

**City of Kamloops
Community Wildfire Protection Plan
July 20, 2016**



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EXECUTIVE SUMMARY

City of Kamloops Community Wildfire Protection Plan July 20, 2016

The City of Kamloops (the City) is located in some of the driest ecosystems within the province of B.C. and all of Canada. These wildfire dependent ecosystems experience long, dry summers with regular drought conditions which are conducive for wildfire ignition and spread. The size and shape of the developed parts of the City result in extensive wildland/urban interface (the interface) between residential houses and forest or grasslands. The City of Kamloops has conducted wildfire threat reduction work on City owned and B.C. Crown land since 1987. An annual wildfire threat reduction program was initiated by the City in 1994. These efforts were accelerated in the mid-2000s due to a pine beetle epidemic that caused mortality in over 90% of the mature ponderosa pine trees within the City limits.

The City has identified over 4200 houses directly adjacent to forests or grassland within its boundaries. The more rural subdivisions typically have more structures prone to wildfires. Mobile home parks, most with very small lots and narrow setbacks from the grasslands, are commonly located immediately adjacent to forests and grasslands.

Long term wildfire threats exist throughout the City. The houses on the western edge of Peterson Creek and within the Rose Hill subdivision face the most serious long term threats. The other main areas of concern include Barnhartvale, Juniper Ridge, Heffley and Pineview. The intention of the City of Kamloops fuel management program is to retain all interface areas within the City in a moderate or low wildfire threat class for the long term. Fuel management treatments are targeted for 200 meters in width when appropriate. The City has completed over 780 hectares of fuel management treatment area on sixty-eight unique sites. Some areas have been treated three or more times. Another fourteen sites, covering 162 hectares, are still requiring their first treatment. Not all private land within interface areas meet a moderate wildfire threat standard. Private land with a high wildfire threat rating adjacent to houses can be found in Barnhartvale, Juniper Ridge, Rose Hill, Pineview and Heffley.

The maintenance requirements on the forest and grasslands within the City of Kamloops will depend on further developments in the area, tree species, forest health, mortality in the stand, conifer ingress/regeneration, grass growth and other factors that increase the amount of dead and down forest fuel, coniferous canopy closure or reduced wildfire suppression crew safe access. Of the sixty-eight past treatment areas, seventeen are requiring maintenance work in the next five years to retain the moderate threat class. As forest stands re-establish themselves after the pine beetle infestation, bio-mass and the associated wildfire threats are expected to increase incrementally each year unless regular, site specific fuel management treatments are continued.

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**City of Kamloops
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1 Community Wildfire Protection Plan Goals

The goals of the City of Kamloops Community Wildfire Protection Plan (CWPP) include;

- to identify and quantify the forestland wildfire threats that directly impact on the developed land within the City of Kamloops,
- to identify and map all possible fuel management treatment areas within approximately 200 meters of developed areas, that would assist in reducing the wildfire threats in the area,
- to establish fuel management guidelines for the City of Kamloops to allow quantifiable assessments of past fuel management activities to ensure fuel treatments meet a consistent standard over time and identify maintenance priorities,
- to prioritize new fuel management activities and a maintenance schedule for past treatment units,
- to identify opportunities to improve wildfire suppression access to the crown land surrounding the community,
- to ensure all fuel management activities recognize the important recreational and visual values of the forested land in and around the City of Kamloops.
- to increase awareness of the unique wildfire threats in the City of Kamloops area.

2 Community Description

Located on the Intermontane Plateau, Kamloops is the meeting place of the South and North Thompson Rivers that form the Thompson River and flow into Kamloops Lake. The Secwepemc people named Kamloops Tk'emlúps, which means "*where the rivers meet*" and is also known as the Hub City, where major highways meet. The two major ecosystems, grasslands and forests, of southern BC are found in Kamloops and the boundary between the gently rolling Interior Plateau and the vast, rugged Shuswap Highland lies just to the east of the city.

Kamloops has a population of approximately 86 000 residents, is 311 square kilometers in size and located at 340-550 meters in elevation. The City boasts a growing season of 166 days and over 2000 hours on annual sunshine making it the second sunniest City in British Columbia. Annual rainfall is 217.9 mm, with 75.5 cm coming as snow. The mean maximum temperature is 21C and the mean minimum temperature is -4.2C.

The City of Kamloops (the City) is located in some of the driest ecosystems within the province of B.C. and all of Canada. These fire dependent ecosystems experience long, dry summers with regular drought conditions which are conducive for wildfire ignition and spread. The size and shape of the developed parts of the City result in extensive wildland/urban interface (the interface) between residential houses and forest or grasslands. This interface exposes thousands of homes within the City to potential wildfire impacts.

3 City of Kamloops Forest Fuel Management History

The City has been conducting wildfire threat reduction work on City owned and B.C. Crown land since at least 1986. Community concerns led to fuel reduction treatments in Peterson Creek, Barnhartvale and other high wildfire hazard areas on the perimeter of the developed part of the City in the 1980s. Most of the treated areas were initially selected based on local homeowner concerns. An annual wildfire threat reduction program was initiated by the City in 1994. These efforts were accelerated in the mid-2000s due to a pine beetle epidemic that caused mortality in over 90% of the mature ponderosa pine trees within the City limits. The fuel management treatments to improve public safety and reduce wildfire threats have focused on City owned and B.C. Crown land within the City boundaries. A province wide program initiated after the 2003 Filmon Report on wildfires and wildfire preparedness provided much of the funding for the major work up to 2010. Private land treatments have been ongoing as well, but are largely at the expense of the individual landowner. A majority of the larger private land treatments have been in the form of salvage harvesting. The City provided wood collection and disposal services for homeowners with dead pine trees on their property after the pine beetle epidemic. Over 800 hectares have been treated through a variety of grant programs and the City's own budget.

This is the fourth official wildfire threat assessment and planning document completed on the City of Kamloops. The initial wildfire threat assessment was completed in 1990, with follow up reports and maps in 1998 and 2004. A significant portion of the forest stands adjacent to the residential areas have been treated in some fashion to reduce wildfire threats and safety issues. Wildfire threat reduction treatments have been aggressively pursued on B.C Crown and Municipal Crown lands within the City boundaries. These varied treatments have included salvage harvesting, basic pine removal activity with heavy equipment, to hand crew treatments involving danger tree removal, spacing and pruning and surface fuel reduction activities.

The City of Kamloops fuel management treatments covered a gross total of 958 hectares since 1994. Many of these areas have been previously treated before the pine beetle epidemic forced the City to conduct further fuel modification work on these sites. The Peterson Creek area has had at least four different entries since 1994. Numerous other sites have been partly treated at least three times. Approximately 62% of the fuel management work was completed with hand crews, the remaining 38% with completed with heavy equipment.

Table One – Wildfire Threat Reduction Efforts within the City of Kamloops from 1997 to 2010

Initial Wildfire Behaviour Threat Class	Fuel Treatment Type			Total
	Hand	Machine	Prescribed Burn	
Extreme	252.47	161.71	0	414.18
High	331.04	176.91	0	507.95
Moderate	16.86	12.45	6.77	36.08
Total	597.24	351.07	6.77	958.22*

*This number is much larger than that shown in the Table Eleven. Some areas have been treated as many as three times and inconsistent data tracking and estimates have led to inaccuracies.

4 Local Wildfire History/Starts and Weather

Kamloops is located within some of the driest ecosystems in B.C. The ten year fire weather data summaries for four local weather stations suggest that fire weather is a regular occurrence in the area. The Afton weather station, the closest to Kamloops, shows an average of 83.5 high and extreme fire weather days annually for the last decade, with a peak of 122 days in 2009. Fire weather days are not an exact indicator of wildfire threats but it does suggest that there are many drying days in this area that will allow for dry forest fuels.

Table Two – Kamloops Area Fire Weather Data Summary (2006-2015)

Wx Station	Moderate Average Days (Range)	High Average Days (Range)	Extreme Average Days (Range)	Maximum High and Extreme Days (year)
Afton	59.3 (35-95)	63.4 (28-84)	20.1 (5-45)	122 (2009)
Leighton Lake	53.2 (40-78)	40.1 (8-61)	5.6 (0-10)	78 (2006)
Paska Lake	41.7 (22-63)	22.9 (0-43)	2.9 (0-8)	25 (2009)
Sparks Lake	45.9 (35-64)	43.9 (12-65)	4.3 (0-10)	71 (2009)

The Kamloops Fire and Rescue has only recently started to track interface wildfires separately from other grass and wildland fires. In the last four years they have responded to 117 'grass' fires within the City for an average of almost 30 per year.

Table Three – Kamloops Fire and Rescue Wildfire Response Statistics 2005-2015

Year	Data Source	# of Grass Fires	# of Interface Fires	Total
2005	Firehouse Software	90 **		90
2006	Firehouse Software	134 **		134
2007	Firehouse Software	118 **		118
2008	Firehouse Software	90 **		90
2009	Firehouse Software	130 **		130
2010	Firehouse Software	64 **		64
2011	Firehouse Software	56**		56
2012 until August (switched to FDM Software)	Firehouse Software	56 **		
2012 (August to present)	FDM Software	14 ^	17	87
2013	FDM Software	10 ^	36	46
2014	FDM Software	41 ^	35	76
2015	FDM Software	46 ^	29	75

**Grass Fires combined with Interface Fires (possibly burning violations)... not separated during these years

^ grass/landscape fires and other outdoor fires does not include burning violations

5 Wildfire Threat Assessment Process

Wildfires have been the main agent of change for the forest ecosystems in the City of Kamloops area for centuries. The forest ecosystems have been regularly modified by varying intensities of wildfires. The result of aggressive wildfire suppression in the last fifty or more years is the accumulation of forest fuels over time as the wildfire return interval has been lengthened. These forest fuels include an increased number of conifer trees and a buildup of dead and dry surface fuels. The resulting fuel buildup creates the potential for more intense, stand replacement wildfires to occur. The additional trees also create more inter-tree competition for moisture and nutrients, creating forest health issues and good conditions for defoliators and diseases. Spruce budworm, Douglas Fir Tussock Moth and Western and Mountain Pine Beetles have all impacted the conifers in the Kamloops area in the past decade.

5.1 Fire Weather

The valley bottoms and lower elevations in the Thompson area are located in some of the driest, hottest ecosystems in Canada. Weather that will dry forest fuels and allow for wildfire spread regularly occurs from April through October in the forest ecosystems around Kamloops.

The main east to west and north to south valleys respectively create variable wind patterns. The local prevailing upper elevation winds blow from the south and west, but are translated into valley winds and daytime heating and cooling winds at lower elevations. Summer outflow winds are also common along both the North and South Thompson drainages.

5.2 Topography

The City of Kamloops is located at the confluence of the North and South Thompson Rivers in south central British Columbia. A majority of the City is located on the flats of North Kamloops, Brocklehurst, Rayleigh, Valleyview and Westsyde, and on a moderate to steep north facing slope which includes Sahali, Aberdeen, Juniper Ridge, Barnhartvale and Rose Hill. This slope is broken by Peterson Creek, a steep, unstable gully and numerous other smaller gullies. The south aspects are rolling grassland hills to the northwest and the northeast on the Tk'emlups Indian Band I.R. #1. In general, the topography in the Kamloops area is rolling, with moderate elevation gains, by B.C. standards, with variable aspects. Silty sand soils have allowed deep narrow gullies to develop from erosion, limiting access to many areas.

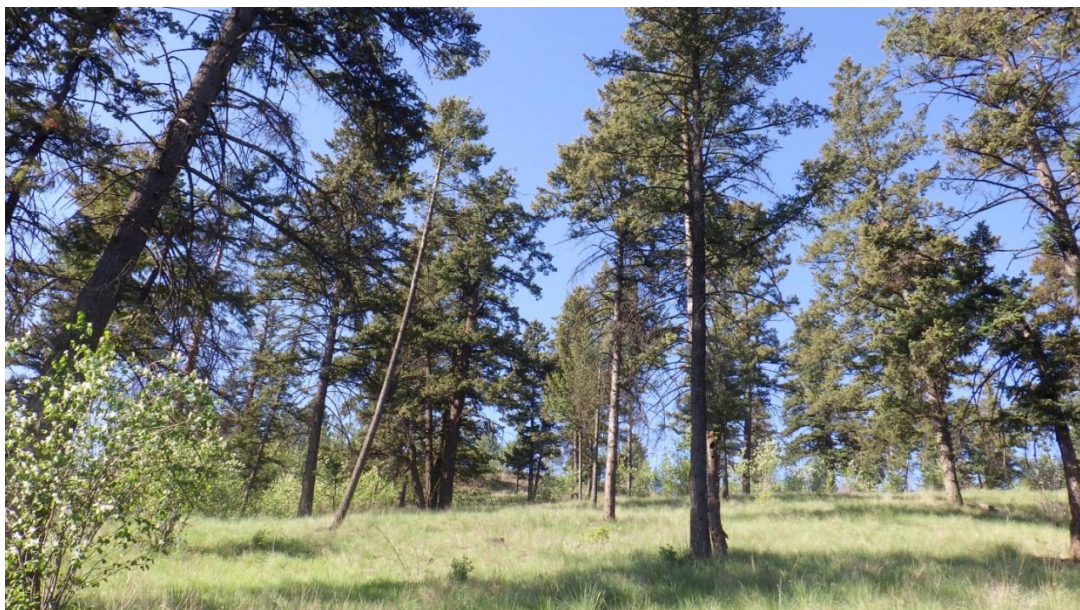
5.3 Forest Fuels

The forest fuel complexes in the Kamloops area include a bunchgrass/big sage grassland ecosystem at lower elevations. The pine beetle infestation, of seven to ten years ago, that caused mortality in over 90% of the mature Ponderosa Pines (pines) in the area created an increase in the local grasslands. This forest ecosystem is best described in the Canadian Forest Fire Behaviour Prediction System (FBP) as an O-1 fuel type. The Ponderosa Pine regeneration is very healthy on the mid-slopes in the Kamloops area, mostly on the north slopes and in the draws and gullies. The regeneration is largely located in areas where the overstorey pines were killed by pine beetles and removal of the stand occurred in the 2006-2009 period.



Dense conifer regeneration on north slopes in Aberdeen greenbelt.

The pine typically germinate in clumps, creating thickets of pine trees, most in the one to four meter tall range in the spring of 2016. These fuels could develop into a serious wildfire threat if left unmanaged. This forest ecosystem is best described in the Canadian Forest Fire Behaviour Prediction System (FBP) as a transition from O-1 to C-4 fuel type. For mapping purposes these stands have been identified as O-1.



Fuel managed C-7 fuel type in Aberdeen.

The middle to upper slopes on the south side of the South Thompson and Thompson Rivers are dominated by drybelt Douglas-fir stands, with residual pines and high value wildlife trees. The City has many forested gullies and greenbelts which snake through Barnhartvale, Rose Hill, Sahali and Aberdeen. Left unmanaged, the Douglas-fir stands are multi-layered, multi-aged forests with a stressed understory and low live and dead crowns. This stand structure can allow aggressive crown fire development. A majority of these sites, within 100-200 meters of homes and structures have been fuel managed in the past decade. The treatment has generally left the live component of the mature stand and focused on the understory, resulting in open stands best classified as C-7 or C-3 in the FBP system. The untreated sites vary dramatically from C-7 to C-4. These areas have largely been identified as C-7 for mapping purposes.



Unmanaged C4 fuel type in Kenna Cartwright Park.

5.4 City of Kamloops Wildfire Threat Summary

The City of Kamloops can be directly threatened by wildfires under numerous scenarios. The most serious wildfire threats exist on the south side of the South Thompson and Thompson Rivers corresponding to the highest developed areas. This area can be exposed to wildfires that start in the valley bottom and spread uphill into the community or a wildfire that initiates to the west, south or east of the City and spreads across slope or downhill into the developed areas with the prevailing winds. The

intermix communities of Barnhartvale and Rose Hill are also exposed to wildfires starting inside the community itself.

The Strawberry Hill Fire on Kamloops I.R. #1, immediately north of the City, in 2003 is an good example of the potential wildfire spread rates and wildfire intensity that can be expected in the Kamloops area.

5.5 City of Kamloops Structures in Interface Areas

Over 4000 houses were identified during the most recent wildfire threat assessment as directly adjacent to forests or grassland within the City of Kamloops.

Table Four - Structures Exposure to Undeveloped Forest or Grassland within the City in April 2016

Location	Number of Structures Directly Adjacent to Forest or Grassland
Heffley	42
Westsyde	429
North Shore	46
Batchelor Heights	386
Iron Mask	31
Pineview	106
Howe Street West	75
Aberdeen	531
Dufferin	240
Downtown/South Kamloops	225
Sahali/Peterson Creek	743
Knutsford	35
Rose Hill	101
Hidden Valley Trailer Park	50
Juniper Ridge	382
Valleyview	170
Campbell Creek Industrial Area	70
Barnhartvale	439
Dallas Drive	114
Totals	4215



Wildland Urban Interface area in Peterson Creek.

6 Biogeoclimatic Information

The City of Kamloops is covered by three different biogeoclimatic zones, each with unique tree species and fuel complexes. The Bunchgrass (BG), Ponderosa Pine (PP) and Interior Douglas Fir (IDF) biogeoclimatic zones are the warmest and driest forest ecosystems in B.C. These biogeoclimatic zones are characterized by a warm, dry climate regime with a long growing season during which moisture deficits are common. These forest ecosystems are included in the Natural Disturbance Type 4 fire regime where regular, low intensity, stand maintaining fires were the norm before European settlement and wildfire suppression activities.

