

# City of Kelowna

## Regular Council Meeting

### AGENDA



Monday, April 9, 2018

9:00 am

Knox Mountain Meeting Room (#4A)

City Hall, 1435 Water Street

Pages

1. **Call to Order**

2. **Confirmation of Minutes**

2 - 3

Regular AM Meeting - March 26, 2018

3. **Reports**

3.1 **2040 OCP Facts in Focus – Agriculture & Rural Areas,  
Natural Environment and A Changing Climate**

60 m

4 - 54

To proceed with Part 3 of the Facts in Focus series as it relates to topic-based background papers on the 2040 OCP update. The third installment of the Facts in Focus topics being introduced are Agriculture & Rural Areas, Natural Environment and A Changing Climate.

4. **Resolution Closing the Meeting to the Public**

THAT this meeting be closed to the public pursuant to Section 90(1) (e) and (k) of the Community Charter for Council to deal with matters relating to the following:

- Acquisition, Disposition or Expropriation of Land or Improvements
- Provision of a Municipal Service

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**

30 m

8. **Termination**



## City of Kelowna Regular Council Meeting Minutes

Date: Monday, March 26, 2018  
 Location: Knox Mountain Meeting Room (#4A)  
 City Hall, 1435 Water Street

Members Present Mayor Colin Basran, Councillors Maxine DeHart, Ryan Donn, Gail Given, Tracy Gray, Charlie Hodge\*, Brad Sieben, Mohini Singh and Luke Stack

Staff Present City Manager, Ron Mattiussi; City Clerk, Stephen Fleming, Community Planning Department Manager, Ryan Smith\*; Director, Community Planning & Strategic Investments, Doug Gilchrist\*; Policy & Planning Department Manager Danielle Noble-Brandt\*; Deputy City Manager, Joe Creron\*; Legislative Coordinator (Confidential), Arlene McClelland

(\* Denotes partial attendance)

### 1. Call to Order

Mayor Basran called the meeting to order at 9:47 a.m.

### 2. Confirmation of Minutes

Moved By Councillor Gray/Seconded By Councillor DeHart

R294/18/03/26 THAT the Minutes of the Regular AM Meeting of March 19, 2018 be confirmed as circulated.

Carried

### 3. Reports

#### 3.1 Airport Business Park – CD15 Planning Background and Context

Staff:

- Displayed a PowerPoint Presentation.
- Provided history and background for the planning rationale for land uses around the Airport and University and the creation of the CD15 Airport Business Park zone.
- Raised concerns with the impacts on the Airport Transportation Gateway Study and other plans in progress that a change in land uses would raise.
- Identified recent issues with inquiries for land uses in the area that are outside of the current CD15 zone.
- Identified potential traffic impacts on Highway 97 and potential Ministry of Transportation implications as to whether they would approve land use changes without upgrades to Highway that the City may have to pay for.

- Raised concerns with impacts on industrial land inventory and locating retail outside of the urban centres.
- Raised concerns and impact with commercial sprawl.
- Displayed on the screen a Future Land Use map and aerial map of the area.
- Responded to questions from Council.

Councillor Hodge joined the meeting at 10:14 a.m.

Council:

- Provided individual comments.

Moved By Councillor Given/Seconded By Councillor Gray

**R295/18/03/26** THAT Council receives, for information, the report from the Policy and Planning and Community Planning Departments, dated March 19, 2018, with respect to the Airport Business Park land use history.

Carried

The meeting recessed at 11:15 am.

The meeting reconvened at 11:27 a.m.

#### 4. **Resolution Closing the Meeting to the Public**

Moved By Councillor Singh/Seconded By Councillor Hodge

**R296/18/03/26** THAT this meeting be closed to the public pursuant to Section 90(1) (a), (e) and (f) of the Community Charter for Council to deal with matters relating to the following:

- Position Appointment
- Acquisition, Disposition or Expropriation of Land or Improvements
- Law Enforcement

Carried

#### 5. **Adjourn to Closed Session**

The meeting adjourned to a closed session at 11:28 a.m.

#### 6. **Reconvene to Open Session**

The meeting reconvened to an open session at 12:40 p.m.

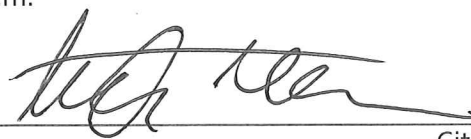
#### 7. **Issues Arising from Correspondence & Community Concerns**

There were no issues arising.

#### 8. **Termination**

The meeting was declared terminated at 12:40 p.m.

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



\_\_\_\_\_  
City Clerk

/acm

# Report to Council



**Date:** April 9, 2018

**1200-31** 1200-31

**To:** City Manager

**From:** Danielle Noble-Brandt, Policy & Planning Department Manager

**Subject:** 2040 OCP Facts in Focus – Agriculture & Rural Areas, Natural Environment and A Changing Climate

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## Recommendation:

THAT Council receives, for information, the report from the Policy & Planning Department Manager dated April 9, 2018, with respect to the 2040 OCP Facts in Focus – Agriculture & Rural Areas, Natural Environment and A Changing Climate.

## Purpose:

To proceed with Part 3 of the Facts in Focus series as it relates to topic-based background papers on the 2040 OCP update. The third installment of the Facts in Focus topics being introduced are Agriculture & Rural Areas, Natural Environment and A Changing Climate.

## Background:

The public launch of the 2040 OCP Update commenced in February 2018 and this OCP update is an opportunity to harness the community's vision and shape the growth of Kelowna over a 20-year time horizon. In preparation for the first phase of public engagement on growth scenarios, Policy and Planning have developed eight Facts in Focus papers to promote a broad understanding of the key issues and opportunities of the core OCP topic areas.

On March 12<sup>th</sup>, 2018 Policy and Planning launched the Facts in Focus papers through a Council presentation on the Purpose of the OCP as well as Population and Housing. On March 19<sup>th</sup>, 2018 Policy and Planning presented the second installment of the Facts in Focus papers including Building Complete Communities and Transportation.

This Council Report highlights three Facts in Focus papers:

- 1) **Agriculture & Rural Areas** – Farming is an essential element of Kelowna's history and identity. A significant portion of the City's land base is agriculture. Similarly, Kelowna's rural lands contain some of the rarest ecosystems in the province. Together, these lands present both a



gift and a responsibility to support and protect (refer to Attachment 1: Facts in Focus – Agriculture and Rural Lands).

- 2) **Natural Environment** – Kelowna’s natural environment, including Okanagan Lake, mountains and streams, distinguishes it as one of the best places to live. There is an urgency to protect remaining natural ecosystems and wildlife habitats to protect species and our natural capital. The green infrastructure functions that the natural environment performs are critical natural assets that promote climate change resiliency for our community (refer to Attachment 2: Facts in Focus – Natural Environment).
- 3) **A Changing Climate** – Locally, Kelowna experienced one of its most extreme weather years on record in 2017 with historic flooding followed by fires and drought. Moving towards a low carbon future is a challenge, yet planning for a healthy and resilient community through focusing growth in the Urban Core and prioritizing sustainable transportation options, is an enormous opportunity (refer to Attachment 3: Facts in Focus – A Changing Climate).

Within the next month, Policy and Planning will present the final Facts in Focus topic paper titled ‘Servicing the Plan’, which is a high level overview of notable considerations of financing and infrastructure servicing of a growth scenario. The complete Facts in Focus series aims to create a baseline knowledge of current policy direction, areas of challenge and future opportunities.

Submitted by:

Danielle Noble-Brandt, Policy & Planning Department Manager

Approved for inclusion:



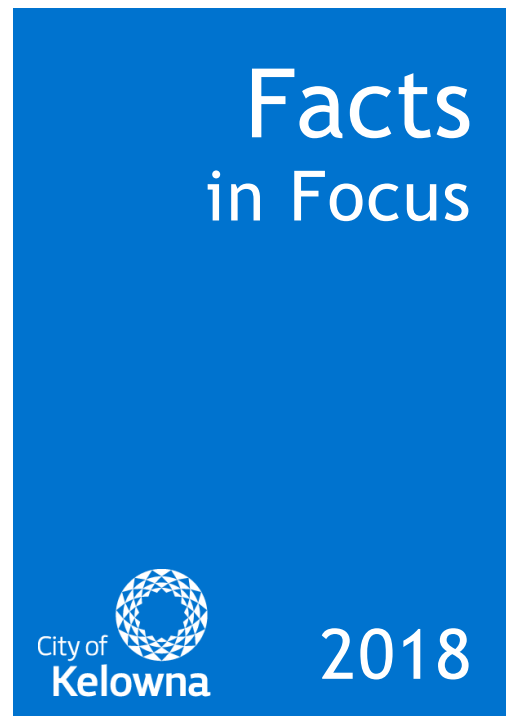
Doug Gilchrist, CP & SI Divisional Director

Attachments:

- 1) Facts in Focus – Agriculture and Rural Lands
- 2) Facts in Focus – Natural Environment
- 3) Facts in Focus – A Changing Climate

cc:

Divisional Director, Community Planning & Strategic Investments  
Divisional Director, Infrastructure  
Divisional Director, Human Resources  
Divisional Director, Financial Services  
Divisional Director, Corporate Strategic Services  
Divisional Director, Corporate and Protective Services  
Divisional Director, Active Living and Culture  
Director, Strategic Investments  
Department Manager, Integrated Transportation  
Infrastructure Engineering Manager  
Community Planning Department Manager  
Communications Advisor



FACTS IN FOCUS

DID YOU KNOW?

## Agriculture & Rural Areas

Farm and rural lands add beauty. They are the green between the blue of the mountains and water. Kelowna's farms, orchards, vineyards and hillsides frame the city and are a key component that makes Kelowna beautiful and unique. Kelowna's agricultural and natural areas are rare within BC and even in Canada. They are part of what makes Kelowna a destination for travel, outdoor activity, food and wine.

