



# COMMUNITY WILDFIRE PROTECTION PLAN UPDATE

CITY OF KELOWNA

# INTRODUCTION

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- ▶ In 2016, B.A. Blackwell & Associates Ltd. were retained to develop a Community Wildfire Protection Plan (CWPP) Update for the City of Kelowna
- ▶ The CWPP Program was developed in response to recommendations from the “Firestorm 2003 Provincial Review” to:
  - ▶ Aid communities in developing plans to assist in improving safety; and
  - ▶ Reduce the risk of damage to property
- ▶ CWPPs are provincially funded (UBCM/SWPI) and City Council approved
- ▶ Kelowna has completed three CWPPs (2004, 2011, 2016)

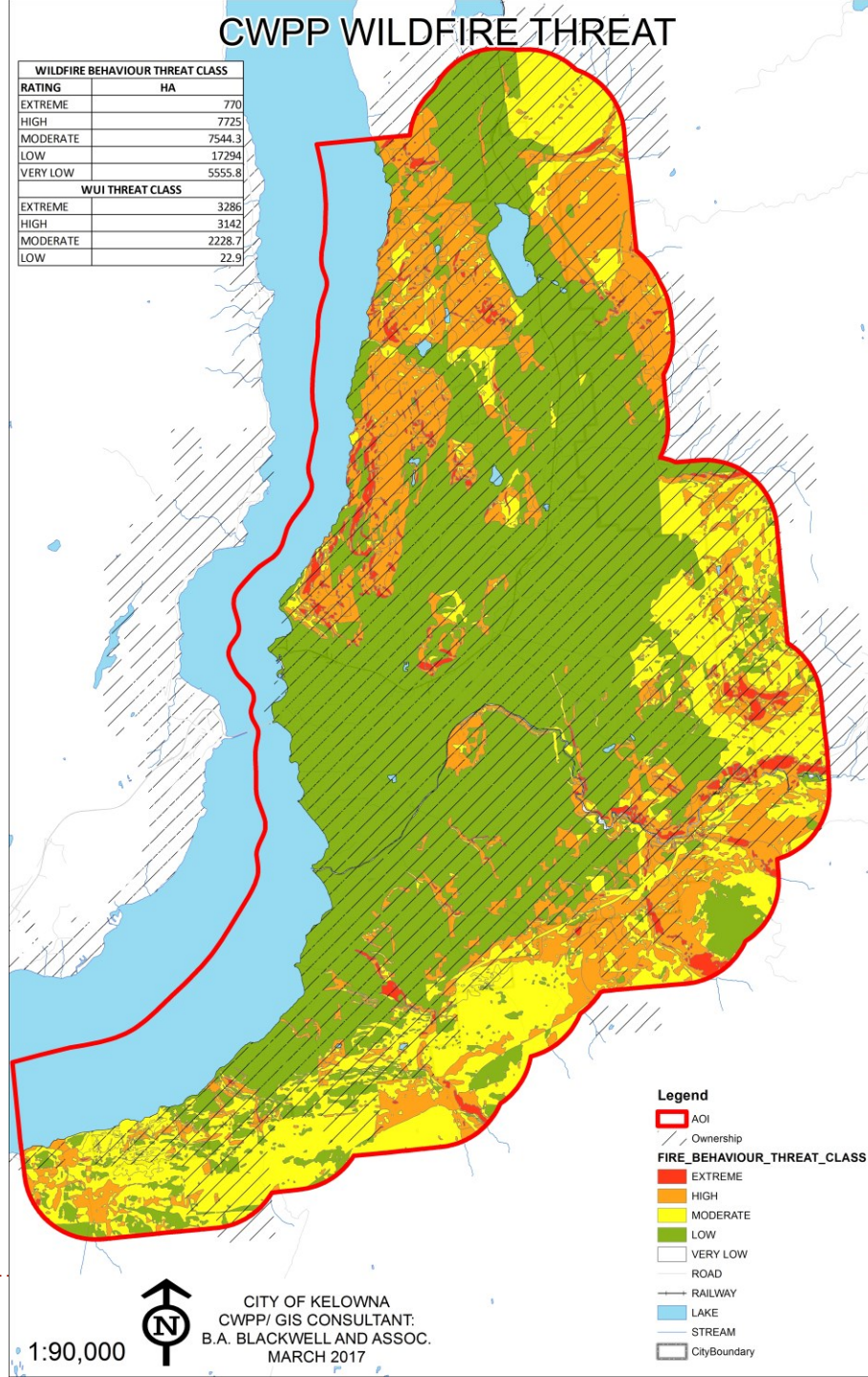
# Key Points

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1. The risk to Kelowna from wildfire is significant, but there are actions which can be taken to reduce the risk
2. The keys to reducing the risk are:
  - ❖ Collaboration with RDCO, Westbank First Nation, BC Parks, BC Hydro, licensees, and Ministry of Forests, Lands, and Natural Resource Operations (MFLNRO)
  - ❖ Increasing FireSmart compliance within the City
3. Funding is available for public land to help reduce the risk:
  - ❖ UBCM/SWPI, Forest Enhancement Society of BC (FESBC)
  - ❖ Investigate alternative funding sources with overlapping or synergistic objectives (e.g., Okanagan Basin Water Board)
4. Reducing the risk will be a complex challenge
  - ❖ Kelowna has shown leadership in fuel treatment projects.
  - ❖ There is significant room for additional initiatives
  - ❖ The Action Plan includes many recommendations; Kelowna will have to prioritize recommendations for implementation
  - ❖ The City has already taken action on a number of CVPP recommendations

# CWPP WILDFIRE THREAT

WILDFIRE BEHAVIOUR THREAT CLASS		
RATING	HA	
EXTREME		770
HIGH		7725
MODERATE		7544.3
LOW		17294
VERY LOW		5555.8
WUI THREAT CLASS		
EXTREME		3286
HIGH		3142
MODERATE		2228.7
LOW		22.9



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CWPP/ GIS CONSULTANT:  
B.A. BLACKWELL AND ASSOC.  
MARCH 2017



# THREAT REDUCTION PROGRESS TO DATE (2011 – 2016)

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- ▶ **Extensive fuel reduction/mitigation activities on City-owned land**
  - ▶ Approximately 600 ha
  - ▶ Leveraging UBCM/SWPI funding
- ▶ **FireSmart Initiatives**
  - ▶ Kelowna Fire Department (KFD) Fire Prevention Branch public education/outreach
  - ▶ Knox Mountain FireSmart Demonstration House
  - ▶ FireSmart Canada Community Recognition Program
- ▶ **Emergency Response**
  - ▶ Purchase of Utility Transport Vehicle (UTV)
- ▶ **Planning and Development**
  - ▶ Establishment of Wildfire Hazard Development Permit Area
  - ▶ CWPP Development and Updates