More information on Natural Disturbance Types in B.C. and fire regimes can be found at;

<http://www.for.gov.bc.ca/tasb/legsregs/fpc/fpcguide/biodiv/biotoc.htm>

The biogeoclimatic zones are shown on the CWPP Wildfire Threat Assessment Map in Appendix E. Brochures describing the three biogeoclimatic zones can be found in Appendix A.

6.1 Analysis of Climate Change on the Kamloops Area

'In May (2013) the concentration of carbon dioxide in the atmosphere reached 400 parts per million, the highest since three million years ago.' – Rising Seas, National Geographic, September 2013. This rise in greenhouse gases is expected to contribute to rising global temperatures and changes in weather patterns, moisture distribution and plant ecosystems. One of the main concerns relating to plant ecosystems is the expected rapid change in weather conditions. Plants will have to migrate to more suitable habitat in short periods of time. This will be very difficult for large plants with heavy seeds and narrow geographic ranges. The weather is expected to change faster than many plants can adapt. This will significantly impact the conifer species in the Kamloops area.

Table Five - Predicted Impacts of Climate Change on Climate Variables and Forests in B.C. During the 21st Century

Expected Impact of Climate Change on Climatic Variables in B.C.
1 to 4 C increase in surface air temperature with winter temperatures most affected
10 to 20% increase in annual precipitation with less snowfall and more rainfall
Reduced snow depth and an increase in the length of the growing season
Increasing the risk of summer drought and decreasing soil moisture
More thunderstorm activity
Predicted Impacts of Climate Change on B.C. Forests
Increase in frequency and severity of forest damaging events including forest fires
Higher than present treeline and northward migration of treeline
Major expansions of grasslands and shrublands
Disappearance of wetlands, shrinking lakes and changing hydrology
Increase in incidents of insects, disease outbreaks and spread of invasive species
New assemblages of species occurring in time and space
Overall loss of biodiversity
Changes in disturbance regimes and forest productivity
Forest migration into previously treeless landscapes
Reduced access for winter logging

Source: Expected Impacts of Climate Change: Dery and Jackson 2006

Predicted impacts of CC on Forests: Ohlson et al; Hebda 2006; Gov't of B.C. 200c; Spittlehouse 2005.

Copied from BC Forest Professional May-June 2008

The impacts of climate change on BG, PP and IDF biogeoclimatic zones in the Thompson area are likely to be;

- a. The BG, PP and IDF biogeoclimatic zone that we know of today may also be shifted upwards in elevation, although the different topography found at higher elevations in the Thompson area will alter the zones in many ways.

- b. Severe moisture stress and insect infestations. This will lead to increasing tree mortality on the lower slopes dominated by Douglas-fir. This has already occurred in the Ponderosa Pine stands in the Kamloops area.
- c. Climate change occurring at a rate faster than the forest can adapt, creating potentially catastrophic conditions. This could include high mortality of the present forest cover in a short period of time.
- d. Longer and more severe fire seasons.
- e. Increased wildfire starts from increased thunderstorm activity.
- f. Less available water for wildfire suppression activities.
- g. Stress on riparian area deciduous trees due to changing hydrology.
- h. Loss/alteration of lakeshore habitat.
- i. Changes in mule deer winter range.
- j. Additional stress on SARA listed species.
- k. Less opportunity to utilize heavy equipment on frozen ground for fuel management and timber harvesting to minimize site impacts.

6.2 Climate Change Impacts on Fuel Management/Wildfire Threat Reduction Activities in the Kamloops area

1. The protection and enhancement of riparian/wetland areas must be a priority for any forest related activities in the Kamloops area.
2. Tree mortality in the lower Douglas-fir stands can be expected to increase substantially. This is not occurring in a significant way in the short term. There are indications of very limited Douglas-fir regeneration throughout the fuel managed areas in the City, suggesting moisture challenges for establishing seedlings.
3. All fuel management activities must be designed to ensure stand resiliency through partial retention of all available tree species and size classes.
4. Management for mule deer winter range should be conducted outside the presently identified winter range.
5. Forest stands are to be treated as lightly as possible to reach the moderate wildfire threat goal while retaining biodiversity, stand resiliency and other forest values.

6.3 Important Forest Health Issues

The Kamloops area has had significant forest health challenges in the past decade. The Western and Mountain Pine Beetle decimated the local pine stands. A majority of these trees were removed shortly after mortality on both crown and private property.

The spruce budworm had limited defoliating Douglas-fir impacts in the Kamloops area. Spruce budworm impacts are cyclical and were heaviest in the mid-2000s and are hardly evident in 2016. This pest thins the crowns of the mature trees and makes them susceptible to moisture stresses and the Douglas Fir Beetle. In areas with a heavy understorey, a significant portion of the smaller trees are directly killed by multi-year infestations. This defoliator can significantly increase the wildfire threats in the area as the small dead trees accumulate as surface and ladder fuels under the main canopy. The Spruce Budworm populations have dropped significantly in the Kamloops area since 2014. The worst infestation occurred in the Pineview area. The Douglas Fir Tussock Moth had a three year cycle from 2009-2011. This defoliator causes tree mortality or severe reduction in growth in Douglas-fir trees. The three year infestation resulted in patches of dead Douglas-fir trees in many parts of the City, mostly in Barnhartvale and Westsyde.

7 Timber Harvesting Land Base

Approximately one-third of the land within the City of Kamloops boundary is provincial crown land. Timber harvesting activities are presently limited to the southwest corner of the City, outside the WUI boundary. This selective harvesting of Douglas-fir is a valuable treatment to reduce surface fuel and crown closure.

8 Wildfire Behaviour and WUI Wildfire Threat Assessment

The wildfire threat assessment mapping and assessment work, as part of this CWPP, was completed in April 2016. This work was conducted to identify, quantify and map all wildfire threat issues within the City of Kamloops and a two kilometer buffer around its perimeter. The assessment was conducted using Wildland Urban Interface Wildfire Threat Assessment Worksheet and Guide (January 24, 2013) recommended by the B.C. Wildfire Service to assess wildfire threats in B.C. All areas were assessed regardless of land ownership to properly assess the overall wildfire threats within the City. The area was broken into one of five wildfire behaviour threat classes; very low, low, moderate, high or extreme. A colour coded map showing the five wildfire threat classes was completed. No extreme wildfire behaviour threat class areas were identified during this assessment.

The wildfire threat assessment included ninety-nine threat plots that covered all fuel complexes in the Kamloops area. Forest polygons not directly assessed with a threat plot were assessed using up-to-date ortho photos and near 100% ground truthing. The only areas not directly ground truthed are located in the two kilometer

perimeter buffer, where no structures exist. All plots and associated pictures can be found in Appendix B.

Table Six - Wildfire Behaviour Threat Class Area Summary

Wildfire Behaviour Threat Class	City of Kamloops Hectares (Ha)	Two Km Buffer Hectares (Ha)
None	172	69
Low	7578	2189
Moderate	16358	17535
High	5320	7480
Extreme	0	0
Total	29428	27273

The following wildfire behaviour threat class definitions have been developed specifically for the Kamloops area. The low, moderate, high and extreme threat classes are taken from the wildfire threat assessment worksheet. The specific definitions for each threat class have been developed to clarify the wildfire threat definition and to provide a locally relevant written description of each wildfire threat class. This wildfire threat class system is similar to that used in the Fire Smart publication.

Table Seven - Wildfire Behaviour Threat Class Definitions

<p>Very Low (Blue)</p>	<p>Water bodies, active or freshly disturbed gravel pits.</p>	
<p>Low (Green)</p>	<p>Developed land that will not support wildfire spread.</p>	<p><u>Examples:</u> Golf course, watered and mowed grass, irrigated or heavily managed agricultural land, severely disturbed land, fully developed residential and commercial areas not directly adjacent to forested or undeveloped land.</p>
<p>Moderate (Yellow)</p>	<p>Developed and undeveloped land that will support surface fire spread only.</p>	<p><u>Examples:</u> Open bunchgrass and Big Sage grassland. Deciduous forest cover dominated areas. Previously fuel managed forest stands assessed as moderate utilizing a threat worksheet.</p>
<p>High (Orange)</p>	<p>Forested land that will support candling, intermittent crown and continuous crown fires.</p>	<p><u>Examples:</u> Unmanaged forested land with coniferous coverage exceeding 20% canopy closure. Multi-layered Douglas-fir dominated stands. Open conifer stands with heavy surface fuel loading. Past fuel managed areas with new dead standing conifers, heavy surface fuel loads or heavy conifer regeneration or not treated to a satisfactory standard.</p>
<p>Extreme (Red)</p>	<p>Forested land in drybelt ecosystems on south or west facing slopes across contour or below developments that will support intermittent or continuous crown fires adjacent to and within communities, or surrounding individual homes.</p>	<p><u>Examples:</u> Forested land with relatively continuous coniferous canopy closure, in excess of 40%, within 200 meters of homes. Continuous dead pine within 200 meters of homes or developments. Areas of live and dead pine beetle attack of greater than 40% adjacent to structures. Partly developed subdivisions with unmanaged coniferous forest fuels on the undeveloped lots.</p>

The threat worksheet guide 'Wildland Urban Interface Wildfire Threat Assessments in B.C. (July 31, 2012) states that low and moderate wildfire threat polygons in the wildland/urban interface are acceptable. High and extreme wildfire threat polygons, adjacent to developments, are considered unacceptable and are to be targeted for wildfire threat reduction (forest fuel management) activities.

All assessed polygons also receive a Wildland Urban Interface (WUI) Wildfire Threat Score as part of the assessment process. The WUI threat assessment identifies the forest land on a community's perimeter, or in intermix situations, that is most likely to directly threaten the adjacent homes and structures in the event of a wildfire. These are the wildland urban interface areas where forest fuels and structures meet. This assessment depends on the location of the assessment polygon relative the developed area, the type of development and the overall position of the development on the slope. The high and extreme WUI wildfire threat class areas are shown as hatched marked areas on the wildfire threat map. Only the high and extreme WUI threat class areas are mapped as the low and moderate areas are considered acceptable and are not targeted for fuel management treatments. The High and Extreme WUI threat class areas are the locations directly targeted for fuel management activities when they overlap a high or extreme wildfire behaviour threat polygon.

Table Eight – City of Kamloops 2016 Wildland Urban Interface Wildfire Threat Class Summary

WUI Threat Class	City of Kamloops Hectares (Ha)	Two Km Buffer Hectares (Ha)
High	7736	1664
Extreme	871	77
Total	8607	1741

The WUI wildfire threat class definitions for the Kamloops area are;

Table Nine - Wildland Urban Interface Wildfire Threat Class Definitions

<p style="text-align: center;">High (black hatch lines)</p>	<p>High WUI wildfire threat class areas are located up to 200 meters above and 500 meters side hill or below developed areas. Forest polygons in these areas can directly threaten adjacent structures and developments through radiant or convective heat of a candling and crowning wildfire within the polygon, or through ember spotting activity ahead of the main fire front.</p>
<p style="text-align: center;">Extreme (black double hatch lines)</p>	<p>Extreme WUI threat class areas are located within 200 meters side hill or below of a developed area. These forest polygons can directly threaten adjacent structures and developments through radiant or convective heat of a candling and crowning wildfire within the polygon, or through ember spotting activity ahead of the main fire front.</p>

8.1 Wildfire Threat Mapping

Ryan Strank of City of Kamloops GIS Department completed the wildfire threat mapping digitizing work. The five City of Kamloops CWPP Map are found in Appendices D through H. The report author collected all field data. Any errors, omissions or inaccuracies are the sole responsibility of the report author.

8.2 PSTA Structure Data Analysis and Management

The PSTA data provided by the BC Wildfire Service for the City of Kamloops included 8750 data points outside the Density Class 5 areas of the City. The data is largely from two sources, 1990s era Trim data and the ICI Society. The Trim data appears to identify all structures, not necessarily occupied houses as is the intent of the PSTA Structure data layer (Melinda McClung, MoFLNRO GIS Analyst, personal communication). These structures can be industrial, farm buildings such as barns and hay storage, and outbuildings in urban areas. The ICI Society data provides all private lots with a street address but not necessarily any structures. There is extensive overlap between the two data sets. Some of the newer developments in the City, specifically in Batchelor Heights, Aberdeen and Juniper Ridge are not captured on either data set. These developments are all inside or immediately adjacent to Density Class 5 areas and should show as such in the next iteration of the PSTA data.

To adequately meet the intent of the spatial data requirements for a CWPP, the following procedure was used to sort and analyze the PSTA Structure data.

1. All data points in Density Classes 3, 4 and 5 were retained as is. There is extensive overlap within these areas but all structures appear to be captured accurately with the exception of the three new development areas identified above. Few 'phantom' or non-structure data points were located in these areas. Those extra points identified are all in close proximity to identified, legitimate house structures.
2. The Trim data in Density Class 1 and 2 areas was removed. This is where a majority of the non-structure data points are located. The ICI Society data alone appears to accurately capture rural houses within the City of Kamloops and around its perimeter.
3. All data points within the Density Class 1 and 2 areas were analyzed using the latest City of Kamloops ortho mosaics and Google Earth to determine if a structure is present and whether it is an occupied dwelling or critical infrastructure. This resulted in the identification of twenty-five data points where no structure existed. These points have been identified on the spatial data for the City of Kamloops CWPP update.
4. The Tk'emlups Indian Band I.R. #1 PSTA data was used as provided.

The final CWPP map and PSTA Structure spatial data will show;

- a. All PSTA Structure data points in Density Classes 3, 4 and 5 as they were provided. Critical infrastructure such as schools in Density Classes 3 and 4 were identified.
- b. No Trim data in Density Classes 1 and 2 will be shown on the CWPP map. These data points will all be shown as overlap or non-dwelling data points in the spatial data.
- c. The ICI data will be shown on the map, without the twenty-five points determined to have no structures present. The twenty-five data points will be identified in the spatial data as having no structure present.
- d. New structures located in Batchelor Heights, Aberdeen and Juniper West have been added to the structure layer and shown on the map.
- e. The Kamloops I.R.# 1 spatial data is mapped as per the PSTA data.

8.3 Mapped Fuel Management Treatment Units

The mapped Fuel Management Treatment Units (FMTUs) within the City of Kamloops boundaries, on municipal or provincial crown land, have been divided into four separate categories as shown in the following Tables. The fourteen new FMTU are a combination of four previously identified FMTUs that were not treated before the hiatus from fuel management within the City boundaries in 2010, and ten new FMTUs

that have been identified to meet the wildfire threat reduction guidelines 200 meter buffer criteria. The previously treated FMTUs have been divided into three maintenance streams based on the stand response and present condition since fuel management treatments were conducted. The M1 areas typically have dead standing trees or patches of thick regeneration that are immediately adjacent to private land. These areas do not meet the City of Kamloops fuel management guidelines and are identified as needing work in the short term to bring them in line with the established guidelines (see 9 City of Kamloops Forest Fuel Reduction Guidelines). The M2 areas have younger regeneration clumps or pruning that does not meet the standard but are not requiring direct action at this time. These areas have been tentatively scheduled for fuel reduction treatments in five years or more. The M3 areas presently meet the City of Kamloops fuel management standard and do not require any action for the foreseeable future. These assessments are for present stand conditions as of April 28, 2016. Impacts of further development, human activities, forest pests, disease, windthrow or snow press can significantly change an area in a short time frame, changing its maintenance status and overall wildfire threat.

The continued effort to manage City owned and Crown land will depend largely on continued grant funding from the provincial government for both initial site treatments and maintenance.

Table Ten – Summary of Fuel Management Treatment Units in the City of Kamloops

Treatment Unit Category	Description	Number of Treatment Units	Total Area (Ha)
New	Untreated forest land within approximately 200 meters of developed areas.	14	162.3
M1	Previously fuel managed treatment units that require further treatment to meet City of Kamloops fuel management standards.	17	121.3
M2	Previously fuel managed treatment units that will require maintenance in the next five years.	19	212.7
M3	Previously fuel managed treatment units that do not require any treatment for at least five years.	32	447.8
Total		82	944.1

NOTE: The digital data for the shapes and areas of the previously treated FMTUs is from historical records, some of unknown origin or data collection standards. No effort has been made to 'clean up' this data, to resolve private/crown land conflicts or changes in ownership since treatments. This work will be done when these sites are re-treated as part of the City of Kamloops maintenance program.