Farming is an essential element of Kelowna's history and identity. A significant portion of the City's land base is agricultural, with 55 per cent of its land base zoned for agriculture, and almost 40 per cent of the City in the Agricultural Land Reserve (ALR). The crops that are produced here distinguish Kelowna from the rest of the province, Canada, and increasingly, the world. The Okanagan is notable as one of only three major fruit growing regions and one of only two grape growing regions of Canada<sup>i</sup>. Agriculture is an anchor and foundation of our community. As an economic driver, it brought in over \$100 million dollars in gross income through the Central Okanagan in 2016<sup>ii</sup>.

Similarly, Kelowna's rural lands contain some of the rarest ecosystems in the province<sup>iii</sup>. Our farm and rural lands lie outside the City's Permanent Growth Boundary (PGB). The PGB distinguishes urban from rural and agricultural lands. Development is directed to lands within the PGB, whereas lands outside the PGB are prioritized for protection of resources, including agricultural land and natural areas.



**The Okanagan is notable as one of only three major fruit growing regions and one of only two grape growing regions of Canada<sup>i</sup>.**



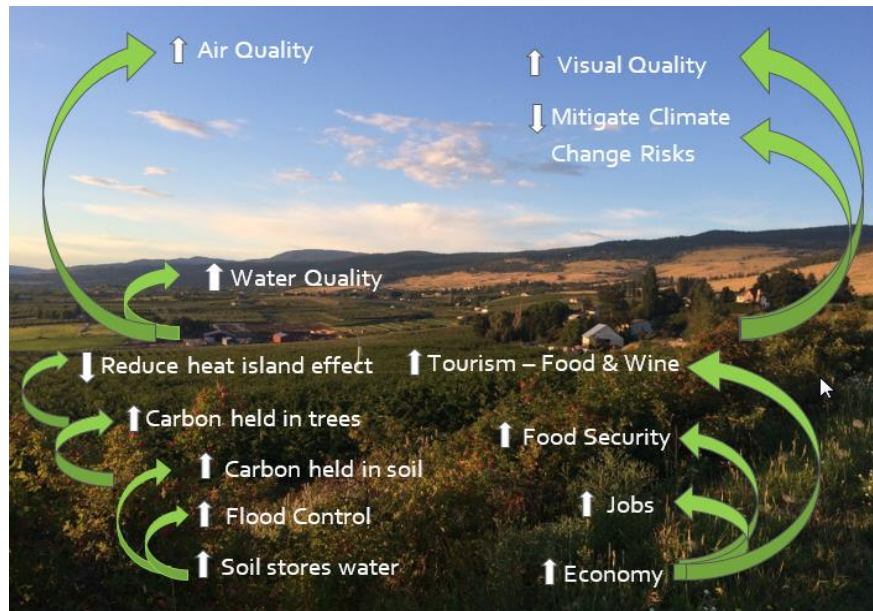
**Agriculture is an anchor and foundation of our community.**

## CURRENT INITIATIVES

There have been many initiatives related to Agriculture since the 2011 OCP. The following are either in progress or endorsed:

- Agricultural Compliance and Enforcement Strategy (2015)
- Agri-tourism Accommodation Amendments (2016)
- Temporary Farm Worker Housing Amendments (2017)
- Agriculture Plan (2017)
- Agricultural Plan Implementation Amendments (2018)

## Functions of Agricultural and Rural Land



Agriculture and rural lands provide many alternate benefits to the community, including stormwater attenuation, flood and wildfire risk mitigation. They help reduce the heat island effect, mitigate climate change, and function as a cornerstone of food security in the community. They draw tourism, support the wine and food industry, and are a backdrop for many cycling, running and relay events through the calendar year. However, benefits expand beyond these factors, and are an integral part of our community identity. They provide assurance for BC's food security, which in turn translates into higher self-sufficiency and less dependency on external resources, climate, transportation and political influences abroad.

While agricultural and rural lands serve many positive functions, there are many competing interests for this land. Kelowna's farm land is among the most expensive in Canada. Yet, it is the least expensive land in Kelowna when compared to land zoned residential, commercial, or industrial zoned land. This creates pressure to use farm land for other uses. While the Agricultural Land Reserve was formed to keep farmland for farming, the need to protect against 'use creep' through enforcement for illegal uses is a notable challenge.

Similarly, rural areas outside the PGB face increasing development pressures. These lands are typically not protected by the Agricultural Land Reserve, and therefore are under greater pressure for the expansion of greenfield development.

Kelowna's agricultural and rural lands present both a gift and a responsibility. Protecting agricultural land is supported by the community, as shown in a 2017 survey where 96 per cent of respondents affirmed that policies to protect farm land were important or very important<sup>iv</sup>. The competition for this non-renewable resource – typically the valley bottoms with the most productive agricultural soils and a highly desirable location, make this a critical responsibility for local governments to maintain the productivity of these lands for future generations.

### Current Direction of the 2030 Official Community Plan

In 2011, the citizens of Kelowna outlined a vision for a sustainable city, one that struck a balance between environmental protection, economic growth, social development and cultural vibrancy. The objectives for agricultural and rural lands included:



## DID YOU KNOW?



The rising cost of agricultural land due to estate homes can be a significant impediment to entering the business of agriculture.



Historically, agriculture has been vulnerable to many changing environmental and economic factors.



For wine grapes, harvesting machines are available which eliminate the need for pickers. Machines that pick apples are now in the prototype stage.

- ▶ **Contain urban sprawl**<sup>v</sup>. The Permanent Growth Boundary (PGB) was established and directs urban uses only to lands within the boundaries.
- ▶ **Protect and enhance local agriculture**<sup>vi</sup>. The OCP establishes clear policy to protect agricultural land from further urban encroachment.
- ▶ **Preserve productive agricultural land**<sup>vii</sup>. The existing OCP supports limiting the impact of permanent structures on productive farmland.

Through Farm Protection and Natural Areas Development Permits, landowners are required to build in accordance with farm protection policies. The Permanent Growth Boundary was introduced to prevent further sprawl into agricultural and rural lands and, for the most part, has remained largely intact since its inception.

### Strategic Direction from Imagine Kelowna

The City and community partners recently undertook the most extensive public engagement process to date to create a new community vision for the future. Imagine Kelowna is a vision for building a prosperous and sustainable city in the face of an uncertain future. The City will use Imagine Kelowna to help shape its short and long-term planning priorities and provide the foundation for future strategies, plans and projects. The wording of the Imagine Kelowna draft goals may change, however, the overall direction of the goals was supported by City Council at the March 12, 2018 City Council meeting. Key draft directions from Imagine Kelowna include:

#### Principle: Smarter

- Take action and be resilient in the face of climate change

#### Principles: Responsible

- Concentrate on growing vibrant urban centres and limit urban sprawl
- Strengthen the protection of our land, water and air resources
- Protect agricultural land and promote sustainable farming

Continued bold leadership and commitment will be required to protect farm and rural lands in the face of growth and economic pressures, to uphold to the policies of the Permanent Growth Boundary, withstand pressure to develop for non-farm uses, and serve a critical role to respond to climate change.

### Looking Ahead: Future Trends

Historically, agriculture has been vulnerable to many changing environmental and economic factors. These uncertainties will continue into the future. Changing political frameworks and trade agreements, such as the uncertainty around NAFTA, climate change and globalization present a constantly moving framework for farm businesses. It is therefore important that policies focus on stabilizing the security of this land base, to justify capital investments and ensure sufficient returns on

## FAST FACTS

96%

According to a 2017 survey, 96 per cent of respondents affirmed that policies to protect farm land were important or very important<sup>iv</sup>.

55%

A significant portion of the City's land base is agricultural, with 55 per cent of its land base zoned for agriculture.

40%

Almost 40 per cent of the City is in the Agricultural Land Reserve (ALR).



these investments. Notably, capital investments will be less likely to occur if agricultural land is seen as a reserve for future urban development and subject to real estate speculation.

- ▶ **Larger Farm Operations:** One trend in the last decade has been to larger farm operations, with multiple parcels of land. Cherries have increased in demand and become more profitable in recent years. Apple varieties such as ambrosias and honey crisp are in demand, where Spartans and MacIntosh apples are on the decline. There have been technological changes as well. For wine grapes, harvesting machines are available which eliminate the need for pickers. Machines that pick apples are now in the prototype stage. The land base needs to remain flexible to accommodate changes over time.
- ▶ **High Land Costs:** As land values rise, the pressure on agricultural and rural lands for development will increase. Locally, the affordability of farm land is increasingly becoming a barrier to entry. The use of farmland for estate homes has increased over the last decade<sup>viii</sup>, dramatically increasing the costs of farms with large homes.

## Current challenges of the 2030 Official Community Plan

Farm and rural lands are still under pressure from development and illegal uses. The rising cost of agricultural land due to estate homes can be a significant impediment to entering the business of agriculture. As well, the illegal use of agricultural and rural lands for commercial and industrial uses continue to put pressure on enforcement resources. Additionally, farm land is threatened by 'use creep' where non-farm uses are expanded beyond what is permitted. Further, conflicts between farm uses and urban development remain an issue, and there is a need to explore a land use designation that addresses a transition to agriculture.

## Key Directions for the 2040 Official Community Plan

Planning for the next twenty years will require leadership on land use policy and implementation, strategic decisions with respect to infrastructure and transportation planning, and action towards mitigating and adapting to climate change, if Kelowna is to have a healthy agricultural land base and future food security.

Using the foundation of the lessons learned through the successes and challenges in delivering previous agricultural policy, and the more up-to-date call to action from Imagine Kelowna, the following key directions emerge to help inform our action for the next 20 years:

- ▶ **Protect Agricultural and Rural Land.** Pressure to develop lands outside the PGB will continue, as urban land prices increase and the supply of undeveloped land decreases. Agricultural land is an easy target for urban expansion and must be protected with clear, consistent policy and regulation,



relying on the stability of the Permanent Growth Boundary. Inaction risks a gradual erosion of farm land, increased sprawl in rural areas, and increased conflicts between residents and farmers along the farm/urban edge, with a consequential reduction in farming. This in turn, will result in the increased cost of farmland due to speculation, and act as a barrier to attracting young farmers to the industry.

