a lot.

# Current Private Property Tree Management:

## 2040 OCP Tree Protection Policies

- *Permanent Growth Boundary* – limit development to already disturbed lands.
- *Natural Environment Development Permit* (NEDP)
- *Performance Security* (Bond) – deposit held by City to cover cost of trees/plants if owner doesn't complete work. Money not returned until trees are well established (3+ years of monitoring).



Take Action on Climate



Protect & Restore  
Our Environment



Stop New Suburban  
Development

# Current Private Property Tree Management

## Tree Protection Bylaw No. 8041

- Applies to trees larger than 150 mm (trunk diameter) within:
  - *Riparian Management Areas* (10m - 30m of a waterbody)
  - *Slopes steeper than 30%*
- Enforcement triggered by complaints. Six permits issued in 2021.
- Replacement trees not required (but encouraged) if removal due to emergency falling hazard.
- Two (2) replacement trees for each one removed.





Project: Environmental Assessment  
 Location: City of Kelowna  
 Project No.: 18-2664  
 Prepared for: Blenk Development Corp.  
 Prepared by: Ecoscape Environmental Consultants Ltd.  
 Robert Wagner, GIS Specialist  
 Coordinate System: NAD83-UTM Zone 11  
 Imagery: ESRI World Imagery  
 Map Date: July 28, 2020

## LEGEND

- 99° Ecosystem Polygon Number  
 Subject Property  
 Proposed Wildlife Underpass  
 Proposed Urban Park  
 Biofiltration Pond  
 Cadastre  
 City of Kelowna OCP Riparian Management Area (RMA) (15 m setback)  
 Proposed Natural Area Park  
 Proposed Development  
 Proposed Future MF Access  
 Proposed Easement  
 Streams  
 Proposed Building Pad/Footprint  
 Proposed Development Footprint  
 Environmental Sensitivity Rating  
 Very High (ESA 1)  
 High (ESA 2)  
 Moderate (ESA 3)  
 Low (ESA 4)



## Natural Environment Development Permit Area Example

Total Subdivision Area Undisturbed: 37%

Very High Value Environmentally Sensitive Area (ESA) Undisturbed: 100%

# Current Private Property Tree Management

## Procedures Bylaw No. 12310

- Applies to landscaping identified in **Form & Character Reviews** (development permits on **multi-unit residential, commercial, or industrial properties**).
- Performance Security (**Bond**) covering cost to plant trees.
- Staff **inspect** when planted and **90%** of bond returned.
- Remaining 10% held for 1 year.

## Subdivision Review (Bylaw No. 7900)

- Cluster buildings/roads away from trees if possible but other site constraints must be considered.

## Zoning Bylaw No. 8000

- **Landscape Buffer** (1 tree every 10-12m) when Development Permit triggered.
- Does not apply to Single Detached Dwelling (low density zones) - no Development Permit required.