Table Eleven - Summary of Previously Treated Fuel Management Treatment Units

FMTU #	Location	Area (Ha)	Maintenance Schedule	Last Treatment (Yr)	Type of Treatment	Treated By	Funding Source
1	Rose Hill	0.8	2	2009	Hand	Contract	SWPI
2	Rose Hill	25.2	1	2009	Machine	Contract	SWPI
4	Westsyde	1.4	2	2008	Hand	Contract	SWPI
5	Juniper	29.4	3	2009	Hand	Contract	SWPI
6	Juniper	5.4	3	2009	Hand	Contract	SWPI
7	Westsyde	58.3	2	2008	Machine	Contract	SWPI
8	Barnhartvale	29.7	3	2008	Machine	Contract	SWPI
10	Juniper	0.2	3	2008	Hand	Contract	SWPI
11	Barnhartvale	2.8	2	2007	Hand	Contract	SWPI
13	Barnhartvale	3.4	3	2007	Hand	Contract	SWPI
15	Barnhartvale	21.6	3	2007	Hand	Contract	SWPI
18	Rose Hill	8.2	2	2009	Hand	Contract	SWPI
19	Barnhartvale	29.0	3	2008	Hand	Contract	SWPI
34	Barnhartvale	13.2	3	2009	Hand	Contract	SWPI
36	Pineview	1.3	2	2006/07	Hand	BCWS	BCWS
37	Pineview	7.0	1	2007	Hand	BCWS	BCWS
38	Barnhartvale	19.7	2	2008	Hand	Contract	SWPI
40	Westsyde	6.3	3	2008/09	Hand	Contract	SWPI
42	Westsyde	8.6	2	2008/09	Hand	Contract	SWPI
43	Westsyde	9.6	1	2008/09	Hand	Contract	SWPI
46	Westsyde	14.8	2	2008/09	Hand	Contract	SWPI
47	Juniper	43.4	1	2008	Hand	Contract	SWPI
48	Kenna Park	26.9	3	2009	Hand	Contract	SWPI
49	Kenna Park	19.4	2	2009	Hand	Contract	SWPI
50	Kenna Park	43.7	3	2009	Machine	Contract	Federal
51	Kenna Park	10.9	3	2009	Hand	Contract	SWPI
52	Kenna Park	17.2	3	2009	Hand	Contract	SWPI
53	Hillside Dr	0.7	3	2010	Hand	Contract	SWPI
54	Aberdeen	3.7	3	2008/09	Hand	Contract	SWPI
55	Aberdeen	2.0	3	2008/09	Hand	Contract	SWPI
56	Aberdeen	1.9	3	2008/09	Hand	Contract	SWPI
57	Aberdeen	2.4	1	2008/09	Hand	Contract	SWPI
58	Aberdeen	4.6	1	2008/09	Hand	Contract	SWPI
59	Aberdeen	1.1	1	2008/09	Hand	Contract	SWPI

60	Aberdeen	0.7	1	2008/09	Hand	Contract	SWPI
61	Sahali	5.3	2	2008/09	Hand	Contract	SWPI
62	Sahali	4.0	3	2008/09	Hand	Contract	SWPI
63	Sahali	7.6	2	2008/09	Hand	Contract	SWPI
64	Aberdeen	6.1	2	2008/09	Hand	Contract	SWPI
65	Aberdeen	0.7	1	2008/09	Hand	Contract	SWPI
66	Aberdeen	8.1	1	2008/09	Hand	Contract	SWPI
67	Aberdeen	4.8	3	2008/09	Hand	Contract	SWPI
68	Aberdeen	1.4	1	2008/09	Hand	Contract	SWPI
69	Knutsford	0.9	3	2008/09	Hand	Contract	SWPI
70	Peterson Ck	2.7	3	2009	Hand	Contract	SWPI
71	Peterson Ck	0.2	3	2009	Hand	Contract	SWPI
72	Peterson Ck	16.9	2	2009	Hand	Contract	SWPI
73	Sahali	0.4	2	2009	Hand	Contract	SWPI
74	Sahali	0.6	1	2009	Hand	Contract	SWPI
75	Sahali	3.2	3	2009	Hand	Contract	SWPI
76	Sahali	1.3	3	2009	Hand	Contract	SWPI
77	Sahali	0.3	3	2009	Hand	Contract	SWPI
78	Juniper	0.5	1	2010	Hand	Contract	SWPI
79	Juniper	3.4	2	2010	Hand	Contract	SWPI
80	Kenna Park	142.0	3	2009	Machine	Contract	Federal
82	Rose Hill	11.3	1	2008	Hand	Contract	SWPI
83	Juniper	18.2	3	2005	Hand	Contract	SWPI
84	Barnhartvale	1.7	3	2009	Hand	Contract	SWPI
86	Barnhartvale	10.8	3	2009	Machine	Contract	SWPI
87	Barnhartvale	2.1	3	2009	Hand	Contract	SWPI
88	Barnhartvale	0.6	3	2009	Hand	Contract	SWPI
89	Peterson Ck	0.6	1	2009	Hand	Contract	SWPI
94	Pineview	26.9	2	2006/07	Hand	Contract	BCWS
126	Barnhartvale	3.7	1	2007/08	Machine	Contract	SWPI
99	Kenna Park	9.8	3	2009	Hand	Contract	SWPI
106	Barnhartvale	10.7	2	2008	Hand	Contract	SWPI
130	Juniper	0.1	2	2009	Hand	Contract	SWPI
132	Juniper	0.4	1	2009	Hand	Contract	SWPI
Total		781.8					

Table Twelve - Summary of Untreated Fuel Management Treatment Units

FMTU #	Priority	Location	Area (Ha)
9	2	Iron Mask	11.7
45	3	Westsyde	4.2
93	1	Barnhartvale	29.8
100	11	Barnhartvale	10.6
125	10	Barnhartvale	22.3
115	5	Pineview	9.1
117	4	Pineview	25.9
118	14	Juniper Ridge	13.1
120	6	Kenna Cartwright Park	6.3
121	8	Kenna Cartwright Park	9.3
122	7	Kenna Cartwright Park	8.0
123	9	Juniper Ridge	11.2
131	12	Juniper Ridge	0.1
133	13	Juniper Ridge	0.7
Total			162.3 Ha

9 Wildfire Threat Reduction Maintenance

Fuel management maintenance regimes will vary greatly. The regime will often depend on the condition of the stand before initial treatment, the intensity of the activity carried out and the reaction of the remaining forest stand to the treatment. Properly planned and implemented fuel management activities should improve the overall health and vigour of a stand, making it more resilient and more able to withstand wildfires, moisture deficits, pests and diseases.

Many forest stands are not able to withstand aggressive fuel management treatments and must instead be planned for multiple entries to reach an acceptable standard. For example, very heavily stocked lodgepole pine stands that have grown tall with little diameter growth can be prone to windthrow and snow press when opened up too quickly.

In a healthy stand with no new disease or environmental impacts, spacing and pruning treatments should last a decade or more before further work is required. The amount of will depend on tree species, forest health, mortality in the stand, tree ingress, windthrow or snow press, grass growth and other factors that increase the amount of dead and down forest fuel.



Eight year old spaced, pruned and surface fuel treatment in Kenna Cartwright Park.

10 City of Kamloops Forest Fuel Reduction Guidelines

All sixty-eight past Fuel Management Treatment Units (FMTUs) were assessed as part of the 2016 CWPP update. These areas have been treated from 1997 to 2010 under prescription prepared by forest professionals. The treatments have varied, with three main activities undertaken;

- A. Heavy Equipment dead pine removal through harvesting or pile and burn.
- B. Hand crew removal of dead pine through piling and burning on inaccessible and steep slopes.
- C. Hand crew treatments in multi-layered conifer dominated stands involving danger tree removal, spacing, pruning, surface fuel cleanup, debris piling and open burning.

A majority of the sites were completed by hand crews. The stand response has varied widely. In general, the following responses have been noted.

1. The conifer regeneration response is strongest on north and west facing slopes and in water catchment areas in largely clearcut areas, those where the mature pine were all removed due to mortality from the pine beetle epidemic.
2. The regeneration response is least in the Douglas-fir stands with 20-40% canopy retention.

3. The response of Saskatoon (*Amelanchier alnifolia*) has been significant wherever it was present before fuel treatments. It has come to dominate many stands, especially underneath partial retention Douglas-fir stands.
4. The stands offering the best biodiversity, wildlife habitat and stand resilience are those where all available tree species and size classes were maintained during the fuel management treatment.
5. The large coarse woody debris left behind has decayed significantly in the last five or more years since treatment.
6. A majority of the dead Ponderosa Pine wildlife trees left behind for habitat have fallen over. Tree failure is highest where the trees are in the open, without the benefit of other trees to reduce the wind impacts. Most of the remaining standing dead trees were dead before the pine beetle infestation. These trees stand far longer than those killed by pine beetles.

The City of Kamloops will attempt to complete fuel management treatments on all crown and municipal lands within the city boundary, as identified in this report, to the following guidelines, within the next decade.

1. Two hundred meter buffer of all structures where high wildfire behaviour threat polygons are identified. This applies to suitable City owned or Crown land only. Private land is not to be directly managed under this CWPP. The wildfire threat will be reduced from high or extreme to a moderate standard based on the WUI wildfire behaviour threat assessment worksheet as recommended by the BCWS. The worksheet can be found at <http://www.ubcm.ca/assets/Funding~Programs/LGPS/SWPI/Resources/swpi-WUI-WTA-worksheet-2012-Update.pdf>
2. All treatments will be conducted by hand crews immediately adjacent to homes and structures unless high tree mortality or other safety reasons determined that mechanized equipment should be utilized.
3. Fuel management activities will be limited to the treatment of conifers and dead deciduous trees and brush. Live deciduous trees and brush will only be removed for access and to manage for worker and fire fighter safety.
4. All fuel management treatments will respect biodiversity and stand resilience by maintaining a component of all the available tree and shrub species.
5. All fuel management work will respect wildlife habitat by retaining high value wildlife trees, coarse woody debris and degrees of visual and thermal cover where safe and prudent to do so.
6. All fuel management work involve live tree spacing activities up to a maximum of 17.5 cm at dbh unless there is a site specific forest health or wildfire hazard issue that requires a more aggressive treatment. Where tree removal larger than 17.5 cm (merchantable timber) is being considered, timber harvesting must be considered whenever possible.
7. Pruning activities will be limited to conifers in excess of two meters tall. Pruning will include all live and dead branches to a maximum of 50% of the

- tree's height or three meters clear of the surface fuels, whichever is lowest. Pruning stub length to be a maximum of one centimeter in length.
8. Surface fuel clean up includes dead felled trees to a maximum of 15 cm in diameter unless high surface fuel loads required additional debris removal. Removal of all surface fuels from spacing activities and at least 95% of the pruned branches down to 1 cm in diameter. Surface fuel removal to be completed by the most cost effective method available. This debris is usually burned on site, but can include removal and chipping or hauling away. Chipping and spreading is not a preferred treatment.
 9. Coarse woody debris to be cut to lie in close proximity to the ground, with supporting limbs intact on slopes for stability. Vertical and horizontal branches removed and at least five meters apart whenever possible. Coarse woody debris fuel load not to exceed 15 Tonnes per hectare unless removal is dangerous to workers or not practical.
 10. All fuel management activities are to respect water values in the gullies through Aberdeen and Sahali.

11 Wildfire Threat Reduction Options

Reducing the wildfire threat to existing communities, homes, and to future developments can be a very complex planning process. All plans or prescriptions for wildfire threat reduction must be site specific, aesthetically pleasing, economically feasible and environmentally sensitive.

The objective of wildfire threat reduction efforts should not be to stop all fires, which is not realistic or achievable. The objectives should be:

- to alter wildfire behaviour on the forested land adjacent to developments, through forest fuel management, to greatly reduce the potential for house and structure losses,
- to create safe access for wildland fire crews to more efficiently and effectively control wildfires, and
- to construct and maintain houses that are designed to withstand a wildfire.

Building construction materials and design are outside the scope of this report but are discussed in detail in the Fire Smart manual, Chapter 3. Improving structure survivability through forest fuel management has two key components; one, separating the structures from the forest with Fire Smart landscaping, and two, reducing or modifying the forest fuels in the surrounding forest to reduce the wildfire behaviour.

**Table Thirteen - Recommended Wildfire Hazard Reduction Guidelines
for Each Wildfire Hazard Class**

Wildfire Behaviour Threat Class¹	Forest Fuel Description²	Wildfire Behaviour	Maximum Fire Intensity Rank	Wildfire Threat Reduction Requirements³
Low	None	Smoldering	1	None
Moderate	Grass/Sage, fuel reduced forested areas, Deciduous forest - Surface Fuels Only	Surface Fires	2 - 3	Priority Zone 1 and 2 (as required)
High	Conifers dominated stands and Surface Fuels	Candling/Crown Fires	4 – 5	Priority Zone 1 and 2 and 3 (as required)
Extreme	Continuous, Dense Conifers and Surface Fuels	Aggressive Crown Fires	4 - 6	Priority Zone 1, 2 and 3 (as required)

1 Wildfire Hazard Class for Priority Zone 2 from Fire Smart

2 See full definitions for each Priority Zone 2 Hazard Class

3 Priority Zones from Fire Smart

Landowner awareness and buy-in are the only options for reducing the wildfire hazard to their own property. Fire Smart information needs to be distributed to the private landowners in established developments with unacceptably high wildfire threat..

The City of Kamloops needs to ensure any new developments or subdivisions are not established without adequate wildfire threat reduction efforts put in place before construction begins. By ensuring the new developments are adequately planned and managed to reduce the wildfire hazard to acceptable levels, many of the present problem areas will have their wildfire threats reduced.

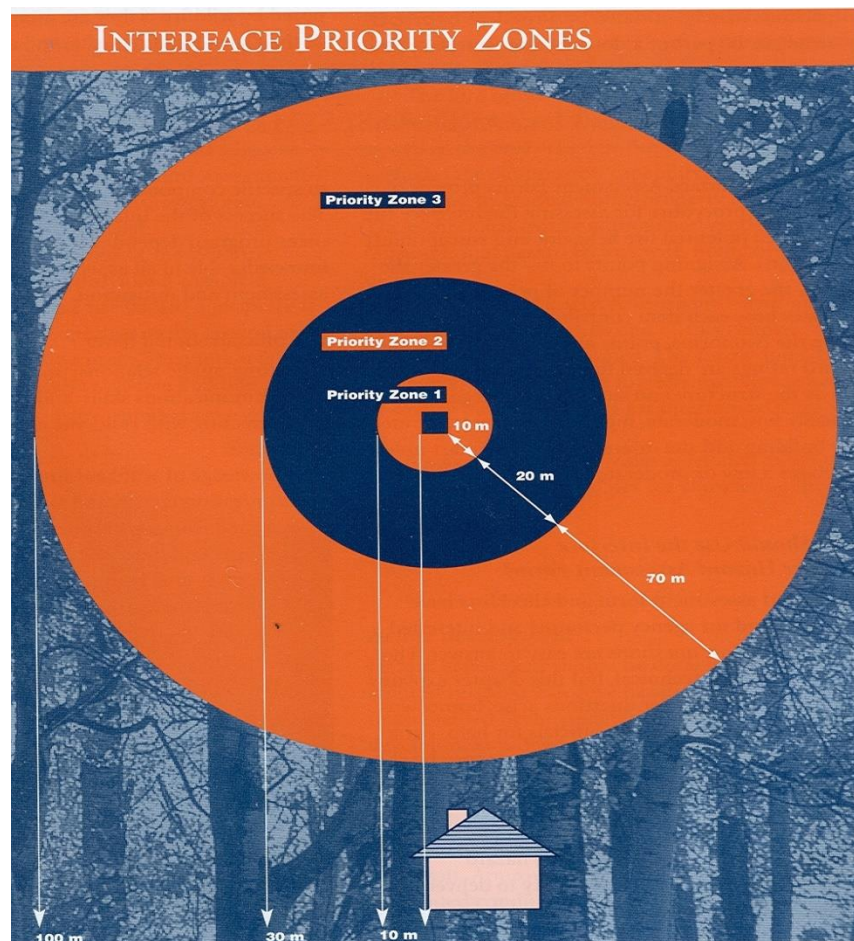
12 Fire Smart Landscaping

Separating homes and other structures from the forest environment involves establishing Fire Smart landscaping around the structure so a wildfire cannot spread directly up to the structure. Direct radiant and convective heat can ignite structures. Creating a barrier between the structure and the combustible material will greatly increase structure survivability in the event of a local wildfire. Fire Smart landscaping can include a wide variety of plants and surface covers, as long as they do not support combustion. Fire Smart landscaping is referred to as Priority Zone One in the Fire Smart manual and is discussed in detail in Chapter 3 of that publication.

A minimum of 10 meters of Fire Smart landscaping from the structure to unmanaged forested land is recommended. This distance should be increased with increasing slopes and the extent of the wildfire threat in the adjacent forest. For example, a 10 meter buffer would likely be sufficient on flat ground adjacent to an unmanaged field of matted grass. The distance should be increased greatly, or combined with other treatments in an area of continuous, dense, tall coniferous trees on a steep (greater than 20%) slope. Fire Smart landscaping alone is suitable for structures adjacent to Low and Moderate (relatively flat ground) Wildfire Behaviour Threat Class areas as identified on the maps attached to this report.

Fire Smart landscaping alone is not enough to increase house survivability in the areas identified as high and extreme wildfire behaviour threat class areas in this report. The high and extreme wildfire behaviour threat class areas will need much wider Fire Smart landscaping or some other type of forest fuel modification on the adjacent forest lands.

Fire Smart Interface Zones



13 Forest Fuel Modification

Wildfire behaviour is based on three factors.