- ▶ **Adapt to a changing climate.** Climate change will likely bring early and warmer springs, more intense weather events, drought, and potential flooding. It is vital that we optimize the role that agricultural lands play in flood mitigation and stormwater management.
- ▶ **Use our water resources wisely.** Population growth and climate change will challenge our water resources. If agriculture is to have a long and successful future in Kelowna, a sustained community effort for water conservation will be needed.
- ▶ **Support local markets.** As agricultural product markets grow and change, the City can be responsive by looking for opportunities to support local markets for agricultural goods.

Kelowna is one of the few cities in Canada to have the majority of their land base in agricultural and rural lands, while having a vibrant, growing urban centre, all set beautifully between the water and mountains. Kelowna's ability to grow a great variety of fruit and vegetables, together with its rare natural ecosystems, sets it apart, and positions itself well in the future for sustainability and food security in the long term. However, with these gifts come responsibility. Strong leadership and commitment to preserve the farm lands, forests and hillsides that frame our city is required. Kelowna is in a unique position to lead on many of these efforts. The updated 2017 Agriculture Plan set a solid foundation for which policy direction can be inspired by to promote the practice of farming to adapt and evolve to meet the changing social, economic and environmental demands. However, this will need to be balanced to ensure that uses today do not preclude the options of future technological innovations for this industry. The preservation of the City's agricultural landscape ultimately achieves the overarching goal to foster a more compact, compete community and ensure the longevity of this precious, non-renewable resource.

Explore the Story Map: [Agriculture & Rural Areas](#) or visit [kelowna.ca/ImagineNext](http://kelowna.ca/ImagineNext) to see how you can influence *Our Kelowna as we Grow*, the Kelowna 2040 Official Community Plan update.

i City of Kelowna, 1998. Agriculture Plan, Planning and Development Services

ii Census of Agriculture, 2016. Revenue in the Central Okanagan.

iii Iverson, K. 2008. [Sensitive Ecosystems Inventory, Kelowna, 2007. Volume 1: methods Ecological Descriptions, Results, and management Recommendations.](#)

iv City of Kelowna, August 2017. Agriculture Plan

v City of Kelowna, 2011. Kelowna 2030 Official Community Plan, Chapter 1 p. 1.3

vi City of Kelowna, 2011. 2030 Official Community Plan – Greening our Future – Chapter 5 Objective 5.33

vii City of Kelowna, 2011. 2030 Official Community Plan – Greening our Future – Chapter 5 Objective 5.34

viii Ministry of Agriculture, 2014. Agriculture Land Use Inventory – Central Okanagan, 2004 to 2014.

ix City of Kelowna, August 2017. Agriculture Plan





## FACTS IN FOCUS

# Facts in Focus



2018

## DID YOU KNOW?

## Natural Environment

Kelowna's natural environment distinguishes it as a unique place in Canada. The lakes, mountains and streams draw many people to live and visit, contributing significantly to the local economy. As the foundation of what makes Kelowna unique and special, it is fundamental that the City plans to protect the water, air and land that residents enjoy and depend upon for their health, economy and livability.

The Okanagan's ecosystems are among the rarest in BC<sup>i</sup>, with over 25 per cent of the Central Okanagan assessed as sensitive, and the remainder modified by human development<sup>ii</sup>. Kelowna lies at the heart of the Okanagan valley, and the City's natural areas form a vital link<sup>iii</sup> for wildlife migration and plant species dispersal between the north and south<sup>iv</sup>, which will become increasingly important to both plant and wildlife species with climate change. Similarly, natural areas are home to a diverse population of wildlife species, many of which are at risk in BC and Canada<sup>v</sup>. The Central Okanagan is home to many rare and endangered species and ecosystems. Riparian areas, wetlands, grasslands, and ponderosa pine forests are commonly critical habitats for many at risk species.

Natural habitat not only conserves our biodiversity, but it also sequesters carbon dioxide and stores a substantial amount of carbon. Conserved areas provide opportunities for ecosystems and species to adapt to climate change and help to mitigate threats such as flooding and drought. These processes, also known as 'green infrastructure' activities, provide



**The Central Okanagan is home to many rare and endangered species and ecosystems.**



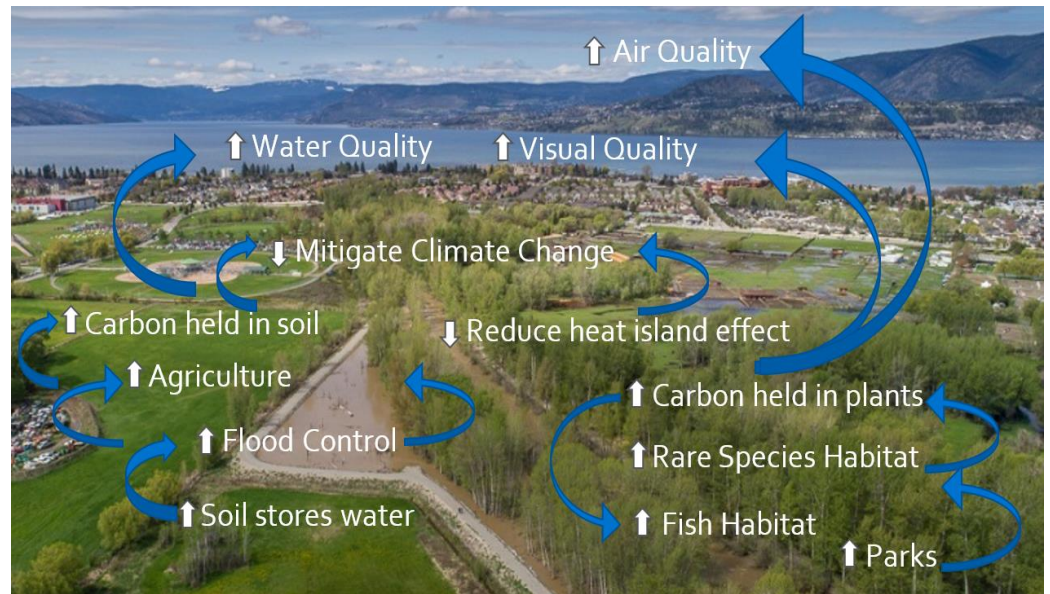
**Riparian areas, wetlands, grasslands, and ponderosa pine forests are commonly critical habitats for many at risk species.**

## CURRENT INITIATIVES

There have been many initiatives related to environment since the 2011 OCP. The following are either in progress or endorsed:

- Mission Creek Restoration Initiative
- Community Climate Action Plan
- Pedestrian and Bicycle Master Plan
- Transportation Master Plan
- Agriculture Plan

## Functions of Natural Areas



economic and environmental services to communities. From retaining water, preventing flooding, recharging aquifers that provide drinking water, and providing habitat for a variety of species, the natural environment is an investment in our future quality of life.

## The City has changed over time

While 28 per cent of Kelowna has been identified as sensitive <sup>vi</sup>, over 64 per cent has been altered by urban or agricultural activity. Riparian and grasslands are uncommon, and wetlands, old forests, and woodlands are extremely rare. What's more, many of these ecosystems remain at risk for loss and further fragmentation due to development. Since 1800, the City has lost roughly 92 per cent of riparian areas, 77 per cent of broadleaf woodlands, and 73 per cent of grasslands to development <sup>vii</sup>.

Natural areas benefit the community in many ways. They benefit agriculture, by providing natural predators such as birds that reduce pests in vineyards and orchards. Natural areas function as a carbon sink, reduce the heat island effect, contribute to the aesthetics of what makes Kelowna beautiful and is the backdrop that makes many parks enjoyable for hiking and mountain biking.

Globally, cities are at a crossroads of how they plan to accommodate a growing population base and how to reconcile the resulting effects to the natural environment. The ecological footprint of development threatens the systems upon which people depend <sup>viii</sup>. Notably, technology and market forces have changed significantly since the last OCP update in 2011, and the necessity to protect remaining natural ecosystems and wildlife habitats is high given the multitude of functions that they serve.

## Current Direction of the 2030 OCP

In 2011, the citizens of Kelowna outlined a vision for a sustainable city, with a balance between environmental protection, economic growth, social development and cultural vibrancy. Through this, the core direction of the OCP <sup>xiii</sup> relating to environmental protection is:



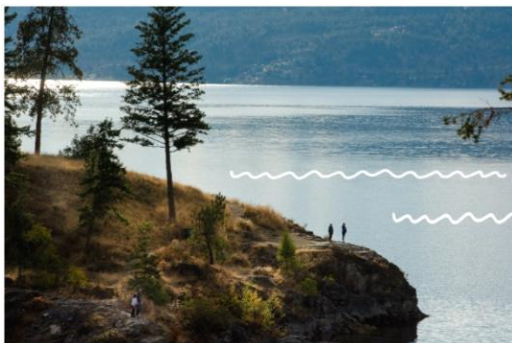
## DID YOU KNOW?



The Okanagan's ecosystems are among the rarest in BC<sup>i</sup>, with over 25 per cent of the Central Okanagan assessed as sensitive, and the remainder modified by human development<sup>ii</sup>.



The cost to the City for flood protection in 2017 alone was \$3.3 million<sup>xi</sup>, with a total of \$10.7 million<sup>xii</sup> in damages being shared by the province and other jurisdictions.



- ▶ **Protect our natural areas.** The OCP established clear direction to protect natural areas including wetlands, riparian areas and forested slopes from the impacts of a growing city.
- ▶ **Sustainable development.** Policy and regulation was set out in the OCP to encourage sustainable site and community development.
- ▶ **Protect Species Biodiversity.** The OCP included clear policy and guidelines to help protect for a diversity of species and the ecosystems they live in.