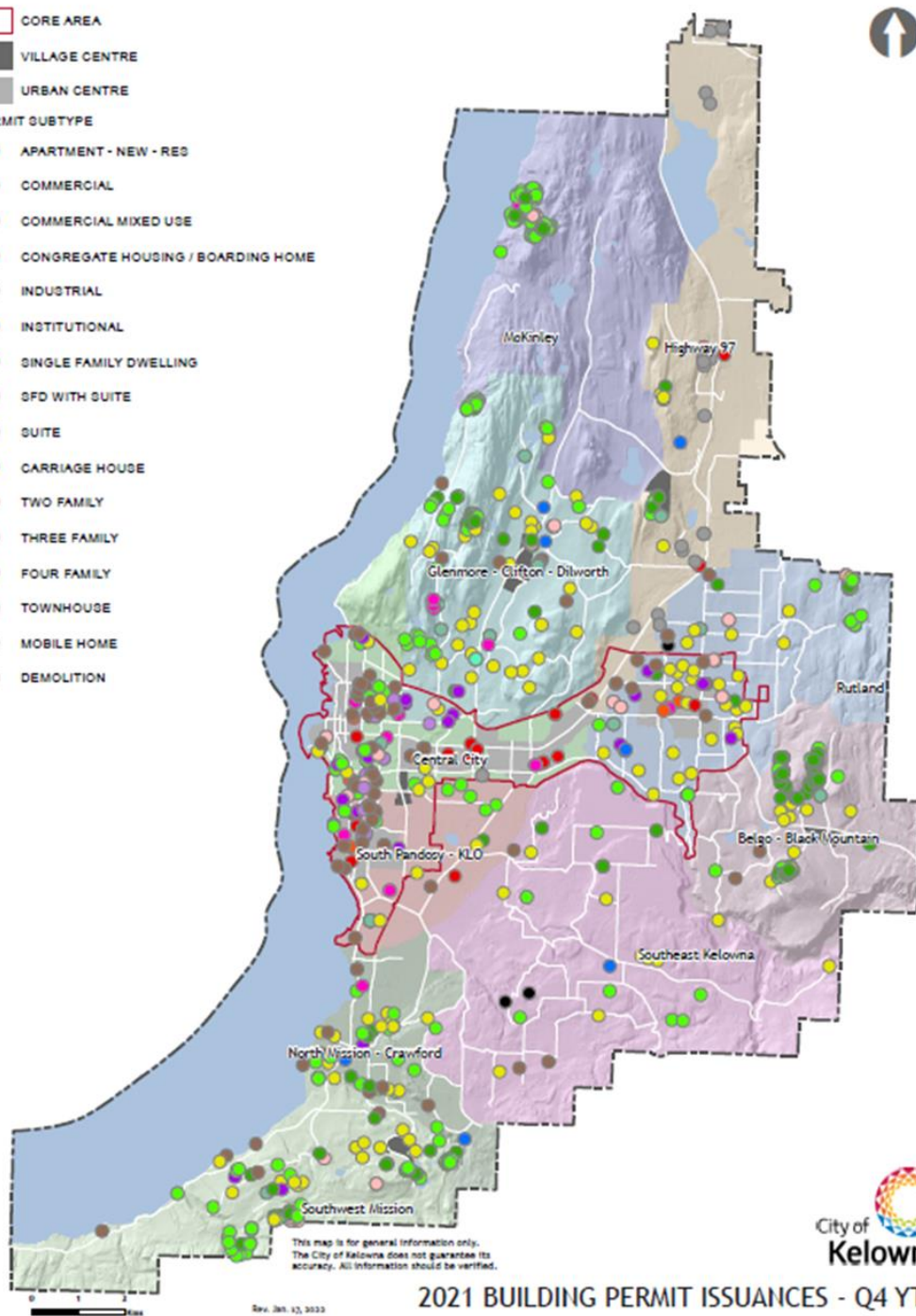




Trees are still seen as a “nice to have” - not necessity.  
So they disappear...



- CORE AREA  
 VILLAGE CENTRE  
 URBAN CENTRE  
 PERMIT SUBTYPE  
 APARTMENT - NEW - RES  
 COMMERCIAL  
 COMMERCIAL MIXED USE  
 CONGREGATE HOUSING / BOARDING HOME  
 INDUSTRIAL  
 INSTITUTIONAL  
 SINGLE FAMILY DWELLING  
 SFD WITH SUITE  
 SUITE  
 CARRIAGE HOUSE  
 TWO FAMILY  
 THREE FAMILY  
 FOUR FAMILY  
 TOWNHOUSE  
 MOBILE HOME  
 DEMOLITION





# Addressing Regulatory Gaps – recommended best practices:

- ▶ Pre-development Tree Inventory
- ▶ Qualified Professional designs, signs, and monitors (landscape architect, arbourist)
- ▶ Landscape Standards Bylaw  
(to direct good planting and maintenance practices)
- ▶ Follow-up inspections
- ▶ Multi-year Bonding  
(like Natural Environment DPs)

# Implementation Strategy:

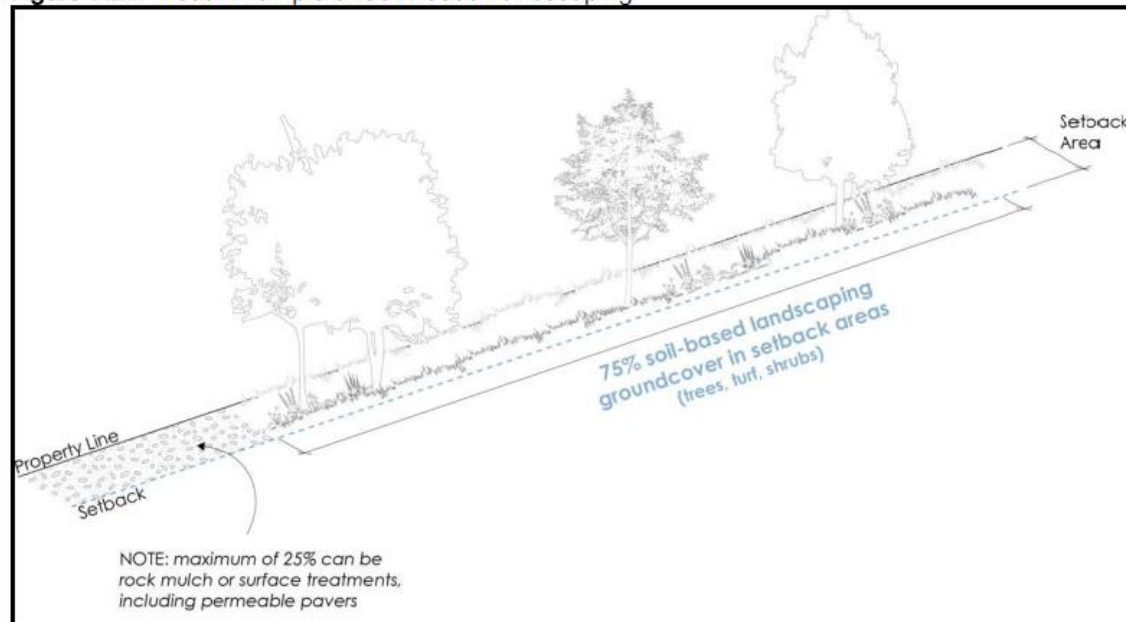
**Action 1** - Support increased tree planting requirements in new *Zoning Bylaw*.