1. Forest Fuel – the woody material available to burn, configuration and continuity
2. Weather – daytime temperature, the amount of drying and wind
3. Topography – the lay of the land, slope, aspect and terrain

Of these three factors, only the forest fuels are within our control. Reducing the volume and continuity of the forest fuels can reduce the intensity, maximum behaviour and the rate of spread of a wildfire, thus reducing the wildfire threat. The objectives for forest fuel management should be:

- a) Reducing the crown fire potential,
- b) Reducing the surface fire intensity,
- c) Improving wildland fire suppression opportunities through better access, better site lines and fewer danger trees,
- d) Maintaining bio-diversity and wildlife habitat, and
- e) Minimizing site impacts during fuel management activities.

Other important benefits include better firefighter safety and greater effectiveness of aerial wildfire suppression resources.

There are two basic approaches to wildfire threat reduction or forest fuel management. The chosen method will depend on numerous site-specific factors.

13.1 Timber Harvesting/Mechanical Fuel Management Treatments

Timber harvesting in interface areas can be a very effective management tool. In large areas of commercially viable forest, a form of timber harvesting to remove a portion of the stand is the most logical option. The wildfire threat reduction work can be self-funding and a valuable resource gets properly utilized. The intensity and method of harvesting will depend on the topography, trees species, forest health, degree of wildfire threat, community acceptance and a variety of other site-specific factors. Clearcut harvesting, while usually not a very popular option for any community, may be the only solution in pure pine or spruce forest stands decimated by bark beetles.

Where necessary, a form of partial or selective harvesting is better accepted. Removal of targeted tree species, based on forest health, wind firmness, diameter limits and a wide assortment of other factors is a common practice.

Harvesting for fuel management, or wildfire threat reduction, is significantly different from conventional commercial harvesting. The emphasis should be directed towards the final product left behind in the forest, not necessarily the timber removed from the site. This can result in additional costs.



Dead Pine removal in Barnhartvale (FMTU 8) in 2007.

13.2 Hand Crew Forest Fuel Management

In immature, inaccessible, sensitive and small patches of forestland where harvesting is not an option, wildfire threat reduction efforts can be completed without timber extraction. Treatments can be carried out by hand, with equipment or a combination of the two. These treatments are rarely self-funded and require a funding source for completion. Treatments can vary in cost from \$2800 to \$7000 per hectare.

Reducing the amount and configuration of the forest fuels consists of four basic activities.

a. Danger Tree Removal

Dead and dangerous trees that will add significantly to the future surface fuel loading should be targeted for removal. Dead trees that can reach private land or access roads must be removed before fuel management activities commence. Retention of high value wildlife trees must be considered.

b. Spacing or Thinning

Spacing, thinning or tree removal involves the reduction of the number of stems and associated branches and needles within the forest canopy. There are a number of different techniques. The spacing treatment necessary is dependent on many factors including; tree species, forest health, age of the stand, stand structure and other factors. Spacing treatments must be designed on a site-specific basis. In some cases, small scale forest harvesting may be the best method to space the area and cover the costs of the treatment. Any forest harvesting in interface areas must be well planned and supervised.

Spacing activities in multi-layered stands involves the removal of the weakest trees on site. These trees have usually been outcompeted, damaged or suffered forest health issues and are falling out of the stand. Caution must be taken to ensure the multi-aged characteristics of the stand are maintained. This is often referred to as 'spacing from below', or forest health style spacing. This usually increases the crown base height and creates a healthier, more vigorous forest. In relatively even aged stands, spacing the trees so the crowns are separated by a set average distance is a reasonable treatment option. This inter-crown distance should be increased on slopes. This spacing distance is also dependent on crown base height and the amount of surface fuel remaining after the site treatment.

c. Pruning

Pruning involves the removal of the lower live and dead branches of coniferous tree species to separate the crown fuels from the surface fuels. By raising the Crown Base Height (CBH) within the stand, it will be more difficult for a surface fire to spread upwards into the tree canopy where it will spread quickly, greatly increase the wildfire intensity and create ember showers, or spotting, onto adjacent structures. The required height of the pruning is variable depending on; canopy closure, tree species, topography and amount of surface fuels remaining after the site treatment.

One commonly used convention for pruning is a three meter crown base height. This is based as much on the crew's reach as on crown fire initiation concerns. Again, there is no one prescription to manage all situations. Pruning must take into account the tree height and amount of live crown. The tree must be left a certain portion of its live crown to remain healthy and vigorous.

d. Surface Fuel Reduction

Surface fuel reduction involves the removal, chipping or burning of the accumulated felled, spaced and pruned material, and sometimes additional downed and dead material that will contribute to wildfire spread. Removal of the fine (small diameter) fuels is the priority as these fuels dry out quickly, ignite easily and are the main contributor to surface fire spread on most sites.

Surface fuel treatments are often considered the most important component of any fuel modification activities and the most expensive. Overly aggressive surface fuel clean up can cause serious environmental impacts including erosion, introduction of noxious weeds and loss of wildlife habitat.

These techniques should be employed on the forested land adjacent to homes or new developments in all High and Extreme wildfire behaviour threat class areas to reduce the wildfire threat to Moderate or below.

No one prescription will solve all wildfire threat problems. All prescriptions must be site specific and developed by an experienced individual.

14 Other Factors to Consider When Conducting Fuel Management

The 'All Things Considered' approach is necessary when conducting any forest management activity. Fuel management is no exception. Fuel management plans and prescriptions must address other forest values that could be impacted by the planned treatments. The other values include; visuals, water, wildlife habitat, site stability, noxious weeds, access, biodiversity, Old Growth Management Areas and endangered species.



A widely spaced and pruned forest will not support crown fires.

15 Implications of Wildfire Threat Reduction Work

Reducing wildfire threats through the reduction of the forest fuels sounds simple enough, but forest fuel treatments can have a wide range of implications. Fuel treatments can have both positive and negative effects on wildfire threats.

Mechanized timber harvesting as a stand alone treatment can be very effective in reducing crown fires but usually results in a significant increase in finer surface fuels composed of needles, limbs and tops. This surface debris can increase surface fire intensity.

Hand crew treatments of dead and danger tree removal, spacing, pruning and surface fuel removal techniques can create lower fuel loaded, more open forest stand. Open forest stands;

- allow more light to reach the surface, often drying out the site or allowing more grass, herb and shrub growth, creating heavier, more continuous surface fuels
- can lengthen the fire season on the site by allowing the site to dry up faster and stay dry longer,
- allow more wind to move through the stand and along the surface, possibly increasing the rate of spread of surface fires, and
- often have lower relative humidity in the summer months from the increased sunlight and temperatures.

The positive effects of wildfire threat reduction through forest fuel reduction include;

- lower probability of crown fires due to the more open forest canopy and higher crown base height,
- lower intensity surface fires from the reduced forest fuels,
- easier and safer access for wildland firefighters, and
- more effective aerial fire control efforts with air tankers.

In general, properly planned and implemented forest fuel reduction work reduces the crown fire potential and overall intensity of wildfires within the treatment area. This will increase the survivability of the trees in the stand and of adjacent homes and structures. Forest fuel reduction work can also increase the dryness on the site, and allow more wind to reach the surface, creating conditions for fast moving, low intensity wildfires to spread.

16 Effectiveness of Hand Fuel Management Treatments

Hand crew treatments is usually the preferred fuel management option, compared to mechanized harvesting and treatments, immediately adjacent to structures because of;

- Better visuals and aesthetics,
- Limited impact on recreational opportunities and established trails,
- Less overall site impacts and soil disturbance, minimizing noxious weed potential impacts, and
- Better protection of wildlife habitat, biodiversity and water resources.

Hand crew completed fuel management treatments usually consist of a combination of danger tree removal, spacing, pruning and surface fuel removal, at varying intensities. The main forest canopy is often kept in place. Much of the work on Crown land is often restricted by merchantable timber utilization standards, where only live trees below the utilization standards can be cut and removed.

This type of treatment can be very effective for small fires that start in the community or within the treatment area. Good visuals, reduced danger trees and ladder fuels can allow safe, fast, aggressive wildfire suppression action within the managed area. Initial attack success can be far higher under these circumstances. Hand crew treatments can be less effective in a landscape level wildfire event that sweeps into the treatment area from the unmanaged forestland. A well developed Rank 5 or 6 wildfire (continuous crown fire) that spreads into a hand treatment area surrounding a community, may easily spread quickly and aggressively through all or a portion of the hand treated fuel management treatment area, providing only minimal safety to the community. The aggressiveness of the treatment will also need to determine the width of the treatment. A lower intensity treatment will have to be wider than a more aggressive treatment to be as effective.

Hand crew fuel management treatments are most effective when supported by forest harvesting along the treatment area perimeter. If the harvesting can reduce the wildfire intensity significantly before the wildfire enters the hand treatment areas, the effectiveness of the hand treatments is significantly increased.

17 Resource Issues and Operational Constraints

The City recommended fuel management treatments are all suggested as hand crew work, supported where possible by smaller pieces of heavy equipment. A

combination of danger tree removal, spacing and pruning of the remaining stand, plus debris disposal is required to reduce the crown fire threshold and improve wildfire suppression access. Most areas are recommended for hand treatments only because the areas selected for treatment are all within highly visual, high use recreation areas. Many sites are relatively steep or located in riparian areas or narrow greenbelts. These sites require sensitive treatments that can only be carried out by hand crews.

18 Higher Level Plans

This area is included within the Kamloops Land and Resource Management Plan (LRMP). This document does not directly address forest fuel management or have significant discussions on wildfires. The LRMP has been reviewed when developing this CWPP and there does not appear to be any conflicts between the stated objectives of the LRMP and properly prescribed and implemented fuel management projects.

The Kamloops LRMP does address Old Growth Management Areas (OGMA's) and Ungulate Winter Range. The fuel management treatment units identified in this document may overlap with local OGMAs but do not impact on the key OGMA attributes on which the areas are based. There is no conflict between the established winter range and the fuel management projects. The planning work to date identifies improvements for winter range within the fuel managed areas.

19 Partnership Contact List

The following individuals and organizations can be very useful in pursuing funding and land use approvals.

Table Fourteen - Partnership List

Name	Organization	Title	Phone #
Kirsten Wourms	City of Kamloops	Nature Park Crew Leader	250 214-5501
Ryan Strank	City of Kamloops	GIS Technician	
Mike Aldred	Ministry of Forests, Lands and Natural Resource Operations – B.C. Wildfire Service	Kamloops Fire Center – Fuel Management Specialist	250-554-5500

Les Leduc	Ministry of Forests, Lands and Natural Resource Operations – B.C. Wildfire Service	Kamloops Fire Zone Fuel Management Specialist	250-554-5500
Hugh Murdoch	Ministry of Forests, Lands and Natural Resource Operations – B.C. Wildfire Service	Kamloops Fire Zone Manager	250-554-5500
Peter Hisch	Ministry of Forests, Lands and Natural Resource Operations - B.C. Wildfire Service	Provincial Fuel Management Specialist	250-426-1773
Peter Ronald	Union of B.C. Municipalities – Victoria	Programs Officer	250-356-5134
Bill Ashman	Ministry of Forests, Lands and Natural Resource Operations	Thompson Rivers District - Tenures Forester	250 371-5500

20 Municipal Council Support

The City of Kamloops council has given its full support to the Forest Fuel Management Program and wildfire threat reduction efforts. Direct threats to the community in 2003 and 2009 have brought the concern of wildfire to the forefront, and the council will continue to support threat reduction efforts.

21 Cultural Heritage Values and Overview

The City of Kamloops completed a city wide Preliminary Field Reconnaissance (PFR) project with the Tk'emlups Indian Band in 2009. This was meant to identify any high value or sensitive cultural values on the crown lands surrounding the city that would be impacted by fuel management treatments. Although nothing specific was located, there will be ongoing consultation with the TIB for future fuel management projects.

22 Discussion of Funding Opportunities

As of the April 2016 creation of this Community Wildfire Protection Plan, there is only one program available to cover the costs of fuel management projects on Crown lands.

Strategic Wildfire Prevention Initiative (SWPI) program

The UBCM distributes fuel management funding provided by the B.C. Wildfire Service to Regional Districts, Municipalities and First Nations on a first come first serve basis to plan and implement fuel management projects.

The UBCM requires that a Community Wildfire Protection Plan be completed before operational funding is provided. This ensures that the entire community area is assessed and the highest priority projects are completed first. The First Nations Emergency Services Society (FNESS) is involved in distributing the funds to First Nations on UBCM's behalf. This is provincial funding that must be spent on Crown land.

Strategic Wildfire Prevention Initiative (SWPI) program guidelines for current and past years can be found at <http://www.ubcm.ca/EN/main/funding/lgps/strategic-wildfire-prevention.html>

23 Landscape Level Forest Fuel Management

Landscape level fuel management activities are largely beyond the scope of this report. The City of Kamloops is focusing on the perimeter fuel management treatments that directly impact on the structures and developments within the City boundaries. No treatments are being carried out outside the City boundaries or for more general landscape level purposes. This is not seen as their jurisdiction or responsibility. The younger timber types in the clearcuts and partial cut systems designed for a landscape level fuel break are less flammable with less bio-mass for combustion and do not pose a significant a wildfire threat as continuous mature conifer stands.

Landscape level fuel management activities include a combination of:

- a. clearcut or selective harvesting treatments with close attention paid to windfirmness of the retained trees,
- b. appreciation for visual quality objectives in the Kamloops area,
- c. fuel management considerations for slash and coarse woody debris retention in the harvested areas.
- d. An accessible road system with wide right-of-ways to act as fuel breaks,
- e. identified and developed water resources for wildfire suppression, and
- f. aggressive fuel management around communities and culturally significant sites.

24 City of Kamloops Capacity/Experience

The City of Kamloops has over twenty years of fuel management efforts supervised and administered by city staff. Their parks department directly manages the fuel management program through local consultants and contractors. The Kamloops Fire and Rescue are involved with site selection and the Fire Smart program. They have bush trucks and gear and regularly conduct cross-over training with the BC Wildfire Service local crews and staff.

There is the B.C. Wildfire Service Branch Office, Air Operations, Fire Center and Fire Zone located at the Kamloops Airport. Initial Attack crews, Unit Crews, wildfire management staff and Air Tankers are all available during the wildfire season.

25 Relevant Legislation and Local Government By-Laws and Policies

City of Kamloops Fire Prevention By-Law 10-37 covers open burning and permitting. Kamloops Fire and Rescue (KFR) provides mandatory permits for all open fires. They are limited to properties on 0.4 hectares or bigger and are for the burning of yard waste only during daylight hours. Land clearing and burning permits are also issued by the KFR. The permit system provides that people are responsible for their fire, must be constantly monitored by a competent person and any other obligations the Fire Chief deems necessary.

26 Recommendations/Action Items

The following recommendations are actions items for the City of Kamloops to continue their fuel management program to reduce the wildfire threat to the structures and recreational areas within the City.

- 1 Continue to support fuel management activities designed to reduce the wildfire threats to the forests and structures within the City of Kamloops.
- 2 Pursue all possible funding options to complete the recommended fuel management treatments.
- 3 Continue the prescribed fire program within the City boundaries to reduce surface fuels and fuel continuity.
- 4 Complete fuel management activities on all identified new Fuel Management Treatment Units identified in this CWPP in the next five years, subject to available funding.

- 5 Initiate a FMTU maintenance program to ensure all past treatment areas continue to meet a reasonable standard.
- 6 Conduct all fuel management activities considering climate change and the implications on biodiversity and forest health in the Kamloops area.
- 7 Ensure local building design requirements address Fire Smart principles specifically in terms of using non-combustible exterior materials, establishing adequate building setbacks from the adjacent forested lands, and ensuring Fire Smart Priority Zone 1 areas are non-combustible.
- 8 Strive to become a recognized Fire Smart Community through the national Fire Smart program that will bring attention to the issue of wildfire prevention while encouraging all business and property owners to reduce the wildfire potential in and around the community.

27 Summary

The City of Kamloops (the City) is located in some of the driest ecosystems within the province of B.C. and all of Canada. These fire dependent ecosystems experience long, dry summers with regular drought conditions which are conducive for wildfire ignition and spread. The size and shape of the developed parts of the City result in extensive wildland/urban interface (the interface) between residential houses and forest or grasslands. The City of Kamloops has conducted wildfire threat reduction work on City owned and B.C. Crown land since 1987. An annual wildfire threat reduction program was initiated by the City in 1994. These efforts were accelerated in the mid-2000s due to a pine beetle epidemic that caused mortality in over 90% of the mature ponderosa pine trees within the City limits. The City has identified over 4200 houses directly adjacent to forests or grassland within its boundaries. The more rural subdivisions typically have more structures prone to wildfires.