Since 2011, the City has consistently applied the principles of natural area protection and restoration for creeks, riparian areas, steep slopes and lakeshore. This has been accomplished through Environmental Areas Development Permits, dedication of parkland, securing registered covenants and land trusts. Projects such as the Mission Creek Restoration Initiative and Munson Pond are collaborative efforts to reclaim floodplain, protect fisheries habitat and restore wetland and riparian habitat that is home to rare wildlife species.

### Strategic Direction from Imagine Kelowna

The City and community partners recently undertook the most extensive public engagement process to date to create a new community vision for the future. Imagine Kelowna is a vision for building a prosperous and sustainable city in the face of an uncertain future. The City will use Imagine Kelowna to help shape its short and long-term planning priorities and provide the foundation for future strategies, plans and projects. The wording of the Imagine Kelowna draft goals may change, however, the overall direction of the goals was supported by City Council at the March 12, 2018 City Council meeting. Key draft directions from Imagine Kelowna include:

#### Principle: Smarter

- Take action and be resilient in the face of climate change

#### Principles: Responsible

- Concentrate on growing vibrant urban centres and limit urban sprawl
- Preserve Okanagan Lake as a shared resource
- Strengthen the protection of our land, water and air resources

Bold leadership and community action will be required to achieve this vision. Firm adherence to the preservation of the Permanent Growth Boundary, waterbodies, riparian areas and steep slopes will be required to protect natural areas, reduce emissions and counteract sprawl. Protection of water quality and quantity is imperative for drinking, agricultural irrigation and fire control.

## FAST FACTS

92%

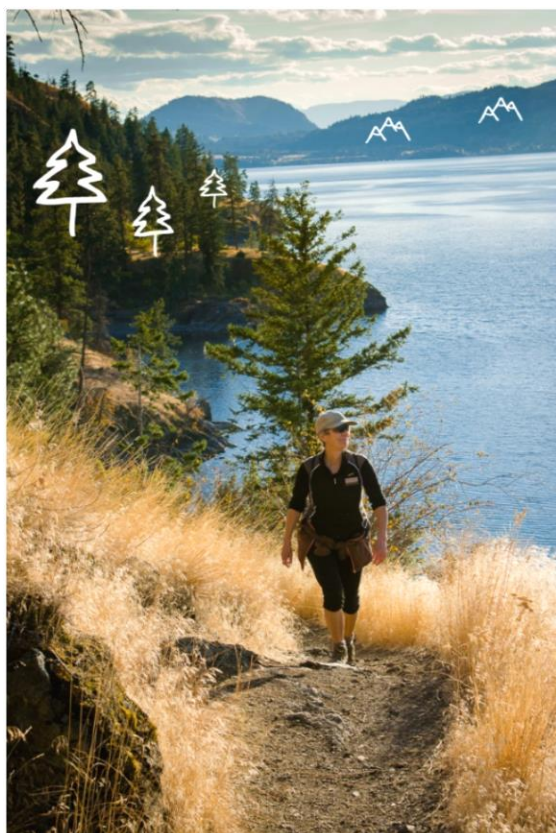
Percentage of riparian areas the City has lost since 1800 to development.

77%

Percentage of broadleaf woodlands the City has lost since 1800 to development.

73%

Percentage of grasslands the City has lost since 1800 to development.



## Looking Ahead: Future Trends

Going forward, Kelowna is faced with threats to its natural environment through development pressure, rising land prices, competing objectives as well as the impacts of climate change. Less snowpack, more severe rain events and drier summers are predicted, intensifying the risks for pest damage, flooding, wildfires, and the economic, environmental and health impacts they entail <sup>xiv</sup>. Trends show that one in five Canadians will face a flood risk at some level, while 1.8 million households are shown to be at very high risk (Canadians personally shouldering approximately 600 million per year in flooding losses) <sup>xv</sup>. Both the anticipated rate of growth and the more extreme weather events <sup>xvi</sup> will require collaboration with community partners and residents to share this responsibility.

## Current challenges of the 2030 Official Community Plan

Natural ecosystems and species are threatened by development pressure, climate change, and shifting environmental legislation. Development sprawl, habitat loss, and conditions such as fires and floods challenge biodiversity and ecosystem health on multiple fronts. In the face of an uncertain legislative environment and limited resources at higher levels of government, Kelowna must take a leadership role in protecting the resources within its boundaries.

Neglect to protect natural ecosystems, as well as water and air resources will have long term and irreversible consequences to the livability of the city. Impacts will be significant on species, ecosystems, and water resources. As with all other communities, Kelowna has a finite limit to its natural resources – notably having one of the lowest per-person fresh water availabilities in Canada, yet, the summertime water consumption is well above the national average. The urban built form is a large determinant on how many resources we consume per capita, and how that translates into our collective community 'ecological footprint'.

## Key Directions for the 2040 Official Community Plan

Planning for the next twenty years will need to put the objectives of sprawl reduction, water, air and ecosystem protection, as well as climate change mitigation and adaption as guiding principles if the City is to maintain the health, beauty and viability of the natural environment residents enjoy, and depend on for economy, health and lifestyle.

Using the foundation of the lessons learned through the successes and challenges in delivering previous environmental policy, and the draft goals from Imagine Kelowna, the following key directions emerge to help inform the City's action for the next 20 years:

- ▶ **Protect natural habitats, slopes and water bodies against development pressures.** Continuous vigilance for the protection of ecosystems, rare species habitats, water bodies, riparian areas and hillsides will be required in order to protect the functions these elements provide in terms of clean air and water. They also





serve a critical role in species adaptation by providing habitat and corridors of at-risk ecosystems as ecosystems change.

- ▶ **Contain sprawl.** Adherence to the Permanent Growth Boundary, and directing development energy to the Urban Core to prevent mass greenfield development will serve to protect natural spaces in the fringe.
- ▶ **Ensure water quality and quantity.** With a growing population, demands on water will increase. More intense weather may cause erosion, debris flows and flooding which affects water quality. Maximizing the retention of natural landscapes will allow rain water to replenish our rivers, lakes, streams, and groundwater. This protects our precious supply of drinking water and to act as a filter for our water.
- ▶ **Invest in green infrastructure.** With increased climate risks and transportation pressures, the challenge will be to accommodate alternative and green infrastructure, including using the urban forest, parks and public space to promote ecological functions xvii, reduce greenhouse gases and provide mitigation for flooding and heat island effects.

- ▶ **Mitigate and adapt to climate habitat threats.** Climate change threats include increased pests, drought, flood events, wildfire and associated air quality impacts. Protected open space can trap and absorb water during heavy rain storms, which can help mitigate or prevent flooding in populated areas. This reduction of flood waters serves to protect our homes, in addition to reducing the strain on local sewer and stormwater infrastructure.



Kelowna has the privilege of having some of the rarest ecosystems in the country, as well as being one of the fastest growing regions in Canada. This gift comes with a responsibility, and the OCP must signal the protection of our natural diversity for the intrinsic values for the benefit of future generations. As such, it will require extraordinary vigilance and prioritization to keep the environment as beautiful and healthy as it is today. For this, Kelowna will need to collaborate with other levels of government, agency partners and community members to achieve conservation outcomes that will benefit our community for generations to come.

Explore the Story Map: [Natural Environment](#) or visit [kelowna.ca/ImagineNext](https://kelowna.ca/ImagineNext) to see how you can influence *Our Kelowna as we Grow*, the Kelowna 2040 Official Community Plan update.

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# Facts in Focus



2018

FACTS IN FOCUS

DID YOU KNOW?

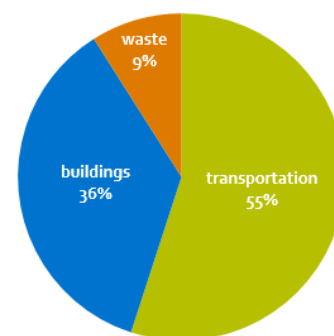
## A Changing Climate

There is global consensus among climate scientists that climate change is happening, and human activity is the cause.<sup>i</sup> Communities must be prepared to join others to respond to the impacts of climate change (climate adaptation) while at the same time reduce greenhouse gas (GHG) emissions (climate change mitigation) to minimize climate impacts.

Leaders in our community are already stepping up and taking action to reduce climate impacts. The City is working on an update to the Community Climate Action Plan, FortisBC is promoting a breadth of programs and funding options to advance energy reductions, and schools are enhancing their curriculum to teach our children about the environmental, ecological and educational values of modifying our human behaviours. Actions like these inspire a more resilient position, but we need to do more at the community level.

Climate change is not something that needs to be addressed in the distant future, it is happening now and the change affects everyone. Environmental, social and economic problems are already being experienced in Canadian communities, and these are projected to increase.<sup>ii</sup> Locally, Kelowna experienced one of its most extreme weather years on record in 2017. Extreme spring precipitation led to historic flooding of Okanagan Lake, Mission Creek and Mill Creek, impacting approximately 3,200 residents and causing approximately \$10.7 million dollars in damage to City property and infrastructure, and this does not take into account the costs for private property damage.<sup>iii</sup> This was followed by one of the hottest and driest July and August on record<sup>iv</sup>, factors contributing to a devastating wildfire season and the community blanketed in smoke. As the impacts of climate change continue to grow, these types of extreme weather events are expected to occur more regularly.