# Main Challenges Identified

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- ▶ Increasing FireSmart compliance on private land within the WUI
- ▶ City-owned natural areas adjacent to values at risk
- ▶ Location of new developments in the interface in high threat areas (steep slopes, surrounded or intermixed with forested land with limited access)
- ▶ Hazard associated with continuous grasses near to values at risk

# Action on current CWPP recommendations 2017

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## ▶ FireSmart Initiatives

- ▶ KFD successfully applied for \$10,000 UBCM/ SWPI FireSmart Grant
  - ▶ Grant will be utilized to complete FireSmart assessments for 160 homes in high/ extreme areas (recommendation #10)
  - ▶ Assessments completed using FireSmart –Home Partners application (app) and includes 4-day training program (KFD, Parks)
- ▶ Distribution of FireSmart materials by KFD in high threat neighbourhoods (Glenmore) (recommendation #4)

## ▶ Fuel Management

- ▶ Parks assisted with a MFLNRO-led FESBC funding application (recommendation #44)
  - ▶ Landscape level fuel break southeast of Kelowna
- ▶ Application for UBCM/SWPI funding for fuel management in Knox Park (recommendation #37)
- ▶ Possible string trimming in higher-risk grassy areas like Dilworth to reduce the immediate hazards posed by grass

# Action on current CWPP recommendations 2017

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## ▶ Communication and Education

- ▶ Creation of two working groups in a cooperative effort in wildfire threat reduction (recommendation #5)
  - ▶ Internal City of Kelowna departments (Planning, Parks, Fire)
  - ▶ Regional (RDCO, Westbank First Nations, BC Parks, Gorman Brothers, MFLNRO)

## ▶ Emergency Preparedness

- ▶ Initiation of Natural Areas Access Planning (Total Access Plan) (recommendation #15)
  - ▶ Analysis and spatial data is being utilized by KFD and Parks to review access, prioritize and make improvements

## ▶ Development and Planning

- ▶ KFD and Parks to engage landscape contractors/ architects and nurseries to encourage practice of marketing FireSmart landscaping (variation of recommendation #19)



# FireSmart Compliance on Private Land

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- ▶ **FireSmart building materials**
  - ▶ Gallagher's Canyon has won legal battle to allow fire rated roofing, rather than cedar shakes
- ▶ **Building location (setbacks)**
  - ▶ FireSmart recommends 10 m setback from top of slope
- ▶ **Landscaping**
  - ▶ Mature and on new developments/new builds





# FireSmart Compliance on Private Land

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- ▶ Large tracts of private forested land between Knox Mountain Park north to the City limits