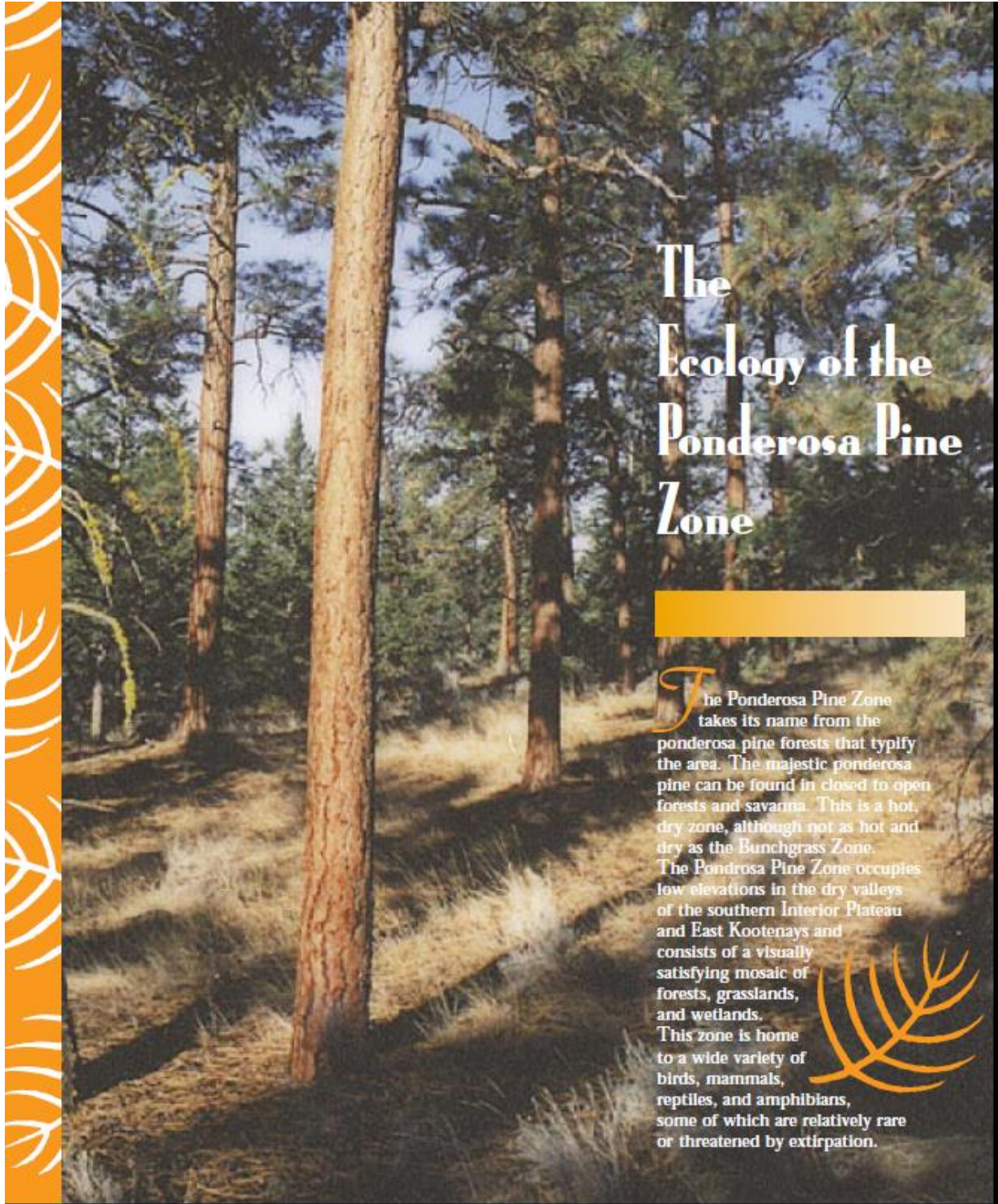
Long term wildfire threats exist throughout the City. The houses on the western edge of Peterson Creek and within the Rose Hill subdivision face the most serious long term threats. The other main areas of concern include Barnhartvale, Juniper Ridge, Heffley and Pineview. The intention of the City of Kamloops fuel management program is to retain all interface areas within the City in a moderate or low wildfire threat class for the long term. Fuel management treatments are targeted for 200 meters in width when appropriate. The City has completed over 780 hectares of fuel management treatment area on sixty-eight unique sites. Some areas have been treated three times. Another fourteen sites, covering 162 hectares, are still requiring their first treatment. Not all private land within interface areas meet a moderate wildfire threat standard. Private

land with a high wildfire threat rating adjacent to houses can be found in Barnhartvale, Juniper Ridge, Rose Hill, Pineview and Heffley.

The maintenance requirements on the forest and grasslands within the City of Kamloops will depend on further developments in the area, tree species, forest health, mortality in the stand, conifer ingress/regeneration, grass growth and other factors that increase the amount of dead and down forest fuel, coniferous canopy closure or reduced fire suppression crew safe access. Of the sixty-eight past treatment areas, seventeen are requiring maintenance work in the next five years to retain the moderate threat class. As forest stands re-establish themselves after the pine beetle infestation, bio-mass and the associated wildfire threats are expected to increase incrementally each year unless regular, site specific fuel management treatments are continued.

Appendix A

Biogeoclimatic Zone Brochures



The Ecology of the Ponderosa Pine Zone

The Ponderosa Pine Zone takes its name from the ponderosa pine forests that typify the area. The majestic ponderosa pine can be found in closed to open forests and savanna. This is a hot, dry zone, although not as hot and dry as the Bunchgrass Zone. The Ponderosa Pine Zone occupies low elevations in the dry valleys of the southern Interior Plateau and East Kootenays and consists of a visually satisfying mosaic of forests, grasslands, and wetlands. This zone is home to a wide variety of birds, mammals, reptiles, and amphibians, some of which are relatively rare or threatened by extirpation.





Location

The Ponderosa Pine Zone is located at low elevations along the very dry valleys of British Columbia's southern interior.

The zone occupies a narrow band along the bottoms and lower side walls of a number

of major river valleys, including the Fraser (in the Lytton-Lillooet area), lower Thompson, Nicola, Similkameen, and lower Kettle. It also occurs in areas adjacent to Okanagan Lake and in southeastern British Columbia near Cranbrook and Lake Kookamisa. The Ponderosa Pine Zone extends south into the United States where it is much more widespread than in Canada.



Similkameen Valley

Climate

The Ponderosa Pine Zone is the driest of the forested zones in British Columbia, and in summer it is also one of the warmest.

In July, mean temperatures range from 17 to 22° C. The low precipitation of 250–450 mm per year is a result of the strong rain-shadow cast over this area by the Coast and Purcell Mountains.

Most precipitation falls in winter, with December and January being the wettest months. Winters are cool, with a light, intermittent snow cover. The snowpack varies from 0 to up to 50 cm and may come and go throughout the winter. The growing season is relatively long, with a continuous frost-free period of 125–175 days. This makes the area suitable for agricultural purposes, provided there is water for irrigation.

© 2010 BC Wildfire Centre



Ponderosa pine stand

Ecosystems

The vegetation in this zone often consists of a mosaic of forests and grassland. Ponderosa pine, which dominates most forests in this zone, is also called yellow pine and is best known for its characteristic vanilla-scented, cinnamon-coloured bark made up of jigsaw-puzzle-shaped scales.

The thick bark helps make the tree resistant to surface fires. Stands are often open and park-like, with a ponderosa pine canopy and an understory of blue-

bunch wheatgrass, rough fescue, and arrow-leaved balsamroot. Other dominant species in this landscape include saskatoon, pasture sage, lemonweed, and yarrow. Tree regeneration, in natural conditions, is uncommon in the understory, and there are few, if any, shrubs. Additional plant species can include silky lupine, orange arnica, rosy pussytoes, Rocky Mountain fescue, Idaho fescue, slender hawksbeard, timber milk-vetch, junegrass, and cheatgrass.



Ponderosa pine bark



Arrow-leaved balsamroot
Babingtonia sagittata



Rosy pussytoes
Antennaria rosea



Due to cutting and fire suppression, many sites that previously supported open stands now contain dense young thickets or, alternatively, grasslands on sites where regeneration of trees has been poor.

Dry grasslands, or shrub-steppes, occur on gently sloping, extremely dry sites throughout the zone and often extend into the lower-elevation Bunchgrass Zone.

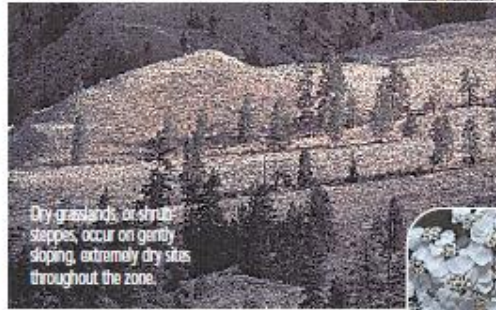
Shrubs, like big sagebrush or rabbit-brush, are found in combination with blue-bunch wheatgrass, pasture sage, yarrow, and fescues on grasslands that are in good condition. On heavily grazed sites, big sagebrush or rabbit-brush increase in abundance and other species like, bluegrasses, cheatgrass, and knapweed are found.

The driest forested sites in this zone are found on south-facing rocky outcrops and steep escarpments. Here ponderosa pine dominates the open forest canopy, and herbs include yarrow, compact selaginella, and red three-awn. On drier sites in the northern part of the zone, Douglas-fir occurs as a minor species mixed with the ponderosa pine.

Dense stands of Douglas-fir grow on moist sites such as gullies, draws, and streambanks, and on steep northerly aspects. Throughout the zone, trembling aspen is a common species in dense stands on sites kept wet by seepage. Water-loving black cottonwood is the main species on floodplains. The shrubby understory includes water birch, along with common snowberry, roses, red-osier dogwood, Douglas maple, and tall Oregon-grape.



Common rabbit-brush
Chrysothamnus nauseosus



Dry grasslands, or shrub-steppes, occur on gently sloping, extremely dry sites throughout the zone.

Ala. Hensley



Yarrow
Achillea millefolium

Ala. Hensley



The driest forested sites in this zone are found on south-facing rocky outcrops and steep escarpments.

Ala. Hensley



Trembling aspen
Populus tremuloides

Ala.

Fire History



As a result of lightning strikes and a general lack of moisture in this zone, wildfires occur here perhaps as often as every 15–25 years. Because of their frequency, fires have played an important role in the ecology of this zone. Mature ponderosa pine trees have a thick bark and a self-pruning habit that prevents most fires from spreading upward to the crown. However, as fires speed through the understory, they burn off grasses and new growth, leaving behind a relatively bare forest floor and restricting regeneration of new trees. Historically, this pattern resulted in a mosaic of grasslands and open stands of pine. In recent times, as a result of fire suppression, dense stands of pines have replaced some of the more open stands, as well as some grasslands. These dense stands contain “ladder” fuels that will result in hotter and more abundant crown fires in the future. Because there is much housing in the Ponderosa Pine Zone, many private residences are at risk from wildfires or fires caused by humans.

Wildlife

Because of the short, relatively snow-free winters, the Ponderosa Pine Zone is an important environment for many kinds of wildlife. Mule deer, white-tailed deer, bighorn sheep, and Rocky Mountain elk migrate long distances to winter here, and resident birds tend to form bigger, more visible flocks in the winter months.

The large number of wildlife species here is related to this zone's location between the Great Basin to the south and the boreal forests to the north. Northern species such as the Snowy Owl and Gyrfalcon find the southern limit of their range here, and southern species such as Canyon Wren and spotted bat are near the northern limit of their range.

Of equal importance is the rich variety of food available in the mixture of grasslands and dry forest, wetlands and dry shrub-steppe, and rugged cliffs and broken rock. Ponderosa pine parklands provide habitat for species such as Clark's Nutcracker, White-breasted Nuthatch, and yellow-pine chipmunk that feed on large conifer seeds. Birds such as the Northern Flicker and White-headed Woodpecker eat insects that live in the bark of pine trees. Others, such as the Common Poorwill, feed on flying insects. In winter, ungulates such as Rocky Mountain elk, mule deer, and white-tailed deer eat the shrubs that grow under the open-canopied forests. Denser stands of Douglas-fir and ponderosa pine provide winter cover for ungulates and abundant seeds and insects for a variety of birds (the Mountain Chickadee for example) and small mammals such as the little brown myotis, California myotis, red squirrel, northwestern chipmunk, and longtailed vole.

Shrub-steppes provide winter and spring grass forage for California bighorn sheep and Rocky Mountain elk, shrub forage for mule deer and white-tailed deer, and breeding habitat for birds such as the Sage Thrasher and Brewer's Sparrow that have adapted to the sagebrush environment.

White-breasted Nuthatch
Sitta carolinensis



Rainbow Mallet Nuthatch



Rocky Mountain elk
Cervus elaphus nelsoni



Mallet Nuthatch

Yellow-pine chipmunk
Tamias amoenus



Mountain Chickadee
Parus gambeli



Painted turtle
Chrysemys picta



Coyote
Canis latrans

Arizonian

Although dry forests dominate this zone, it also includes some wetland meadows and moist, shady draws.

These are home to a variety of reptiles and amphibians such as the common garter snake, tiger salamander, and northern leopard frog. Lakes and potholes provide breeding grounds for Canada Goose and various dabbling and diving ducks, and year-round habitat for the painted turtle and tiger salamander.

Other species such as coyote, black bear, cougar, badger, beaver, muskrat, and yellow-bellied marmot also inhabit the forests and

wetlands of this zone. Some species of wildlife benefit from the change in vegetation associated with agriculture: for example, the coyote, American Kestrel, Western Bluebird, and Lewis Woodpecker. Non-native bird species, such as California Quail, Ring-necked Pheasant, and European Starling, occur here as a result of direct or indirect introductions from elsewhere.



Western Bluebird
Sialia mexicana

Endangered Species

Rugged cliffs and talus slopes provide breeding habitat for rare bat species such as spotted bat and pallid bat, as well as less abundant birds and reptiles such as Canyon Wren and western rattlesnake.

Threatened species in this zone include Townsend's big-eared bat, fringed myotis, western small-footed myotis, western long-eared myotis, Flammulated Owl, Common Poorwill, Burrowing Owl, tiger salamander, Anatum Peregrine Falcon, White-headed Woodpecker, and White-throated Swift. Several species, including Sage Grouse, white-tailed jackrabbit, short-horned lizard, and Nuttall's cottontail, once occurred in this zone but are now considered extirpated in British Columbia.



Common Poorwill
Palaenoptilus nuttallii

Alkaline Ponds

Although wetlands and ponds are not a common feature in the dry Ponderosa Pine Zone, alkaline ponds can occur in depressions or basins with restricted drainage. These ponds, which dry out by the end of summer, are fringed by wetlands that contain several kinds of plants, including alkali saltgrass, rushes, and bulrushes. Wetlands such as these, even when they are limited in extent, represent the greatest source of key habitat for many rare and endangered species. Because water is so scarce in the zone, even small amounts are important to the survival of many wildlife species.



Alkaline pond

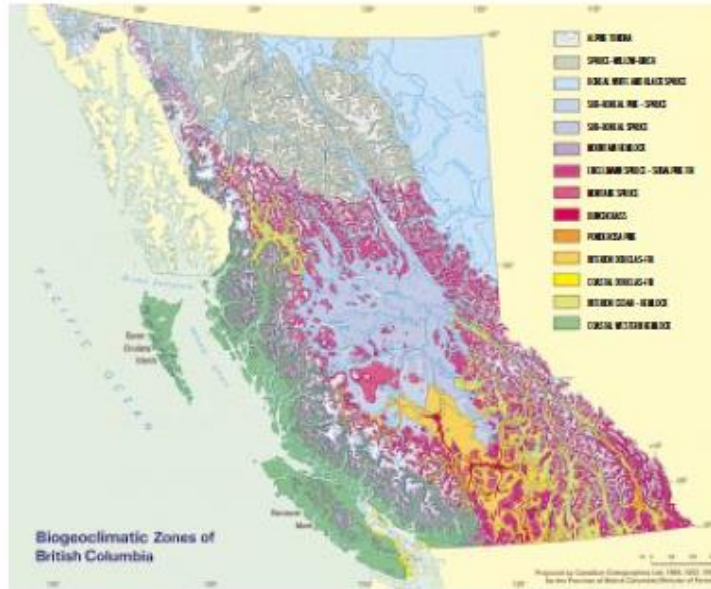
Resources

Although the Ponderosa Pine Zone has many forested areas, the productivity of ponderosa pine and Douglas-fir is poor on most sites. Because of the prominence of grasslands, cattle grazing is the primary form of agriculture in this zone. The ponderosa Pine and Bunchgrass zones are particularly important for early spring range for cattle. Most flat areas are irrigated for the production of hay. In the Okanagan Valley, irrigation also makes orchards and vineyards possible in some areas. Much of the Ponderosa Pine Zone occupies slopes that are too steep for agricultural purposes. However, because of their ideal climate and views, these same sites provide excellent locations for housing.



Landscapes in lower Deadman River Valley

Recreational uses include hiking, cycling, horseback riding, nature study, hunting, fishing, and dirt bike riding. The larger lakes and their beaches are significant tourist attractions. Some recreational activities such as the use of all-terrain vehicles and mountain bikes, which have become quite common in this zone, can present environmental hazards. These activities often bring in weed seed. They also compact the soil surface and make it more susceptible to erosion. Because of the competing demands of agriculture, forestry, urban and industrial development, recreation, biodiversity, and wildlife habitat, land-use conflicts are common in the Ponderosa Pine Zone. Integrated land-use planning can be an important tool for resolving these conflicts.



The Ponderosa Pine Zone is one of fourteen biogeoclimatic or ecological zones within British Columbia. These zones are large geographic areas that share a similar climate within the province. Brochures in this series explore each zone.