- ▶ Adding more trees to parking lots
- ▶ Increasing clarity on tree requirements in Landscape Buffers

**Action 2** - Strengthen tree replacement requirements in Environmentally Sensitive Areas.

- ▶ Amend Bylaw No. 8041 to remove tree replacement exemption for emergency removals.

**Figure 7.2.1** Visual Example of Soil Based Landscaping





### Action 3 - Amend *Procedures Bylaw* (No. 12310):

- ▶ Pre-development tree inventory
- ▶ Construction drawings **Qualified Professional**
- ▶ **Monitor** landscaping throughout construction to discourage changes
- ▶ Staffing increase by 1 FTE to **increase frequency of inspections**
- ▶ Allowance to **hold more than 10% of bond** and inspect trees for multiple seasons

# Implementation Strategy:

**Action 4** - Increase tree planting requirements to support tree canopy expansion objectives of 2040 OCP.

- ▶ New Zoning Bylaw tree requirements for low density zones – **minimum 1 tree per lot.**
  - ▶ Coordinate with Building Permit reviews to capture Single Detached Dwellings and other construction that doesn't require a Development Permit.
  - ▶ Consider other zoning regulations (parking relaxations, height and/or setback variances) or to encourage tree retention and tree protection covenants.
- ▶ *Report back to Council in 2023*



# Implementation Strategy:



## Action 5 - Support tree longevity through a *Landscape Standards Bylaw*.

- ▶ Make room for roots – good soil
- ▶ Include **Climate Resiliency Assessment**:
  - ▶ Shading of amenity space and/or buildings
  - ▶ Irrigation standards and on-site water harvesting
  - ▶ Mulching standards
  - ▶ Permeable surface/stormwater infiltration requirements
  - ▶ Species recommendations
  - ▶ *Plant the right tree in the right place!*

# Implementation Strategy:

*Landscape Standards Bylaw* is an opportunity to include Tree Protection Bylaw elements...

## ► Provincial tree replacement formula:

- 1 tree at 0 mm - 151 mm (6") DBH = 2 replacement trees (min height 1.5 m);
- 1 tree at 152 mm - 304 mm (12") DBH = 3 replacement trees (min height 1.5 m);
- 1 tree at 305 mm - 456 mm (18") DBH = 4 replacement trees (min height 2.0 m);
- 1 tree at 457 mm - 609 mm (24") DBH = 6 replacement trees (min height > 2.0 m);
- 1 tree at 610 mm and larger (36") DBH = 8 replacement trees (min height > 2.0 m).

## ► Compensation payments to cover cost to plant replacements.

# Implementation Strategy:

## Action 6 - Monitor tree canopy and assess against 2040 OCP Objectives:

- ▶ Update **Sustainable Urban Forestry Strategy** and compare against 2019 LiDAR baseline.
  - ▶ Contributions received from tree compensation, following implementation of **Landscape Standards Bylaw**, could be used to fund more tree sales through *NeighbourWoods Program*.
  - ▶ Coordinate with City of Kelowna *WaterSmart Qualified Water Efficient Landscaper* professional training.
- ▶ *Long term monitoring to assess progress*

# Strategy Summary

1. Support increased tree planting requirements in new *Zoning Bylaw*
2. Amend existing *Tree Bylaw No. 8041* to increase replacement requirements in environmentally sensitive areas
3. Amend *Procedures Bylaw* to support tree inventories and multi-year monitoring with additional staff (1 FTE)
4. Increase tree planting requirements in Zoning Bylaw
5. Develop Landscape Standards Bylaw
6. Long term monitoring and evaluation



# Staff Recommendation

- ▶ That Council directs staff to investigate the implementation requirements for the preferred urban tree canopy enhancement strategy and report back to Council.



## *Conclusion of Staff Presentation*