# City-owned Natural Areas

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- ▶ City-owned natural areas provide many benefits to the community, including wildlife habitat and corridors for migration, storm water management, aesthetics, sense of place, among others.
- ▶ City-owned natural areas adjacent to values at risk introduces liability, as well as cost, to the City.
  - ▶ Steep slopes
  - ▶ Regular activities required to keep in an acceptable range of hazard
  - ▶ Limited access for maintenance crews and fire suppression efforts
  - ▶ No access for material (wood) removal



# New Development Location

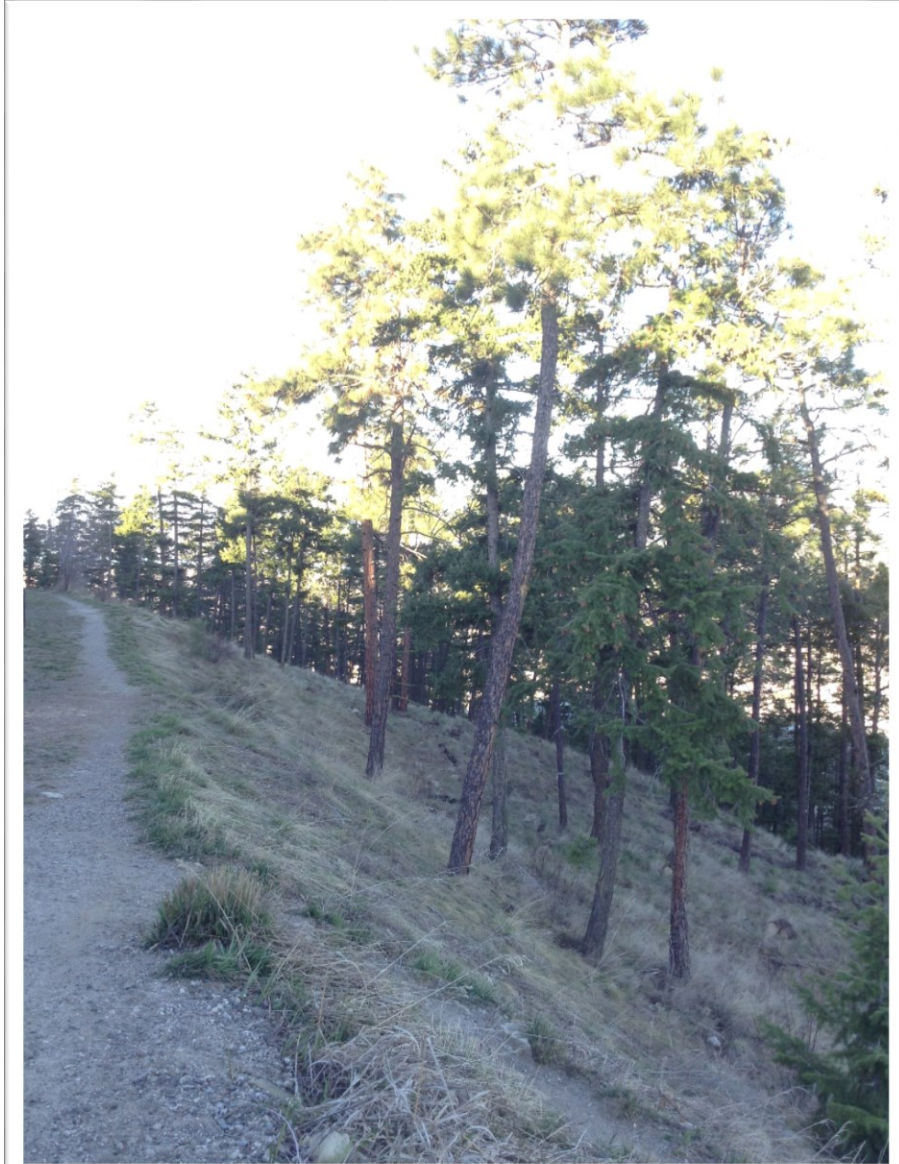
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# Grass Hazard – Native and Seeded

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# Recommendations – Private Land

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## ▶ Encourage Voluntary Compliance

- ▶ FireSmart property assessments
  - ▶ Offer results and recommendations to homeowners
  - ▶ Create publicly available spatial database of hazard assessments by property
  - ▶ Use opportunity to provide public outreach/education on FireSmart
- ▶ Distribute FireSmart materials to all homeowners within 100 m of interface
  - ▶ KFD has started distribution in the Glenmore area in conjunction with their smoke alarm campaign
- ▶ Expand school fire prevention education program to include wildfire management and engage youth
  - ▶ Provincial curriculum available “Master of Disaster”