Ministry of Forests
October 1998

For further information contact:

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Research Branch
P.O. Box 9519 Stn Prov Govt
Victoria, B.C. V8W 9C2

Detail on British Columbia's Biogeoclimatic Zones is available in:

Ecosystems of British Columbia
Special Report Series #8
D. Meidinger and J. Pojar
Ministry of Forests Research Branch, Victoria, B.C.

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The Ecology of the Interior Douglas-fir Zone

The Interior Douglas-fir Zone lies in the heart of British Columbia's southern interior. Often described as "cattle country," it is a land of rolling hills and valleys covered by dry grasslands and open forests. Although it is best known for cattle ranching and forestry, this zone also supports a rich diversity of natural communities and wildlife species.

Location

The Interior Douglas-fir Zone spreads across low- to mid-elevations in the east Kootenays, the Okanagan-Similkameen and Thompson region, and southern parts of the Chilcotin and Cariboo. Most of the zone occupies the southern part of the Interior Plateau. To the west, the zone works its way up the leeward slopes of the Coast Mountains. In the east, it covers the southern portion of the Rocky Mountain Trench. Cranbrook, Vernon, Chase, Princeton, Boston Bar, Clinton, and Williams Lake all lie within the Interior Douglas-fir Zone.



Climate

The Coast, Cascade, and Columbia mountains cast a rain-shadow over the Interior Douglas-fir Zone. Warm and dry in the short summer season and cool in winter, the climate is driest at lower elevations in the Okanagan-Similkameen, Lytton-Lillooet, Chilcotin, and Kamloops areas and wettest in areas close to the Columbia and southern Coast mountains. The ecology of the area reflects the shortage of moisture in much of this zone. Plants such as pinegrass flourish here because they can survive on little moisture during the growing season.



Jim Peckley

Ecosystems

A diverse and interesting array of ecosystems occurs within the Interior Douglas-fir Zone. Forests dominated by Douglas-fir trees of all ages and sizes with a grassy understorey in which pinegrass is most common are typical in this zone. On hotter and drier sites, grassland and open ponderosa pine forest predominate, while dense, closed-canopy spruce forests occur on wetter and cooler sites such as in riparian areas. Lodgepole pine is common at higher elevations or where there has been recent fire.

Extensive grassland communities, commonly called the "upper grasslands," occur throughout drier parts of the zone. Bluebunch wheatgrass, junegrass, and fescues are prominent grasses in these communities. These grasses also occur on very hot and



Jim Peckley

Trembling aspen occurs throughout the zone, especially in younger forests.

dry sites such as upper, south-facing slopes and ridges where ponderosa pine forms open, park-like forests. Wetlands are found in depressions and around open water. Marshes with cattails, sedges, and bulrushes ring the open water with shrubby willows and birches in nearby

swamps. The prominent red stems of red-osier dogwood stand out along stream banks in winter after the leaves have fallen. A unique wetland ecosystem found in this zone consists of saline meadows dominated by saltgrasses.

Fire in the Grass

Ecologists believe wildfires have played an important role in maintaining grasslands in the Interior Douglas-fir Zone. Without regular grassfires, trees take root in open grassy areas and, over time, grasslands become overgrown with trees. Frequent grass fires keep the forests at bay by killing most young trees. Today, wildfires are suppressed, and there is evidence that forests are taking over areas once occupied by grasslands.



Wildfire used to be a common occurrence in the zone, especially in drier areas where there is a mosaic of grasslands and open forests.

Fire and Forest Succession

Wildfires have a big influence on forest ecosystems of the Interior Douglas-fir Zone. Ecologists classify forest fires as either low intensity or high intensity, depending on how hot they are and how they affect the forest. In this zone, most forest fires are low intensity—they scorch the forest floor every 10 to 20 years and burn less than 50 hectares. The thick bark on old Douglas-fir trees enables them to survive low-intensity fires, but many young trees and understory plants are killed. Over time, repeated low-intensity fires



create a forest made up of Douglas-fir trees of many ages—a multi-aged stand.

High-intensity fires occur on average every 150 to 250 years and burn more than 50 hectares at a time. These are stand-destroying fires—they burn not only along the ground but also through the forest canopy, killing most of the young and old trees. Following a high-intensity fire, lodgepole pine is often the first tree to grow back. This pattern results in pure, even-aged pine stands.



Wildlife

Ungulates find prime winter habitat in this zone, with its old Douglas-fir forests, low snowpack, and abundant shrubs such as snowbrush, redstem ceanothus, and snowberry. In winter mule deer find habitat in old forests, particularly those on south-facing slopes. The deer feed on litter fall and find protection from heavy snowfalls under the tree cover. South-aspect forests are also important winter habitat for other ungulates, including white-tailed deer, Rocky Mountain elk, and bighorn sheep.

Rocky Mountain elk
Cervus elaphus nelsoni

Species at Risk

There are several animal species found in the Interior Douglas-fir Zone that are considered by the Ministry of Environment, Lands and Parks to be vulnerable and at risk. For example, vulnerable or sensitive species in wetland ecosystems within this zone include the Great Blue Heron, American Bittern and painted turtle.



Painted turtle
Chrysemys picta



Great Blue Heron
Ardea herodias

Flammulated Owl

After over-wintering in Mexico and Guatemala, Flammulated Owls move north in spring to breed in mountainous areas of North America. Although most nest farther south, a small number return every summer to British Columbia's southern interior—to the Okanagan Valley, the Thompson Basin and, occasionally, the southern part of the Rocky Mountain Trench. Individuals have been observed throughout the Thompson Basin between Chase and Spences Bridge. This diminutive owl is a cavity nester. It usually makes its nest in dead trees or snags and often uses cavities made by woodpeckers. The species is considered vulnerable or sensitive, one step below endangered status.



Verity



Mule deer
Odocoileus hemionus hemionus



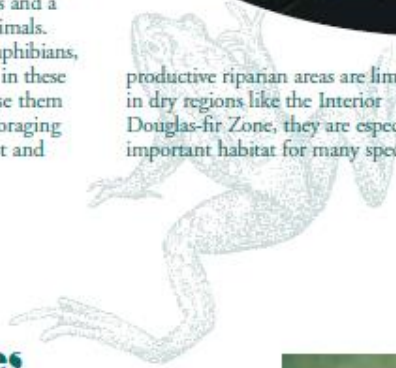
Riparian Ecosystems

Riparian zones are areas around streams, lakes, and other bodies of water. Characterized by a high water table and nutrient-rich soils, riparian zones often support productive ecosystems and a rich diversity of plants and animals. Water-loving plants, birds, amphibians, and small mammals all thrive in these ecosystems. Larger animals use them for various reasons, such as foraging or giving birth. Because moist and



productive riparian areas are limited in dry regions like the Interior Douglas-fir Zone, they are especially important habitat for many species in

this zone. Cattle and horses are also attracted to riparian areas and, if not properly managed, can seriously degrade these sensitive ecosystems.

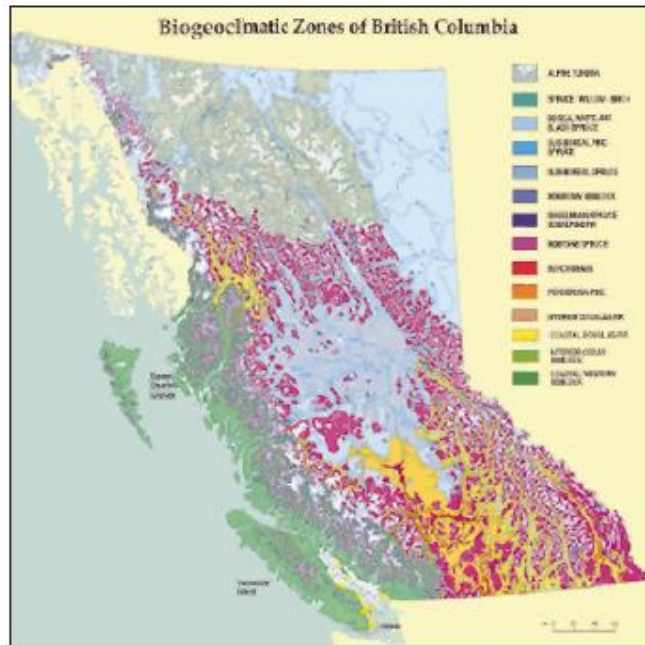


Resources

Extensive and productive Douglas-fir forests provide saw and pulp logs for the forest industry. Cattle grazing is also an important land use here. In fact, this zone contains much of the province's forested summer cattle ranges, as well as many spring and fall ranges.

Wintering areas for cattle are common at lower elevations, especially in grasslands. The short growing season limits other agriculture uses. The zone is ideal for a variety of recreational activities, from hiking and fishing to cross country skiing and horseback riding.





The Interior Douglas-fir Zone is just one of the fourteen biogeoclimatic or ecological zones within British Columbia. These zones are large geographic areas that share a similar climate within the province. Brochures in this series explore each zone.



Ministry of Forests

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 31 Bastion Square
 Victoria, BC V8W 3E7

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 Design: Susan Fitzgibbon
 Electronic graphics: David Boyd*



Appendix B
City of Kamloops
Community Wildfire Protection Plan
Wildfire Behaviour Threat Assessment
Worksheets and Pictures
April 2016

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 1

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-occupied Post-occupied

Plot # 1 Community Hoffley Creek

Assessor B Morrow GPS/UTM (L, S, Zone) E7487000 Street Name Edwards Green Estates

Date April 11/16 GPS/UTM (N, E, Zone) N50 62 24 W 120 15 21 466m

Plot # 04 Land Ownership Crown Private IR Other (Specify)

Factor	A	B	C	D	E
1 Fuel Depth and Moisture Regime Fuel	0	1-5 Dry (anal Wet) 3 2 1	5-10 Dry (anal Wet) 10 0 2	10-25 Dry (anal Wet) 12 8 4	>25 Dry (anal Wet) 15 10 5
2 Surface Fuel Continuity (% cover)	<20	20-40	41-60	61-80	81
3 Vegetation Fuel Compaction	Moist Berbs, Truncated Cany, few stemability weeds	Hard, Detritus Salix	Loose, Cover Salix	Progress, Layer	Loose brush, detritus, Adequate brush, Scattered
4 Fine Woody Debris Continuity (<=70cm) (% cover)	<10 coverage	>10 coverage <50 coverage	10-75 coverage	>75 coverage <10 mm dia	>75 coverage >10 mm dia
5 Large Woody Debris Continuity (>70cm) (% cover)	<10 coverage	>10 coverage <10 coverage	10-75 coverage	>75 coverage, not stacked	>75 coverage, partially stacked
6 Live and Dead Continuity Cover Class (M)	0	1-5	6-10	11-20	>20
7 Live Detritus Cover Class (M)	>20 live detritus cover class issues	0-10	11-20	21-40	>40
8 Live and Dead Equivalency Crown Base Height (M)	5- or <20% equiva crown base	3-5	0	1-2	<1
9 Live and Dead Suppressed and Decadent Fuel (M)	0	SD1-1000	1001-2000	2001-4000	>4000
10 Fuel Form (% of standing and co-incident stems)	Standing Dead and Fully Down <5 or <10% live	Standing Dead and Partly Down 5-25	Standing Dead and Partly Down >25-50	Standing Dead and Partly Down >50-75	Standing Dead and Partly Down >75
11 Continuity Forest/Class Cover within 20m (M)	0-20	21-40	41-60	61-80	>80
Sub Total 33 / 35					
12 Topography	A, Infiltrated	CW, CR, M, Dry (anal Wet)	IR, SS, ESF, Dry (anal Wet)	W, M, SM, LW (anal Wet), EW, SW, Dry (anal Wet)	0
13 Historical Stability Disturbance (by WMI Fire Date)	G, R, R, G, Y, Y, Y, R, R, R, V	G, G, R, R, W, K, G, Y, B	G, G, G, G, G, K, C, W	K, R, R, R, C, C, N, N, R, R, R, R	M, R, R, R, R
Sub Total 30 / 34					
14 Aspect (> 15% slope)	North	East	<15-30% aspects	West	South
15 Slope (%)	0	10-25 and maximum for North slopes	10-40	40-54	>55
16 Rumble	Flat	0	Stepped Terrace, minor low relief	Concave slope, deep ditches or shallow gullies	Convex slope deep gullies
17 Landcover/Topographic Limitation to Wildfire Spread	< 5% unobstructed terrain	North and/or east aspects, concave, shallow gullies, restricted from South and/or West	Non-obstructed terrain, broad topography, regular slope and slope changes, multiple restrictions to wildfire spread	Balling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread	Concave, convex topography, No restriction to wildfire spread
Sub Total 24 / 24					
FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					
18 Position of Structures/ Community on Slope	No Structures Values within 2 km	Bottom of slope, valley bottom	Mid-slope (gentle), elevated slope (>10% slope)	Mid-slope (steep), >10% slope	Upper 1/3 of Slope
19 Type of Development	No Structures Values within 2 km	Partial interface, no enclosure	Partial interface, with enclosure	Boundary > 1 structure	Interface < 1 structure
20 Proximity of Assessment Area Relative to Values	No Structures Values within 2 km	Above >500 200-500 <200 m	Below >500 200-500 <200 m	Flattening >500 200-500 <200 m	Below >500 200-500 <200 m
Sub Total 45 / 55					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
TOTAL WILDFIRE THREAT SCORE 132 / 125					

Wildfire Behaviour Threat Class (check applicable class)

Low 0-10

Moderate 11-25

High 26-39

Extreme >39

Wildland Urban Interface Threat Class (check applicable class)

Low 0-15

Moderate 16-26

High 27-39

Extreme >39

Last Updated: January 24, 2012

1

City of Kamloops – Wildfire Threat Assessment Picture – Plot 1



Photo 1-1 @ 340 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 2

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot # 2 Locality: City of Kamloops Pre-treatment: Post-treatment:

Assessor: B. Morrow Geographic Location/Draw Name: Heffley

Date: April 11/16 UTM: N50 52' 51" W120° 15' 33" 390m 2

Photo: 1 N 4 Land Ownership: SR (Crown) Private: IR: Other (specify):

Factor	A	B	C	D	E
1 Fuel Depth and Moisture Regime (cm)	1-5 3	6-15 Local Wet 3 1	16-30 Dry Local Wet 10 6 2	31-70 Dry Local Wet 22 4 4	>70 Dry Local Wet 15 10 5
2 Surface Fuel Continuity (% cover)	<10 4	20-40 2	41-60 2	61-80 6	>80 1
3 Vegetation Fuel Composition	Moss, Herbs, Lignated (4) sp. Low Flammability Woods 1	Herbs, Deciduous Shrubs 2	Lichen, Conifer Shrubs 3	Perennial, Lignifer 4	Stephens, Sarcocolla, Arctostaphylos, Salix, Spiraea 5
4 Fine Woody Debris Continuity (<7cm) (% cover)	<10 1	11-20 <10 coverage 5	21-30 10-15 coverage 7	>30 coverage < 30 cm deep 10	>35 coverage > 10 cm deep 15
5 Large Woody Debris Continuity (>7cm) (% cover)	<10 1	11-20 Scattered <10 coverage 2	21-30 15-25 coverage 5	>30 coverage not elevated 10	>35 coverage artificially elevated 15
6 Live and Dead Continuous Crown Closure (%)	<20 2	21-40 1	41-60 10	61-80 10	>80 10
7 Live Deadwood Crown Closure (%)	>40 or >40% (all across crown closure) 2	41-60 2	61-80 2	81-100 4	>100 5
8 Live and Dead Canopy Crown Layer Height (m)	5+ or <10% canopy crown closure 0	1-5 5	6-9 7	10-15 10	>15 15
9 Live and Dead Suppressed and Understorey Fuelbed (m ² /ha)	1-200 2	201-1000 5	1001-2000 10	2001-4000 20	>4000 30
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Fully Dead < 5% or < 10% canopy 0	Standing Dead and Fully Dead 5-25 5	Standing Dead and Fully Dead > 25-50 10	Standing Dead and Fully Dead > 50-75 20	Standing Dead and Fully Dead > 75 30
11 Continuous Forest/Shrub Cover within 20m (%)	0-20 0	21-40 1	41-60 5	61-80 10	>80 15
Sub Total					49 / 155
12 Atmospheric Zone	AT, Inverted 1	CNH, GRS, Jc, Dry Local Wet 3 1	KH, SRS, ESSF, Dry Local Wet 3 3 5	DS, MS, SRS, Inverted E, Jc, DWS, SWB - Dry Local Wet 5 10 5	15 15
13 Potential Wildfire Occurrence by HWY Fire Zone	65, R1, R2, G6, Y5, R0, Y8, Y9, R5, R8, Y7 1	G1, G8, R3, R4, Y6, G7, G9, Y4 5	G7, G5, G4, G4, Y7, C1, M4 8	G1, Y5, R3, C2, G3, Y5, Y0, R4, R2, Y2 10	R7, R4, R3, R1 15
Sub Total					30 / 120
14 Aspects (>15% slope)	North 0	East 5	<10% slope all aspects 10	11-20 15	South 15
15 Slope (%)	<10 1	10-20 and less severe No Heavy slopes 5	21-40 10	41-60 12	>60 15
16 Terrain	Flat 1	Rolling 3	Sloped terrain, small low relief dunes 5	Continuous slope, steep small scale dune gullies 10	Continuous slope, steep gullies 15
17 Landscape Topographic Limitation to Wildfire Spread	< 5 ha isolated forest None 1	North and/or west aspects, bottoms, wet to moist, protected from South and/or West 2	Altitudinal terrain, broad topography, regular aspect and slope changes, multiple ridges to shelter wind 3	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor ridges to shelter wind 10	Continuous, complex topography, No restriction to wildfire spread 15
Sub Total					39 / 155
FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					118 / 240
18 Position of Structures/Community on Slope	No Structures, Values within 75m 0	Bottom of slope, valley bottom 5	Mid-slope (top of land, elevated paths, etc.) 10	Mid-slope continuous, > 5% slope 12	Upper 1/3 of slope 15
19 Type of Development	No Structures, Values within 75m 0	Perimeter structures, no enclosures 5	Perimeter structures, with enclosures 10	Adjacent > 1 structure 12	Threat to neighbouring property 15
20 Position of Assessment Area Relative to Values	No Structures, Values within 25m 0	0-50 >50-200-500 < 200 m 1 10 20	50-100 >100-200-500 < 200 m 1 10 25	100-200 >200-500-100 < 200 m 1 12 25	200-500 >500-100 < 200 m 1 15 30
Sub Total					21 / 75
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					139 / 295