GHG Emissions in Kelowna



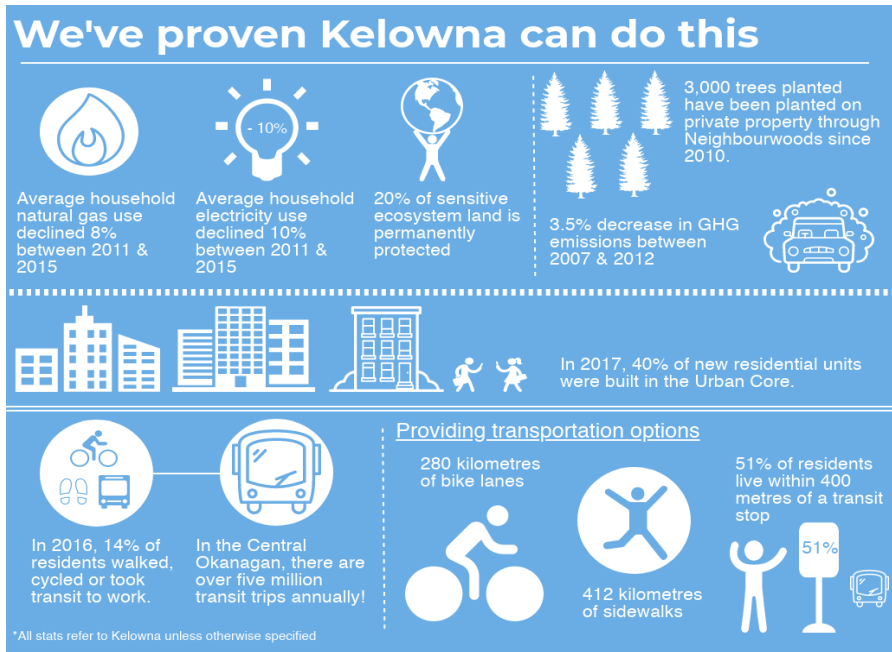
In 2012, Kelowna's greenhouse gas (GHG) emissions were over 642,000 tonnes, or about 5.4 tonnes per capita. This equates to \$341 million in energy expenditures, about \$3,000 per person per year. While 2012 emissions showed a slight decline from the 2007 baseline, preliminary data indicates that, since this time, emissions are rising.

Source: City of Kelowna, 2018. Community Climate Action Plan DRAFT.

## CURRENT INITIATIVES

There have many initiatives related to Climate since the 2011 OCP. The following are either in progress or endorsed:

- Community Climate Action Plan
- Corporate Energy and Emissions Plan
- Urban Centres Roadmap
- Pedestrian and Bicycle Master Plan
- Transportation Master Plan
- Regional Strategic Transportation Plan
- Regional Solid Waste Management Plan
- Energy Step Code Implementation Strategy
- Community Energy Retrofit Strategy
- Urban Forestry Strategy
- Neighbourhoods



Moving towards a low carbon future is a monumental challenge, but planning for a healthy and resilient environment is also an enormous opportunity. Communities across BC, Canada, and abroad are taking up the responsibility on energy, sustainability and climate solutions. These solutions are ever more feasible, and the need to lead is ever more pressing. Community benefits are broad reaching from healthier residents, promoting a more livable and prosperous community, to notable reductions in energy costs.

A dynamic community that embraces diverse transportation options to shift away from a car-centric culture; growing vibrant urban centres and shifting away from sprawl; and protecting land, water and air will attract jobs in the new global economy, is healthier for citizens, and will be resilient in the face of a changing climate.

The tide is turning. Recently, the US saw three times more employees working in renewable energy than those in fossil fuels<sup>v</sup> and China's solar and wind capacity continue to grow beyond expected targets<sup>vi</sup> and the Netherlands made a commitment for all new cars to be emission-free by 2030<sup>vii</sup>.

## Current Direction of the 2030 Official Community Plan

The current OCP sets a target for reducing emissions, and all stakeholders in our community (government, local residents, and businesses) must play a role. While the OCP has one specific policy on reducing greenhouse gas emissions, policies throughout the document support the creation of a low carbon community while continuing to ensure the city is a desirable place to call home.

- **Contain urban sprawl:** The OCP introduced a Permanent Growth Boundary to contain sprawl and beyond which no significant development is supported.
- **Develop complete communities:** Encouraging the development of complete communities in the five urban centres that support live-work developments, amenities and optimizing land use.
- **Focus growth in Urban Centres:** Directing investments (parks, streetscaping, bike lanes, etc.) to the City's urban core and urban centres to attract investment and encourage growth.
- **Prioritize sustainable modes of transportation:** Prioritizing streets that are designed to serve a broader range of transportation modes focusing on pedestrians, cyclists, and transit service.
- **Improve the energy efficiency of new buildings:** Embracing sustainable solutions to improve the efficiency and performance of buildings.

## DID YOU KNOW?



A number of sustainable transportation solutions within the urban centres have been funded by the OCP's DCC program, reducing transportation-related emissions by making commuting by walking, cycling or transit easier.



The most recent Census (2016) shows that the commute to work remains dominated by vehicles (79 per cent as driver, 5 per cent as passenger).

- **Reduce and divert solid waste:** Providing opportunities to reduce and reuse waste in order to reduce the carbon footprint associated with it.
- **Increase local food production:** Encouraging more local food production to reduce reliance on imports by promoting healthy and productive agriculture and encouraging opportunities for local food production through community gardens and farmer's markets.

A number of policies in the 2030 OCP have been successful at curbing the growth of greenhouse gas emissions. With respect to development, the introduction of a Permanent Growth Boundary was to concentrate development and supporting infrastructure within its boundaries while simultaneously preserving agriculture and our natural resources. The Permanent Growth Boundary has been successful and has remained largely intact since its inception. Policies directing development to the urban core have also shown some success, with Kelowna seeing 40 per cent<sup>viii</sup> of all new residential units constructed within the Urban Core in 2017, up from 25 per cent in 2015<sup>ix</sup>.

### Strategic Direction from Imagine Kelowna

The City and community partners recently undertook the most extensive public engagement process to date to create a new community vision for the future. Imagine Kelowna is a vision for building a prosperous and sustainable city in the face of an uncertain future. The City will use Imagine Kelowna to help shape its short and long-term planning priorities and provide the foundation for future strategies, plans and projects. The wording of the Imagine Kelowna draft goals may change, however, the overall direction of the goals was supported by City Council at the March 12, 2018 City Council meeting. Key draft directions from Imagine Kelowna include:

#### Principles: Connected

- Embrace diverse transportation options to shift away from our car-centric culture

#### Principles: Smarter

- Take action and be resilient in the face of climate change

#### Principles: Responsible

- Concentrate on growing vibrant urban centres and limit urban sprawl
- Strengthen the protection of our land, water and air resources
- Protect agricultural land and promote sustainable farming
- Preserve Okanagan Lake as a shared resource



FAST FACTS



36%

The percentage of emissions that come from buildings in Kelowna.



40%

Policies directing development to the urban core have shown success, with Kelowna seeing 40 per cent of all new residential units constructed within the Urban Core in 2017.



25%

Percentage of new residential units constructed within the Urban Core in 2015.

Imagine Kelowna stresses the need for complete compact communities that support walking, cycling and transit. Focusing new housing in urban centres, making these centres easy to get around for daily trips without a car, and attracting a variety of businesses, services and amenities will create vibrant centres that not only will reduce greenhouse gas emissions by being more efficient but will also improve quality of life by making it easier for people to live, work, shop and play in the same neighbourhood.<sup>xxi</sup>

Looking Ahead: Future Trends

Climate change is already occurring. Regions across the globe have been and will be impacted in different ways and using the past as a predictor of the future is no longer viable. Over the last century, British Columbia’s Southern Interior warmed 0.9°C<sup>xxii</sup> and despite annual precipitation increasing 17 per cent in the region<sup>xxiii</sup>, snow depth decreased by 11 per cent in the second half of the century<sup>xxiv</sup>. Looking to the future, the Pacific Climate Impacts Consortium predicts the Okanagan-Similkameen’s climate will change significantly in the coming decades<sup>xxv</sup>:

	Season	2020s	2050s	2080s
Mean Temperature	Annual	+1°C	+1.9°C	+2.9°C
Precipitation	Annual	+4%	+6%	+8%
	Summer	-7%	-13%	-14%
	Winter	+2%	+6%	+10%
Snowfall	Winter	-6%	-14%	-22%
	Spring	-33%	-56%	-78%

These changes in climate will have impacts<sup>xxvi</sup> on many aspects of the community including:

- 1. **Water resources.** Declining snowpack and warmer summers could lead to increased drought and less water available for residents during the summer when demand is high. Increased precipitation could result in increased flooding. Further, earlier snowmelt and less spring snowpack will mean less water in streams for fish and wildlife during hot summers.
- 2. **Agriculture.** Hotter summers will increase the demand for irrigation at a time when water availability will be low. A warmer climate will increase pests.
- 3. **Biodiversity.** A warmer climate could impact the types of species that call the Okanagan home, as some will move to cooler climates and others may take their place.
- 4. **Trees.** With a warmer climate, trees will be at increased risk for pests such as pine beetle.





5. **Tourism.** The tourism sector could be significantly impacted. With reduced snow comes reduced winter recreation opportunities. Hotter, drier summers will increase forest fire risks, thus impacting air quality. These extremes were observed in 2017, with Tourism Kelowna noting a seven per cent decrease in hotel occupancy in July due to beaches and boat launches that were closed due to flooding as well as poor air quality due to smoke from nearby forest fires <sup>xxvii</sup>.
6. **Energy.** While warmer winters could result in less demand for energy for heating, hotter summers will increase the demand for cooling.
7. **Infrastructure.** Major flooding events will put increased demands on storm water systems. Upgrades or retrofits to vulnerable flood and erosion control infrastructure may be required. The 2017 flood events resulted in \$10.7 million in damages to the City's infrastructure including stormwater systems, parks, walking paths, bridges, retaining walls, roads and other public properties <sup>xxviii</sup>.
8. **Health.** The World Health Organization has said that "*climate change is the greatest threat to global health in the 21<sup>st</sup> century*" <sup>xxix</sup>. Health impacts due to climate change are numerous including heat related stress (especially for vulnerable populations such as seniors, children, etc.), reduced air quality, and poorer water quality. This was seen in Kelowna in 2017 when the City water utility issued a water quality advisory for 1.5 months due to high turbidity from high stream flows. This was followed by the community blanketed in smoke and the air quality health index was high for 25 days impacting vulnerable populations and requiring many others to stay indoors <sup>xxx</sup>.