# Recommendations – Private Land

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## ▶ Bylaws – Review OCP

### ▶ Strengthen current DP process

- ▶ Formalize terms of reference for Qualified Professionals (QPs) completing assessments
- ▶ Require sign-off from assessing QP prior to DP process completion
- ▶ Require landscaping plan or provide list of acceptable plantings
- ▶ Match DP area to most recent threat assessment

### ▶ Expand reach of DP

- ▶ Require DPs for individual new builds and major renovations (where the building envelope is being re-done and only foundation is remaining)
- ▶ Can be a simplified process, but with building and landscaping requirements
- ▶ Obtain legal confirmation regarding the Building Act and temporarily unrestricted matters, including authority to set exterior building materials requirements

# Recommendations – Private Land

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## ▶ Bylaws

### ▶ Enforce existing bylaws

- ▶ QP sign-off of fuel mitigation, building materials, and landscaping prior to completion of DP process
- ▶ Enforce existing wildfire bylaws requiring homeowners/property owners to maintain properties in a low hazard state in DP areas

### ▶ Other

- ▶ Develop a landscaping standard for DP/interface areas or plant list of climate appropriate, low-maintenance, low-flammability plantings
- ▶ Work with Building and Safety Standards Branch to provide input into Building Code revisions to be applied in wildfire development permit areas provincially
- ▶ Conduct a series of workshops to engage, inform, and consult development community. Topics: revisions to DP process, FireSmart landscaping, etc.

# Recommendations – Development

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- ▶ **Wildfire hazard assessment and input earlier in the development process**
  - ▶ Preliminary report (access, setbacks, design)
  - ▶ Detailed report (fire hazard mitigation activities and specifics)
- ▶ **Sub-Division Design**
  - ▶ Require two access/egress points
  - ▶ Continue practice of KFD review of hydrant location and spacing for all new developments. Require that developers follow KFD recommendations
  - ▶ Require a 10 m minimum setback from buildings and forest interface. Setbacks should be larger at mid-slope and top of slope
  - ▶ Place roadways adjacent to forested lands (ring roads)

# Recommendations – City Natural Areas

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- ▶ **Ensure acceptability of land assumed**
  - ▶ Increase consistency and raise expectations
    - ▶ Create a terms of reference for all wildfire hazard assessments.
    - ▶ Require sign-off by QPs that fire hazard has been mitigated acceptably and objectives have been achieved
  - ▶ Require long-term access plan
  - ▶ Future assumed lands (new parks) should be reviewed by Parks earlier in the process to allow for meaningful review and input
  - ▶ Create a decision-making matrix analysis to evaluate potential assumed land prior to acceptance

# Recommendations – Grass

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## ▶ Native

- ▶ Set up formal monitoring system to inform future fuel treatments and find the right balance of crown separation and grass control
- ▶ Allow prescribed burning as a tool to reduce grass continuity and cover, both in initial treatments and as regular maintenance
- ▶ Implement targeted grazing pilot program

## ▶ Non-native Seeded

- ▶ Revegetate disturbed areas within 30 m of houses with a mixture of native grass seed mix and native deciduous and evergreen low-flammability shrubs

# Recommendations – Other

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## ▶ Communication and Education

- ▶ Make the CWPP publicly available, promote/enhance wildfire-specific Fire Prevention Day
- ▶ Re-establish regional interface steering committee to help coordinate larger risk reduction efforts (landscape level fuelbreaks) and share costs

## ▶ Structure Protection and Planning

- ▶ Critical infrastructure spatial data, fire flow/water vulnerability assessment, FireSmart assessment of critical infrastructure, assess back-up power to critical infrastructure



# Recommendations – Other

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## ▶ Emergency Preparedness

- ▶ Annual KFD/ BCWS cross training and wildfire-specific training, review sprinkler request and set-up, facilitate evacuation plans for isolated interface neighbourhoods, complete total access plan

## ▶ Fuel Management

- ▶ Continue fuel treatment program
  - ▶ Prioritize FESBC funding for landscape level fuel breaks and maintenance program for previously treated areas (as needed)
    - Parks has moved forward with two funding applications

# SUMMARY

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- ▶ A total of 47 priority recommendations have been outlined for Kelowna to reduce the community's risk profile when implemented.
- ▶ The City will need to further prioritize the recommendations for implementation with consideration of the priority recommendations (high) outlined in the Action Plan.
- ▶ Priorities in the document are based upon those actions where direct risk reduction will be greatest.
- ▶ It is recognized that resources are limited. Cost/benefit analysis of recommendations will help the City to prioritize recommendations and implement effectively.
  - ▶ Implementation of high priority recommendations is estimated to cost \$240,000 - \$300,000 spread over the next few years.