**Percent only if Fuel sub total is > 20

**Percent to Structure (or) to community only if Wildfire Threat Behaviour Score is > 25 for untreated objects

Wildfire Behaviour Threat Class (if not applicable):

Low 0-10

Moderate 11-25

High 26-49

Extreme > 50

Wildland Urban Interface Threat Class (if not applicable):

Low 0-15

Moderate 16-24

High 25-39

Extreme > 40

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 2



Photo 2-1 @ 90 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 3

3

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot # 3 Community City of Kamloops
 Address B Morrow Geographic Location (Street Name) Highway
 Date April 11/16 GPS UTM N50° 51' 45.5" W120° 14' 52"
 Parcel # 0114 Land Ownership X Crown Private FR Other (specify)

Factor	A	B	C	D	E
1 Fuel Depth and Moisture Regime (RM)	1-2	3-5	6-10	10-20	>20
2 Surface Fuel Continuity (FC cover)	<10	20-40	40-60	51-80	>80
3 Vegetation Fuel Composition	Miss. Herb. Arched Crops, Low Flammability	Herb. Deciduous Shrubs	Lichen, Deciduous Shrubs	Firegrass, Archaic	Sagebrush, Buckwheat, Antelope-brush, Sycamore
4 Fine Woody Debris Continuity (<10cm) (FC cover)	<1 coverage	Scattered	10-15 coverage	>15 coverage	>25 coverage
5 Large Woody Debris Continuity (>10cm) (FC cover)	<1 coverage	Scattered	10-25 coverage	>25 coverage	>25 coverage
6 Live and Dead Conifers Crown Closure (%)	<20	20-40	41-60	61-80	>80
7 Live deciduous Crown Closure (%)	>50 or <40% (extensive crown closure)	61-80	61-80	20-40	>40
8 Live and Dead Conifer Live Height (m)	5+ or <10m (extensive crown closure)	3-5	6-10	1-2	<1
9 Live and Dead Deciduous and Understorey Crown Closure (%)	0	50-100	100-2000	2001-4000	>4000
10 Fuel Health (% of live and dead) (FC cover)	Standing Dead and Partly Dead < 5	Standing Dead and Partly Dead > 5	Standing Dead and Partly Dead > 25	Standing Dead and Partly Dead > 50	Standing Dead and Partly Dead > 75
11 Continuous Fuels/Stack Cover within 2km (%)	0	21-40	41-80	81-90	>90
Sub Total 52 /155*					
12 Prognostic Zone	A1, Impacted	CW, C8, H11	H1, S3, S5F	H4, H5, S6F, S7H	H6, H7, S8F, S9H
13 Historical Wildfire Occurrence by Wildfire Zone	G5, H1, H2, G6, H5, H6, H7, H8, H9, H9, H9, H9, H9	G1, G2, H1, H4, H6, G1, G5, H8	G2, G5, G4, G4, H1, C1, H4	H1, H1, H2, H2, H2, H2, H2, H2	H7, H8, H9, H1
Sub Total 30 /30					
14 Aspect (>10% aspect)	North	East	<10% slope all aspects	West	South
15 Slope (%)	<16	16-20 and max slope for height	10-44	45-54	>55
16 Terrain	Flat	Rolling	Vertical	Complex slope	Steepest slope
17 Landscape/Topographic Limitations to Wildfire Spread	< 5% isolated forest	With minor east aspect	Horizontal terrain, below topography, regular	Rolling terrain, below water	Steepest, rugged topography
Sub Total 30 /30					
FUEL, WEATHER AND TOPOGRAPHY					
WILDFIRE BEHAVIOUR THREAT SCORE 112 /240**					
18 Position of Structures/Community on Slope	No Structures	Bottom of slope	Mid slope	Mid-slope	Upper to all Slope
19 Type of Development	No Structures	Are major interface	Per street interface	Interface > 1	Interface < 1
20 Position of Assessment Area Relative to Values	No Structures	None	Small	Medium	Large
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE 30 /35					
TOTAL WILDFIRE THREAT SCORE 172 /275**					

* based only of Fuel 1-10 (1-20)
 ** based on WILDFIRE THREAT SCORE only if WUI threat score > 30 for estimated polygons.

Wildfire Behaviour Threat Class (where applicable)

Low 0-40

Moderate 41-95

High 96-149

Extreme >150

Wildland Urban Interface Threat Class (where applicable)

Low 0-13

Moderate 14-20

High 21-29

Extreme >30

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 3



Photo 3-1 @ 315 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 4

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot: 4
 Address: 41 Marrows
 Date: April 11/16
 Photos: 3
 Comments: City of Kamloops
 Geographic Location/Street Name: Haskins
 GPS/UTM: N50 51 30
 UTM: 16W20 15 23 6
 Land Ownership: Private
 L.I. Code: 10000

LEVELS

Point	A	B	C	D	E
1. Duff Depth and Moisture Regime (cm)	1-2 3	3-5 Dry 5	5-10 Dry Local Wet 11 4	10-20 Dry Local Wet 12 8 4	>20 Dry Local Wet 15 10 5
2. Surface Fuel Continuity (% cover)	<20 0	20-40 7	41-60 3	61-80 4	81-100 5
3. Vegetation Fuel Characteristics	More Herbs, Invaded Grass, Low Flammability Needs 1	Herbs, Deciduous Shrubs 2	Decid, Conifer Shrubs 3	Conifer 4	Superbark, Pines, Spruce, Deciduous Shrubs, Scrub 5
4. Fine Woody Debris Continuity (<7cm) (% cover)	0	1-10 1	10-25 coverage 2	>25 coverage, <10cm dia 10	>25 coverage, >10cm dia 15
5. Large Woody Debris Continuity (>7cm) (% cover)	0	1-10 coverage 1	10-25 coverage 5	>25 coverage, not elevated 7	>25 coverage, partially elevated 10
6. Fine and Coarse Combustible Crown Classes (CC)	<20 2	21-40 3	41-60 10	61-80 35	>80 10
7. Live Deadwood Crown Class (CC)	>80% <20% live:dead crown class 0	61-80 2	41-60 5	20-40 4	0-20 5
8. Live and Dead Canopy Crown Base Height (m)	5 or <20% canopy crown base 0	3-5 5	2-3 5	1-2 10	<1 15
9. Live and Dead Spruce and Fir Crown Class (m)	0	50-100 5	100-200 10	200-400 25	>400 30
10. Fuel Health (% of standing and partially dead)	Standing Dead and Partially Dead <5 or <20% 0	Standing Dead and Partially Dead 5-25 5	Standing Dead and Partially Dead >25-50 10	Standing Dead and Partially Dead >50-75 20	Standing Dead and Partially Dead >75 30
11. Conditions Favorable to Spread (m)	0-20 4	21-40 7	41-60 10	61-80 15	>80 20
Sub total 46 / 155*					

WINDSPEED

	A	B	C	D	E
12. Exposure Zone	A, Unexposed 1	CH, LH, MH, DH Local Wet 5 4	LH, SH, ESH, DH Local Wet 10 7	RF, MS, SPS, EWH, M, S, L, SH, SW, Local Wet 15 10	PH, SH 15
13. Historical Wildfire Occurrence by Wind Dir. Zone	G5, H1, H2, G4, H3, H4, H5, H6, H7, H8, H9 1	H1, H2, H3, H4, H5, H6, H7, H8, H9 5	G7, G8, G4, G6, G1, G2, H6 8	H1, H5, H3, G2, G1, H5, H6, H4, G7, H2 10	H7, H8, H1 15
Sub total 25 / 70					

TOPOGRAPHY

	A	B	C	D	E
14. Aspect (>15% slope)	North 1	East 5	<10% slope all aspects 10	West 15	South 15
15. Slope (%)	<10 1	10-20 all aspects 5	Slope 10	41-54 15	>55 15
16. Terrain	Flat 1	Rolling 5	Slope, terrain, minor relief features 10	Consistent slope, deep wash or shallow valley 15	Extensive slope, deep gully 15
17. Landscape Topographic Obstacles to Wildfire Spread	<5 ha isolated forest land 1	North and/or east aspect, consistent, no relief, spread restricted from south and/or west 5	Mountaintop, minor topographic, multiple restrictions to wind-spread, deep gullies 10	Building remains, minor water bodies, varied aspect and slope changes, trees restrictions to wildfire spread 15	Consistent, consistent topographic, no restriction to wildfire spread 15
Sub total 35 / 155					

FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE

	A	B	C	D	E
18. Position of Structures/Community on Slope	No structures, values within 2 km 0	Some structures, all within 5	Mid-slope interface, elevated valley, <10% slope 10	Mid-slope, continuous, >10% slope 15	Upper 1/3 of slope 15
19. Type of Development	No structures, values within 2 km 0	Residential interface, no restrictions 5	Residential interface, with restrictions 10	Interface > F structures 15	Interface < F structures 15
20. Position of Attachment Area Relative to Values	No structures, values within 2 km 0	Below >500-200-500-100 m 1 10 20	Below >500-200-500-100 m 1 10 20	Mid-slope >500-200-500-100 m 1 10 20	Below >500-200-500-100 m 1 10 20
Sub total 35 / 155					

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE

TOTAL WILDFIRE THREAT SCORE 131 / 295

Wildfire Behaviour Threat Class (check applicable class)

Low	0-40	<input type="checkbox"/>
Moderate	41-95	<input type="checkbox"/>
High	96-140	<input checked="" type="checkbox"/>
Extreme	>140	<input type="checkbox"/>

Wildland Urban Interface Threat Class (check applicable class)

Low	0-15	<input type="checkbox"/>
Moderate	16-25	<input type="checkbox"/>
High	26-35	<input checked="" type="checkbox"/>
Extreme	>35	<input type="checkbox"/>

Conf updated: January 26, 2017

4

City of Kamloops – Wildfire Threat Assessment Picture – Plot 4



Photo 4-1 @ 160 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 5

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot #: **5** Comments: **City of Kamloops** Pre-treatment Post-treatment

Address: **B. Morrow** Geographic Location/Street Name: **Hastley**

Date: **Apr. 11/16** GPS: **N50 51' 20" W120 16' 00"**

Photos: **0, 1, 4** Land Ownership: Crown Private Other (specify):

Fuel	FUELS				
	A	B	C	D	E
1. Duff Depth and Moisture Regime (mm)	0-2 1	3-10 2 Dry-Zonal Wet 3 3 1	11-10 10 Dry-Zonal Wet 6 2	11-30 4 Dry-Zonal Wet 4 4 4	>30 5 Dry-Zonal Wet 15 10 5
2. Surface Fuel Continuity (% cover)	0	10-40 2	41-60 3	61-80 4	>80 5
3. Vegetation Fuel Composition	Shrub, Herbs, Injuncted logs, Live Herbs, etc.	Herbs, Deciduous, Shrubs	Herbs, Conifer Shrubs	Pinaceous, Lvspruce	Logbrush, Deciduous, Juniper, Scrub Shrubs
4. Fine Woody Debris Continuity (<5cm) (% cover)	0	Scattered, < 10% coverage 3	10-25 coverage 3	>25 coverage < 10 cm deep 4	>25 coverage, > 10 cm deep 5
5. Large Woody Debris Continuity (>5cm) (% cover)	0	Scattered, < 10% coverage 3	10-25 coverage 3	>25 coverage, not elevated 4	>25 coverage, partially elevated 5
6. Over and Dead Canopies Canopy Closure (%)	0	30-40 3	41-60 4	61-80 5	>80 6
7. Live/Deadwood Crown Closure (%)	>80% live, scattered dead 5	61-80 4	41-60 3	20-40 2	<20 1
8. Live and Dead Canopy Crown Base Height (m)	5-4 or 5-6 3	3-5 3	2-3 2	1-2 1	<1 1
9. Live and Dead Suppression and Understorey Canopies (Abundance)	0	501-1000 3	1001-1500 4	1501-2000 5	>2000 6
10. Forest Health (% of investment and assessment target)	Standing Dead and Partially Dead 0-25 1	Standing Dead and Partially Dead 26-50 2	Standing Dead and Partially Dead 51-75 3	Standing Dead and Partially Dead 76-90 4	Standing Dead and Partially Dead 91-100 5
11. Continuous Forest/Slash Cover within 20m (%)	0-20 0	21-40 3	41-60 4	61-80 5	>80 6
Sub Total					15 / 155*
Microclimate					
12. Microclimatic Zone	A1, B1, C1 1	CW1, CW2, J1 Dry-Zonal Wet 3 3 1	W1, W2, E1 Dry-Zonal Wet 1 1 1	W3, W4, S1, S2, S3 Wet 10 10 10	W5, W6 15
13. Microclimatic Zone (by Windy Day)	G1, F1, E1, G2, G3, G4, G5, G6, G7, G8, G9, G10, G11, G12, G13, G14, G15, G16, G17, G18, G19, G20 1	G1, G2, G3, G4, G5, G6, G7, G8, G9, G10, G11, G12, G13, G14, G15, G16, G17, G18, G19, G20 5	G1, G2, G3, G4, G5, G6, G7, G8, G9, G10, G11, G12, G13, G14, G15, G16, G17, G18, G19, G20 5	G1, G2, G3, G4, G5, G6, G7, G8, G9, G10, G11, G12, G13, G14, G15, G16, G17, G18, G19, G20 10	G1, G2, G3, G4, G5, G6, G7, G8, G9, G10, G11, G12, G13, G14, G15, G16, G17, G18, G19, G20 15
Sub Total					25 / 250
Topography					
14. Aspect (> 15% slope)	South 0	East 5	< 15% slope 10	West 15	North 15
15. Slope (%)	< 15 1	16-20 and less severe for north slopes 5	21-40 10	41-54 12	> 55 15
16. Terrain	0	Rolling 3	Sloped terrain, minor low relief drains 5	Foreround slope, deep drains or shallow gullies 7	Conspicuous slope, deep gullies 10
17. Landscape/Topographic Situation to Wildfire Spread	< 5 ha isolated forest 1	North and/or east aspect, dominant, or diffuse spread, restricted from South and/or West 2	Non-linear terrain, broken topography, regular aspect and slope changes, multiple microclimates, multiple wind directions, multiple spread 5	Backing terrain, minor water bodies, irregular aspect, one large change, multiple wind directions, multiple spread 10	Conspicuous, non-linear topography, prominent, multiple spread 15
Sub Total					67 / 255
FUEL, WEATHER AND TOPOGRAPHY					
Sub Total					255 / 2200**
WILDFIRE BEHAVIOUR THREAT SCORE					
18. Position of Structures/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, 200-500 m 3	Mid-slope benchland, elevated valley, < 15% slope 10	Mid-slope continuous, > 15% slope 12	Upper 1/3 of slope 15
19. Type of Development	No Structures Values within 2 km 0	Perimeter Interface, no structures 3	Perimeter Interface with structures 5	Interior > 1 structures/ha 8	Interior < 1 structures/ha 10
20. Position of Residential Area Relative to Trees	No Structures Values within 2 km 0	Close < 500 200-500 < 700 m 1 10 20	Side-by-side > 500 200-500 < 700 m 1 10 20	Road/Railing > 500 200-500 < 700 m 1 15 25	Below > 500 200-500 < 700 m 1 15 18
Sub Total					35 / 295
TOTAL WILDFIRE THREAT SCORE					35 / 295

* Proceed only if Plot #40101 (1)-20
** Proceed to Structural Fire Hazard only if Wildfire Threat Behaviour Score > 85 for residential polygons

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 41-95

High 96-140

Extreme > 140

Wildland-Urban Interface Threat Class (check applicable class)

Low 0-15

Moderate 16-28

High 29-54

Extreme > 54

Last Updated: January 24, 2013

5

City of Kamloops – Wildfire Threat Assessment Picture – Plot 5



Photo 5-1 @ 180 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 6

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 6 Community: City of Kamloops

Assessor: B. Morrow Geographic Location/Street Name: Hartley

Date: April 11/16 GPS/UTM: N50 51' 20" W120 16' 01"

Photos: 0 N # 3 Land Ownership: Crown Private I.R. Other (specify):