## Current Challenges of the 2030 Official Community Plan

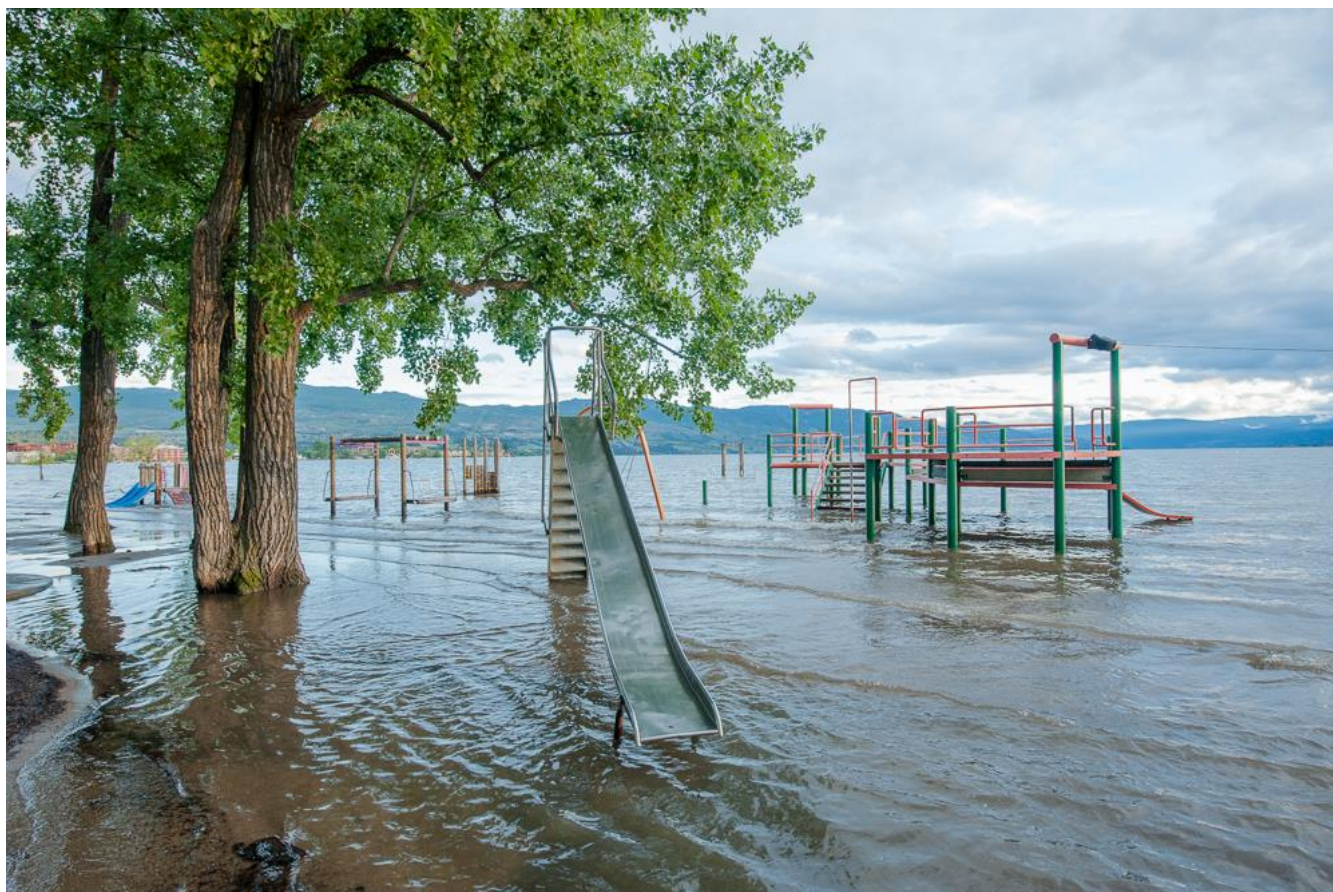
While the current OCP has established sound policy direction, more needs to be done to reduce emissions and prepare the community for a changing climate. The decisions made today will have long-term impacts on Kelowna's greenhouse gas emissions. Policy and choices that support suburban development and reliance on automobiles sets Kelowna on a path for continual increases in GHG emissions for decades to come <sup>x</sup>. However, by investigating options for Kelowna to become more compact, complete community this will lower reliance on vehicles and consequently emissions.

While we see the effects of climate change, the personal and business choices that we make do not necessarily match the direction that climate change requires us to take. These include:

- ▶ **Behavior change.** Although most people are aware and concerned about climate change, it does not translate into action <sup>xi</sup>. As seen in Imagine Kelowna, the community's long term desire to be less car dependent, reduce sprawl and to take action on climate change does not align with the current community behavior. For example, transportation (specifically traffic congestion) continues to be a top issue in the biannual citizen survey <sup>xii</sup>. The gap remains on how to connect with individuals and the community to promote sustainable behavior.
- ▶ **Growing community.** With an estimated growth of 50,000 residents between now and 2040, community emissions could continue to grow even with a decline in per capita emissions. Despite more development happening in the urban core, population growth will continue to put pressure on undeveloped land in Kelowna's suburban and rural areas.



- ▶ **Car-dependant neighbourhoods.** Many Kelowna neighbourhoods lack sufficient density to support transit and are too far away for walking and cycling to be convenient, so residents must rely on their automobile. The most recent Census (2016) shows that the commute to work remains dominated by vehicles (79 per cent as driver, 5 per cent as passenger). Despite a nineteen per cent increase in the percentage of people choosing to walk, cycle or take transit to work (to nearly 14 per cent in 2016)<sup>xiii</sup>, fuel sales (and associated emissions) continue to increase, up 14 per cent since 2012<sup>xiv</sup>.
- ▶ **Low efficiency buildings.** 36 per cent of emissions come from buildings in Kelowna. Progress is being made on increasing energy efficiency of new buildings (for example the introduction of the Provincial Energy Step Code which calls for all buildings to be net zero energy ready by 2032). This does not address existing buildings, 72 per cent of which were constructed prior to 2000<sup>xiv</sup>. Typical life expectancies of buildings can be for over half a century.
- ▶ **Funding change.** The Stern report confirms that the benefits of strong and early investment in climate change prevention far outweigh the economic costs of inaction<sup>xvi</sup>. However, this issue is competing with other high priority issues for limited government dollars such as housing and homelessness, and there is little appetite for tax increases at any level of government. The costs, however, could far outweigh the risks. The 2017 flooding event cost the City over \$10.7 million<sup>xvii</sup> (not including private property damage), and if these flooding or fire events become more frequent, these costs will only continue to rise.
- ▶ **Adaptation Measures.** The current OCP is silent on climate adaptation, specifically policies that are needed to minimize the impacts from changing climatic conditions. Kelowna, like the rest of the province, has already experienced extreme weather, flooding, droughts and fires, and these impacts are anticipated to become more severe and/or frequent<sup>xviii</sup>. Preparing to become resilient to these changes is crucial. Exploring the use of green infrastructure which can increase flood protection while providing shade, reducing heat in the urban core and improving air quality is one option. These improvements not only help the community adapt to climate change but also reduce GHG emissions, and can provide health, social and economic benefits<sup>xix</sup>.





## HEALTH AND CLIMATE CHANGE

The World Health Organization has said that "climate change is the greatest threat to global health in the 21<sup>st</sup> century"<sup>xxix</sup>



## Key Directions for the 2040 Official Community Plan

Even without growth, emissions will remain constant if infrastructure isn't provided to make walking, cycling, and transit the convenient choice for most trips. Without new infrastructure, new technology that will help reduce GHG emissions such as electric vehicles or driverless shared vehicles won't be able to become common place. When we reduce fossil-fuel pollution, it improves the health and security of our community. We can slow the rising temperatures that are changing weather patterns and causing more intense storms and heat waves, which in turn affect food and energy prices, as well as threaten our city infrastructure and health and safety of our families.

By taking action, we can be prepared for climate impacts, enhance our community, create good local jobs, and make our neighborhoods more attractive places to live in. Committing to policy and actions that create the desired future residents are asking for in *Imagine Kelowna* is intricately linked to climate change. By taking action, residents can benefit from:

1. **Healthy, complete community.** That includes healthy transportation options, quality housing, access to healthy food, expansive urban forest and good air quality. Saying no to development in the fringe results in a compact efficient city, with a corresponding transportation system that has a lighter environmental footprint. Further a complete, compact community is more economical to operate and maintain.
2. **Economic development.** Promoting Kelowna as environmentally conscious can help attract green innovation.
3. **Reduced energy consumption.** In 2012, Kelowna residents spent approximately \$3,000 per capita on energy. Reducing energy consumption saves residents and businesses money and also increases the dollars available for local goods and services.
4. **Social benefits.** Transportation and housing choices represent the two largest expenditures for most working households. Energy efficient homes in complete communities reduce utility costs for residents and save transportation costs by reducing the need for vehicle ownership.

In addition to achieving the goals of *Imagine Kelowna*, there are several changes on the horizon that could change the way communities develop and help to significantly reduce GHG emissions. Automakers are making commitments to reduce reliance on fossil fuels making electric vehicles become mainstream. Emission reductions achieved by shifting to electric vehicles will be further compounded with the introduction and growth of driverless shared vehicles (some predict that fully automated vehicles will become the prevailing mode of urban transportation by the 2030s<sup>xxx</sup>). Some studies show that if cities embrace vehicle technology, automation, electrification and ride sharing, there can be an 80 per cent cut in GHG emissions compared to the business as usual option.<sup>xxxii</sup>

Further, all new buildings will be required to be net zero energy ready in BC by 2032 (the BC Energy Step Code) and older building stock will start to be replaced with energy efficient buildings. Communities endorsing higher energy efficiency requirements early will ensure that more buildings will



have these efficiencies built in. Further, it is hoped that the annual increases to the provincial carbon tax<sup>xxxiii</sup> will encourage the reduction of fossil fuel use.

Success on reducing emissions and being prepared for a changing climate may require a new approach to policy and infrastructure investments. The shift to complete communities that allows for convenient access to alternative modes of transportation for daily commutes and errands will require leadership from the City, residents, businesses and development community. It may require making bold decisions on where new development goes and choosing to prioritize infrastructure funds differently from the past. Ultimately, the move to vibrant urban centres with diverse transportation options creates a healthy city for all.

The greatest action on climate begins with us. We have the capacity and community will to make a difference that will benefit our environment, our economy, our quality of life and our City's resiliency.

Explore the Story Map: [A Changing Climate](#) or visit [kelowna.ca/ImagineNext](http://kelowna.ca/ImagineNext) to see how you can influence *Our Kelowna as we Grow*, the Kelowna 2040 Official Community Plan update.

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# Our Kelowna as we Grow

## Facts in Focus: A Changing Climate







**Climate change is happening NOW**  
In 2017 Kelowna saw:  
flooding, droughts, poor air quality



# Climate action

- ▶ Communities must be prepared to:
  1. Respond to climate change impacts (**adaptation**)
  2. Reduce greenhouse gas emissions (**mitigation**)

## 2050 Climate Projections



**1.9 CELSIUS  
INCREASE**



**7% ANNUAL  
INCREASE**



**14% ANNUAL  
DECREASE**

# Climate Connections



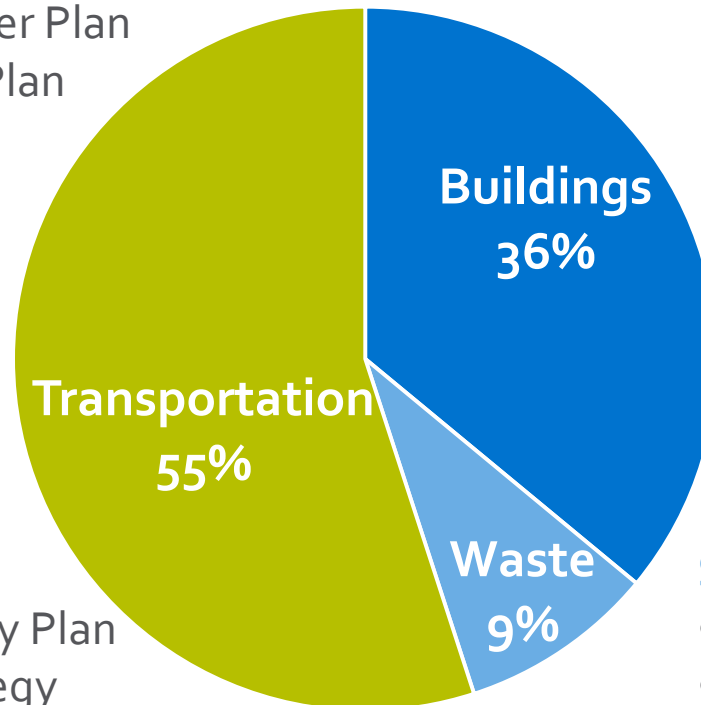
**2012 Emissions**  
**642,000 tonnes CO<sub>2</sub>e**

## TRANSPORTATION

- Pedestrian Bicycle Master Plan
- Transportation Master Plan
- OGO Car Share
- Transit Plan(s)
- Parking Management
- Clean Air Strategy
- Land use planning
- Transportation programs

### Other Linkages

- Official Community Plan
- Healthy City Strategy
- Corporate Energy and Emissions Plan



## BUILDINGS

- BC Building Code
- Energy Step Code
- Energy policy
- Land use planning
- Partnerships with utilities
- Promotion of energy retrofit programs

## SOLID WASTE

- Waste management plan
- Waste management program
- Landfill gas program





Emissions from vehicles are rising  
fuel sales are up 14% since 2012



23,000 - 25,000 new units required by 2040  
72% of current homes constructed before 2000





# Future Trends

1. Climate trends
  - ▶ ~ 2°C temperature ↑
  - ▶ hot, dry summers
  - ▶ More rain, less snow
2. ↑ drought
3. ↑ flooding
4. ↑ risk for pests
5. Economic impacts (e.g. agriculture, tourism)
6. Health impacts





# We CAN do this

It is time to accelerate efforts and for all segments of our community- residents, businesses, and government - to do their part.



# Imagine Kelowna

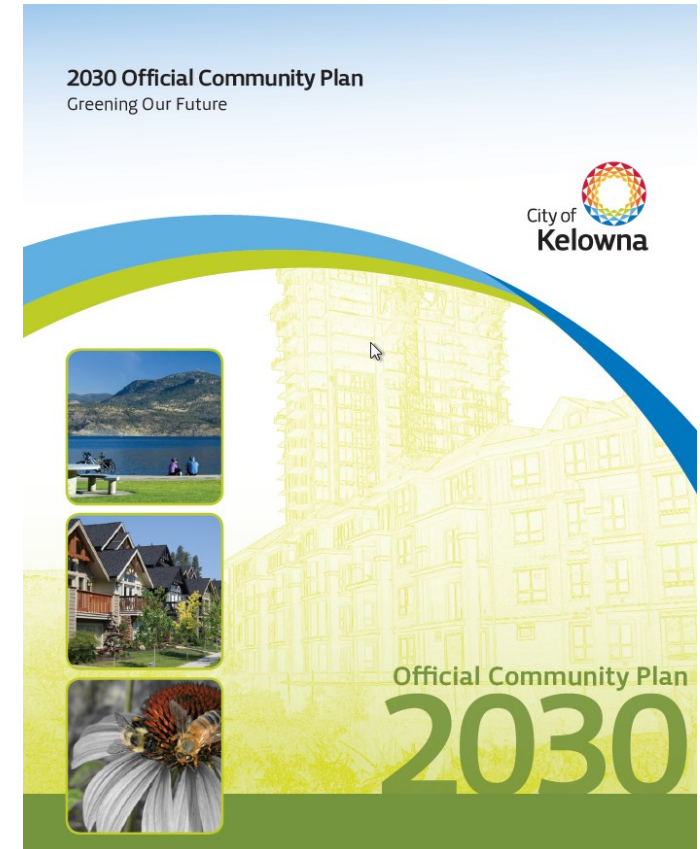
1. Take action and be resilient in the face of climate change
2. Grow vibrant urban centres
3. Embrace diverse transportation options
4. Protect land, water, air resources





# Building on the OCP

- ▶ Focusing growth
  - ▶ Permanent Growth Boundary
  - ▶ 5 Urban Centres
  - ▶ Complete communities
- ▶ Prioritizing sustainable modes of transportation
- ▶ Improve energy efficiency
- ▶ Reduce solid waste
- ▶ Increase local food production



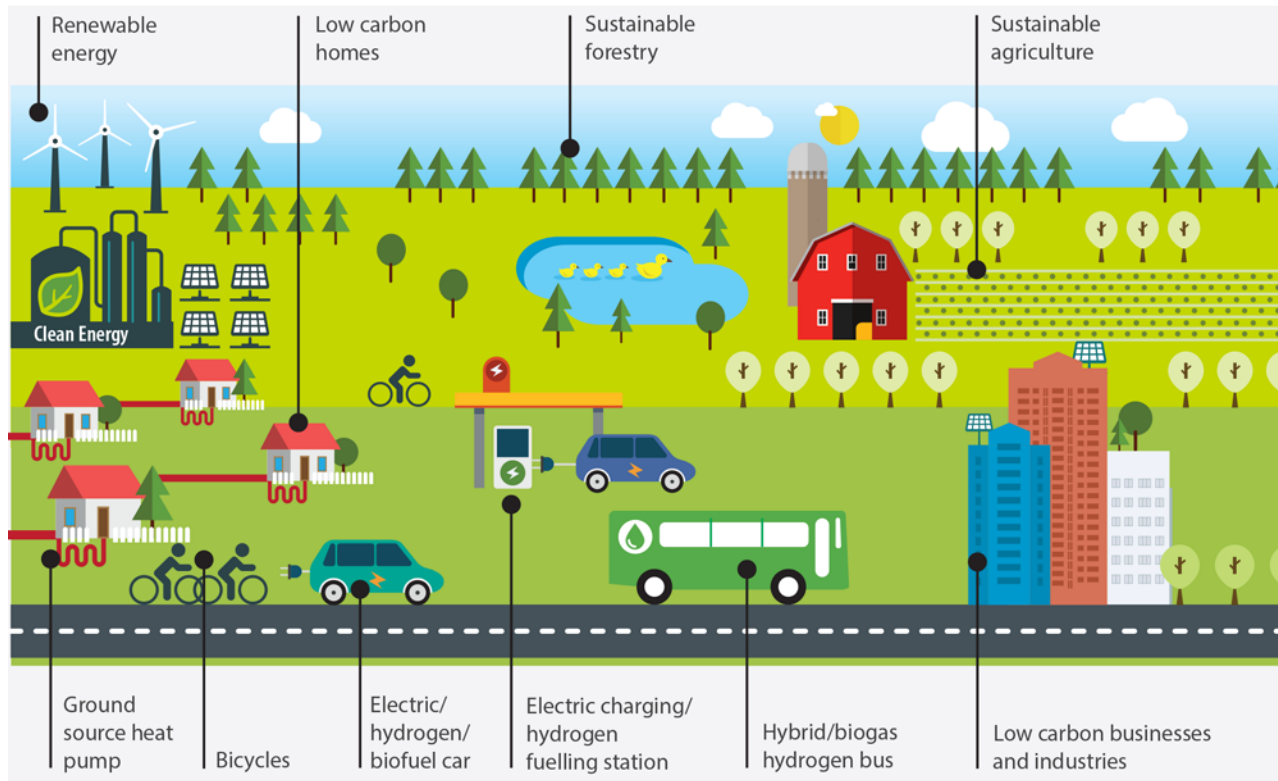


# Key Directions

1. Build more complete communities
2. Intensify the urban core
3. Make alternative transportation the convenient choice
4. Adaptation is necessary
5. Embrace new opportunities



# Our Future Resilient City



Source: Province of Ontario Climate Change Strategy website

# Its about more than GHG emissions

- ▶ Healthy city,  
healthy residents
- ▶ Economic  
development
- ▶ Reduced energy  
consumption
- ▶ Social benefits





# We've proven Kelowna can do this



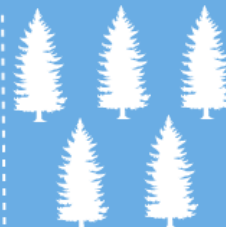
Average household natural gas use declined 8% between 2011 & 2015



Average household electricity use declined 10% between 2011 & 2015



20% of sensitive ecosystem land is permanently protected



3,000 trees planted have been planted on private property through Neighbourwoods since 2010.

3.5% decrease in GHG emissions between 2007 & 2012



In 2017, 40% of new residential units were built in the Urban Core.



In 2016, 14% of residents walked, cycled or took transit to work.



In the Central Okanagan, there are over five million transit trips annually!

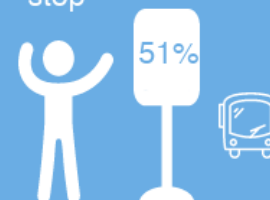
## Providing transportation options

280 kilometres of bike lanes



412 kilometres of sidewalks

51% of residents live within 400 metres of a transit stop



\*All stats refer to Kelowna unless otherwise specified



## *Resources:*

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

Facts in Focus Background Paper

StoryMap Link: <http://apps.kelowna.ca/ocp/2018/climate/index.html>

# Our Kelowna as we Grow

## Facts in Focus:

### Environment & Agriculture





# Backbone of City's identity

- ▶ Kelowna's uniqueness
- ▶ Anchor of health and economy
- ▶ Ecosystems, fish and wildlife habitat
- ▶ Green infrastructure
- ▶ Backdrop and major draw for tourism, hiking & biking



# Multiple Functions of Agriculture & Natural Lands





# Role of Agriculture

- ▶ 55% City zoned Agriculture / 40% in the ALR
- ▶ + 4000 ha land farmed
- ▶ Farm receipts \$106 million (2016 – RDCO)
- ▶ Wine sales \$250 million (2015 - BC VQA)





# Role of Natural Areas

## ► Natural Areas

- Water, land and air quality
- Species and ecosystems at risk
- 28% sensitive ecosystems / 72% modified ecosystems
- Critical migration corridor
- Tourism \$1.7 billion Thompson Okanagan (much drawn by clean lakes, beaches, parks & natural spaces)





# Permanent Growth Boundary

“Focus development to designated growth areas”

- ▶ Basis for growth determination
- ▶ Policy framework
- ▶ Interdependency and agricultural / natural area interface



# Permanent Growth Boundary

- ▶ Foundation of growth pattern
- ▶ Prioritize and signal infrastructure investments



# Agriculture - Current OCP

- ▶ What's Working
  - ▶ Farm Protection DP
  - ▶ Temporary Farm Worker Housing
  - ▶ Permanent Growth Boundary
  - ▶ Non-farm use and exclusion policies
- ▶ Challenges – Pressures from within
  - ▶ Illegal non-farm uses
  - ▶ Illegal soil placement
  - ▶ Unclear provincial regulation
  - ▶ Estate homes increasing prices





# Environment - Current OCP

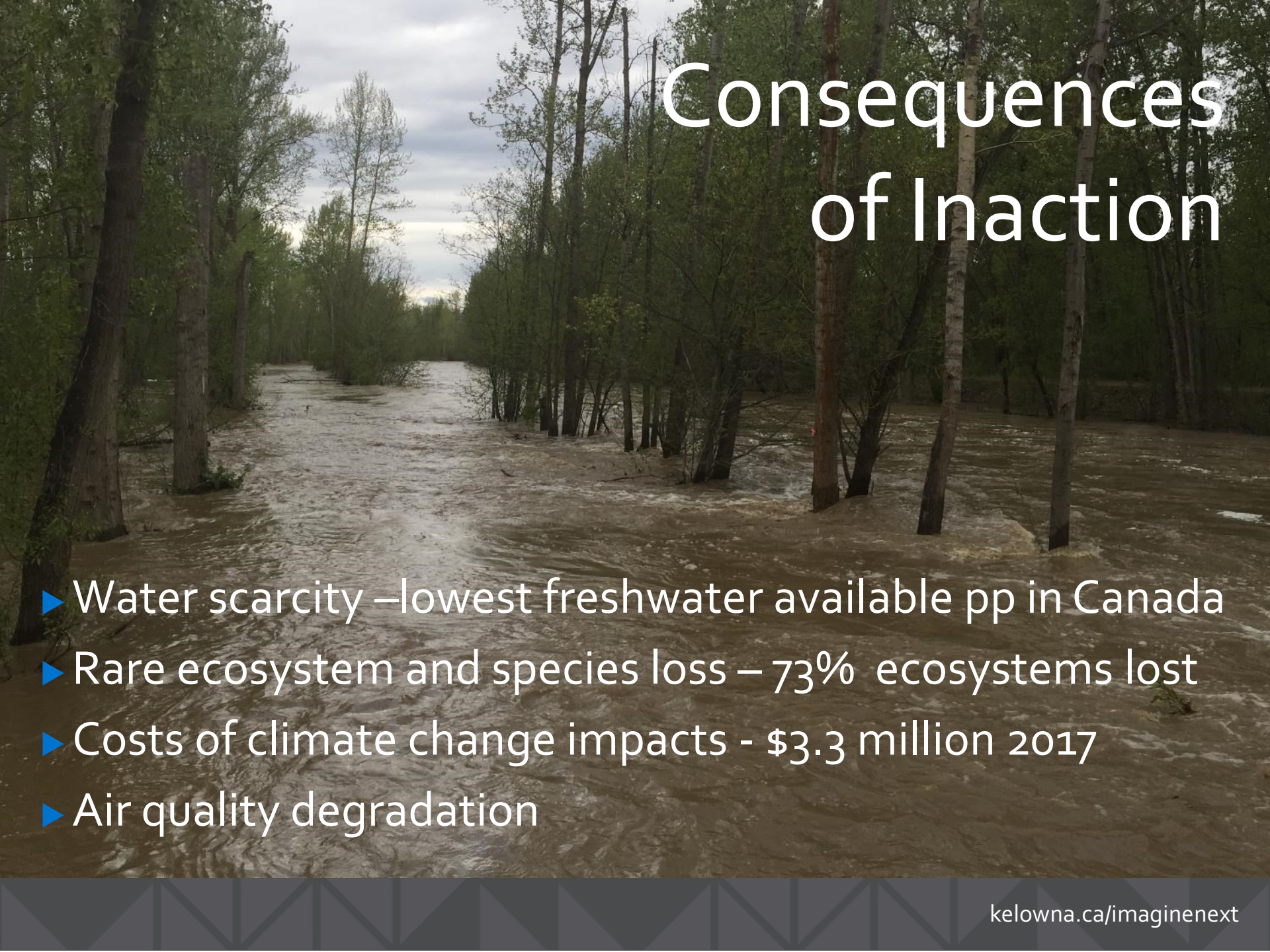
## ▶ What's Working

- ▶ Development Permits for Natural Areas
- ▶ Mission Creek Restoration Initiative
- ▶ Munson Pond
- ▶ Bellevue Creek Linear Park

## ▶ Challenges

- ▶ Development Pressure
- ▶ Climate Change
- ▶ Fires and floods impact habitats
- ▶ Costs of managing impacts





# Consequences of Inaction

- ▶ Water scarcity –lowest freshwater available pp in Canada
- ▶ Rare ecosystem and species loss – 73% ecosystems lost
- ▶ Costs of climate change impacts - \$3.3 million 2017
- ▶ Air quality degradation



# Consequences of Inaction



- ▶ Escalating farm land costs
- ▶ Pressure for commercialization of farm land
- ▶ Long term food security



# Draft Imagine Kelowna

- ▶ Action & Resilience in face of climate change
- ▶ Vibrant Urban Centres – stop sprawl
- ▶ Preserve Okanagan Lake
- ▶ Protect water, land and air
- ▶ Adhere to Permanent Growth Boundary
- ▶ Boldness and consistency through time
- ▶ Protect agricultural land & sustainable farming




# Key Directions for 2040

- ▶ City as steward of farmland and natural areas
- ▶ Vigilant protection of water, land and air resources
- ▶ Maintain the integrity of the Permanent Growth Boundary
- ▶ Ensure water quality and quantity
- ▶ Invest in green infrastructure
- ▶ Mitigate and adapt to climate change threats
- ▶ Support access to local food



# More than land preservation

- 
- A scenic photograph of a lake at sunset. The sky is a mix of blue and orange, with the sun low on the horizon. Silhouettes of trees are visible on the left and right, and a few small figures of people are sitting on the shore in the distance.
- ▶ Kelowna's distinct identity & aesthetic character
  - ▶ Nurtures our population health, economy, tourism, recreation, & food security
  - ▶ Natural assets that make our community flourish
  - ▶ Basis of our quality of life



## *Resources:*

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Facts in Focus Background Paper

Environment StoryMap Link:

<http://apps.kelowna.ca/ocp/2018/environment/index.html>

Agriculture & Rural Areas StoryMap Link:

<https://apps.kelowna.ca/ocp/2018/agriculture/index.html>