5

Fuel	A	B	C	D	E
1 Duff Depth and Moisture Regime (cm)	1- <u><2</u> 3	2- <u><5</u> Dry Zonal Wet 5 2	1- <u><10</u> Dry Zonal Wet 10 6 2	10- <u>20</u> Dry Zonal Wet 12 8 4	> <u>20</u> Dry Zonal Wet 15 10 5
2 Surface Fuel Continuity (% cover)	< <u>20</u> 0	20- <u>40</u> 2	41- <u>60</u> 3	61- <u>80</u> 4	> <u>80</u> 5
3 Vegetation Fuel Composition	Moss, Lichens, Irruptive, Low Flammability species 1	Herbs, Deciduous Shrubs 2	Lichen, Conifer Shrubs 3	Pinegrass, Juniper 4	Sagebrush, Bushgrasses, Antelope Brush, Scotch Broom 5
4 Fine Woody Debris Continuity (<7cm) (% cover)	< <u>10</u> coverage 1	Scattered, <10 coverage 5	10-25 coverage 7	>25 coverage, <10 cm deep 10	>25 coverage, >10 cm deep 15
5 Large Woody Debris Continuity (>7cm) (% cover)	< <u>10</u> coverage 1	Scattered, <10 coverage 5	10-25 coverage 5	>25 coverage, not elevated 7	>25 coverage, partially elevated 10
6 Live and Dead Coniferous Crown Closure (%)	< <u>20</u> 2	20- <u>40</u> 5	41- <u>60</u> 10	61- <u>80</u> 15	> <u>80</u> 10
7 Live Deciduous Crown Closure (%)	> <u>80</u> or 20% coniferous crown closure 2	61- <u>80</u> 2	41- <u>60</u> 3	20- <u>40</u> 4	< <u>20</u> 5
8 Live and Dead Conifer Crown Base Height (m)	5+ or 10+ conifer crown closure 1	3- <u>5</u> 5	2- <u><3</u> 7	1- <u><2</u> 10	< <u>1</u> 15
9 Live and Dead Suppressed and Understory Conifers (Stems/ha)	< <u>500</u> 0	501-1000 5	1001-2000 10	2001-4000 20	>4000 30
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Partly Down <5 or 5-10% 0	Standing Dead and Partly Down >25 5	Standing Dead and Partly Down >25-50 10	Standing Dead and Partly Down >50-75 20	Standing Dead and Partly Down >75 30
11 Continuous Forest/Slash Cover within 2km (%)	0- <u>20</u> 0	21- <u>40</u> 3	41- <u>60</u> 5	61- <u>80</u> 7	> <u>80</u> 10
Sub Total					17 /155*

Weather	A	B	C	D	E
12 Bioclimatic Zone	Arid/semi-arid 0	CW, E, D, WH Dry Zonal Wet 5 3 1	K, H, S, E, S, F Dry Zonal Wet 10 7 3	D, K, M, S, S, P, C, W, H, G, 1 & G, 2, B, W, S, S, W, B - Dry Zonal Wet 15 10 5	P, P, B, G, L 12
13 Historical Wildfire Occurrence (by WMB Fire Zone)	G5, H1, R2, G6, Y5, R9, Y9, Y8, R5, R6, Y7 1	G6, G8, R3, R4, Y6, G1, G9, Y8 1	G7, G5, G4, G4, V1, C1, N6 8	K1, K5, K3, C2, C3, H5, H6, H4, K7, K2 10	N7, M2, N1 12
Sub Total					16 /30

Topography	A	B	C	D	E
14 Aspects (>15% slope)	North 0	East 5	<10% slope, all aspects 10	West 12	South 15
15 Slope (%)	< <u>16</u> 1	16-29 and max score for North slopes 5	30-44 10	45-54 12	>55 15
16 Terrain	Flat 1	Rolling 3	Sloped terrain, minor low relief draws 5	Consistent slope, deep draws or shallow gullies 7	Consistent slope, deep gullies 10
17 Landscape/Topographic Limitations to Wildfire Spread	<5 ha isolated forest land 1	North and/or east aspects dominate, wildfire spread restricted from South and West 2	Mountainous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread, large water bodies 5	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread 10	Continuous, consistent topography, No restriction to wildfire spread 15
Sub Total					51 /55

FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE	A	B	C	D	E
18 Position of Structure/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 5	Mid-slope benchland, elevated valley, <10% slope 10	Mid-slope continuous, >15% slope 12	Upper 1/3 of Slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter Interface, no inclusions 3	Perimeter Interface, with inclusions 5	Intermix >1 structure/ha 8	Intermix <1 structure/ha Infrastructure 10
20 Position of Assessment Area Relative to Values	No Structures Values within 2 km 0	Above >500 200-500 <200 m 1 10 20	Sidehill >500 200-500 <200 m 1 10 20	Flat/Rolling >500 200-500 <200 m 1 12 25	Below >500 200-500 <200 m 1 15 30
Sub Total					37 /240**

* Proceed only if Fuel sub total is >29. **WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE** 35 /155

** Proceed to Structural component only if Wildfire Threat Behaviour Score is >95 for untreated polygons. **TOTAL WILDFIRE THREAT SCORE** 295

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 41-95

High 96-149

Extreme >149

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13

Moderate 14-26

High 27-39

Extreme >39

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 6



Photo 6-1 @ 180 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 7

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 7 Community: City of Kamloops
 Assessor: B. McGraw GPS/UTM: N50 41' 15" R128 11' 20"
 Date: April 11/16 Photos: N E S W Land Ownership: Crown Private IR Other (specify):

FUELS

Fuel	A	B	C	D	E
1. Root Depth and Moisture Regime (cm)	7-15	7-15	10-20	10-20	>16
2. Surface Fuel Continuity (% cover)	<20	20-40	41-60	61-80	>80
3. Vegetation Fuel Composition	Moss, herbs, Impatiens, etc. Low flammability	Moss, Brodiaea Straws	Lichen, Conifer Straws	Progressive	Sagebrush, Rhythmic, Knowledge Birch, Scotch Broom
4. Fine Woody Debris Continuity (<=1cm) (% cover)	<10	Scattered, <10 coverage	10-25 coverage	>25 coverage, < 30 cm deep	>25 coverage, > 10 cm deep
5. Large Woody Debris Continuity (>1cm) (% cover)	<10	Scattered, <10 coverage	10-25 coverage	>25 coverage, not elevated	>25 coverage, partially elevated
6. Live and Dead Conifers Crown Closure (%)	<10	10-40	41-60	61-80	>80
7. Live and Dead Deciduous Crown Closure (%)	>80% - 100% continuous crown closure	61-80	41-60	20-40	<10
8. Live and Dead Conifer Canopy Base Height (m)	5.0-5.1 - 100% canopy closure	3-5	2-2.5	1-2	<1
9. Live and Dead Suppressed and Understorey Canopies (dominant)	None	50-100	100-200	200-400	>400
10. Forest Health (% of abundant and non-abundant species)	Standing Dead and Parly Down < 5	Standing Dead and Parly Down 5-25	Standing Dead and Parly Down >25-50	Standing Dead and Parly Down >50-75	Standing Dead and Parly Down >75
11. Continuous Forest/Slash Cover within 25m (%)	0-20	21-40	41-60	61-80	>80

Sub Total: **70**

WINDSPEED

Wind Speed	A	B	C	D	E
12. Atmospheric Zone	1	CWH, LDE, MII Dry Zonal Wet	ICH, SBS, ESS Dry Zonal Wet	EH, MS, SBS, EWH, MII, GWS, DWS, SWB Dry Zonal Wet	15
13. Abnormal Weather Occurrences (by WMO Fire Zone)	G5, H1, H2, G4, G5, G6, G9, H3, H5, H6, H7	G3, G4, H4, H6, G1, G2, V8	G7, G8, G4, V1, G1, H4	H1, H3, H5, G2, G5, H5, H6, H4, H7, H7	H7, H8, H6, H1

Sub Total: **20**

TOPOGRAPHY

Topography	A	B	C	D	E
14. Aspect (>10% slope)	North	East	<15% slope, all aspects	West	South
15. Slope (%)	<10	10-29 and maximum for North Slopes	30-49	49-59	>59
16. Slope	None	None	Sloped terrain, minor low level drains	Consistent slope, steep areas or shallow gullies	Consistent slope, steep gullies
17. Landform/Topography (Limitations to Wildfire Spread)	< 5 ha isolated forest land	North and/or east aspects dominant, wildfire spread restricted from South	Watersheds, lowlands, broken topography, regular slope and slope changes, multiple restrictions to wildfire spread	Barling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread	Continuous, open slope topography, no restriction to wildfire spread

Sub Total: **25**

FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE

Structural	A	B	C	D	E
18. Position of Structures/Continuity on Slope	No Structures Values within 2 km	Between of slope	Mid-slope or crestland, released valley, <15% slope	Mid-slope crestland, >15% slope	Upper 1/3 of slope
19. Type of Development	No Structures Values within 2 km	Perimeter interface no inclosures	Perimeter interface with inclosures	Interiors > 8 structures/ha	Interiors <1 structures/ha
20. Position of Accessway/Route to Structure	No Structures Values within 2 km	Above >100-200-500 m	Below >500-200-500-500 m	Flat/rolling >500-200-500-500 m	Below >500-200-500-500 m

Sub Total: **25**

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE **107**

TOTAL WILDFIRE THREAT SCORE **295**

Proceed only if fuel sub total >= 20
 Proceed for structural component only if Wildfire Threat Behaviour Score >= 65 for unrestricted pathways

Wildfire Behaviour Threat Class (if applicable class)

Low	0-40
Medium	41-60
High	61-140
Extreme	>140

Wildland Urban Interface Threat Class (if applicable class)

Low	0-13
Medium	14-20
High	21-30
Extreme	>30

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 7



Photo 7-1 @ 315 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 8

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot # 8 Community City of Kamloops

Assessor B. Mandow Geographic Location/Street Name 70 Ranch

Date April 11/16 GPS TIME NSD 49° 01' W 120° 17' 24"

Photos 1, 2, 3 Land Ownership Crown Private I.L. Other (specify)

Fuel	LEVELS				
	A	B	C	D	E
1 Fuel Depth and Moisture Regime (cm)	1-10 2	10-25 Dry Zonal Wet 5	25-40 Dry Zonal Wet 10	40-60 Dry Zonal Wet 15	>60 Dry Zonal Wet 20
2 Surface Fuels Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Moss, Herb, Invasive Exotic, Low Flammability Weeds	Herbs, Deciduous Shrubs	Lichen, Evergreen Shrubs	Progressive, Juniper	Sagebrush, Blackberry, Kettleweed, Shrub, Small Trees
4 Fine Woody Debris Continuity (<7cm) (% cover)	<10 0	Scattered <10 coverage 1	10-25 coverage 2	>25 coverage <10cm deep 3	>25 coverage >10cm deep 4
5 Large Woody Debris Continuity (>7cm) (% cover)	<10 0	Scattered <10 coverage 1	10-25 coverage 2	>25 coverage not elevated 3	>25 coverage partially elevated 4
6 Live and Dead Grasses Crown Closure (%)	<20 0	20-40 1	41-60 2	61-80 3	>80 4
7 Live Deciduous Crown Closure (%)	<20 0	20-40 1	41-60 2	61-80 3	>80 4
8 Live and Dead Conifer Crown Base Height (m)	<1 0	1-5 1	5-10 2	10-15 3	>15 4
9 Live and Dead Suppressor and Understorey Canopy Structure	<1000 0	1000-2000 1	2000-4000 2	4000-6000 3	>6000 4
10 Fuel Health (% of dead and partially dead)	Standing Dead and Fully Dead <5 0	Standing Dead and Partly Dead 5-25 1	Standing Dead and Partly Dead >25-50 2	Standing Dead and Partly Dead >50-75 3	Standing Dead and Partly Dead >75 4
11 Continuous Forest/Slash Cover within 20m (%)	0-20 0	21-40 1	41-60 2	61-80 3	>80 4
Sub Total					755*
12 Windthrow	A1, Injured 1	EW4, CD, MH Dry Zonal Wet 2	K2, S2, ES2 Dry Zonal Wet 3	EE, WS, S2, CD, MH, ES2 Dry Zonal Wet 4	EE, WS, S2, CD, MH, ES2 Dry Zonal Wet 5
13 Historical Wildfire Disturbance by Wildfire Zone	G1, R1, R2, G4, S5, R5, R5, V1, V2, R6, V7 1	G1, R1, R2, G4, S5, R5, R5, V1, V2, R6, V7 2	G2, S5, G4, R4, V1, C1, M2 3	K1, K2, K3, C2, C1, H5, K6, R4, G7, R2 4	H7, H8, H1 5
Sub Total					70/34
14 Aspect (>15% slope)	North 0	East 1	<16% slope all aspects 2	West 3	South 4
15 Slope (%)	<16 1	16-25 2	26-44 3	45-54 4	>55 5
16 Rocks	Flat 1	Rolling 2	Steep with numerous rocks 3	Consistent slope, deep draws or shallow gullies 4	Consistent slope, deep gullies 5
17 Landscape Topography Continuity in Wildfire Spread	<1% the exposed forest land 1	More than 1% but aspects consistent, and fire spread restricted from South and West 2	Mountains, terraces, broken topography, regular aspect and slope changes, multiple restrictions to fire spread 3	Rolling terrain, minor water bodies, irregular aspect and slope changes, more restrictions to fire spread 4	Continuity, consistent topography, no restriction to fire spread 5
Sub Total					27/25
FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					1240**
18 Position of Structure/Community on Slope	No Structures values within 2 km 0	Down slope values below 1	At-slope benchland, elevated valley, <15% slope 2	Mid-slope continuous, >15% slope 3	Upper 1/3 of slope 4
19 Type of Development	No Structures values within 2 km 0	Primitive structures, no structures 1	Primitive interface, structures 2	Intermediate > 1 structure/ha 3	Intense < 1 structure/ha 4
20 Position of Development Area Relative to Slope	No Structures values within 2 km 0	None >500 100-500 1	Small >500 200-500 < 200 m 2	Flattening >500 200-500 < 200 m 3	Below >500 200-500 < 200 m 4
Sub Total					7/5
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					7/5
TOTAL WILDFIRE THREAT SCORE					1247**

* Picked only fuel sub total to be 20
** Assessed to Structural component only if within the Behaviour Score or 1% in unoccupied polygons.

Wildfire Behaviour Threat Class (check applicable risk):
 Low 0-40
 Moderate 41-95
 High 96-147
 Extreme >148

Wildland Urban Interface Threat Class (check applicable risk):
 Low 0-13
 Moderate 14-26
 High 27-39
 Extreme >39

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 8



Photo 8-1 @ 180 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 9

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot # 9 Community City of Kamloops

Address B. Morrow Geographic Location/Street Name Rayleigh

Date April 11/16 GPS/UTM: N50° 47' 44" W 126° 18' 34"

Plots: 4 Land Ownership: Crown Private Other (Specify)

Fuel	LEVEL				
	A	B	C	D	E
1 Fuel Type and Moisture Regime (%)	2-5 Dry Zonal Wet S 3 1	6-10 Dry Zonal Wet 10 6 2	11-20 Dry Zonal Wet 10 6 2	21-30 Dry Zonal Wet 12 4 4	31-40 Dry Zonal Wet 15 10 5
2 Surface Fuel Continuity (% cover)	<10 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Moss, Herbs, Irrigated crops, Low flammability trees	Herbs, Deciduous Shrubs	Lichens, Conifer Scrubs	Prunus, Juniper	Sagebrush, Bushy shrubs, Irrigated crops
4 Fine Woody Debris Continuity (< 75cm) (% cover)	< 10 coverage 1	Scattered, < 10 coverage 1	10-20 coverage 2	> 25 coverage, < 90 cm deep 3	> 25 coverage, > 90 cm deep 4
5 Large Woody Debris Continuity (> 75cm) (% cover)	< 10 coverage 1	Scattered, < 10 coverage 2	10-25 coverage 3	> 25 coverage, not elevated 4	> 25 coverage, partially elevated 5
6 Live and Dead Conditions Crown Closure (%)	0-20 1	21-40 2	41-60 3	61-80 4	> 80 5
7 Live and Dead Conditions Base Height (m)	> 30 or < 20% canopy closure 1	0-30 2	31-60 3	61-90 4	> 90 5
8 Live and Dead Conditions Base Height (m)	> 30 or < 20% canopy closure 1	0-30 2	31-60 3	61-90 4	> 90 5
9 Live and Dead Suppression and Shrinkage Coefficient (Metric/US)	0-500 1	501-1000 2	1001-2000 3	2001-4000 4	> 4000 5
10 Fuel Health (% of dominant and co-dominant species)	Standing Dead and Partly Down < 5 1	Standing Dead and Partly Down 5-25 2	Standing Dead and Partly Down > 25-50 3	Standing Dead and Partly Down > 50-75 4	Standing Dead and Partly Down > 75 5
11 Continuous Forest/Shrub Cover within 20m (m)	0-20 1	21-40 2	41-60 3	61-80 4	> 80 5
Sub Total					24 / 755*
12 Topography	A	B	C	D	E
12 Slope/Aspect	AT, Irrigated 1	Chili, EM, MH Dry Zonal Wet S 4 1	EH, SPS, SFF Dry Zonal Wet 10 7 3	DE, MS, SPS, LWH & 1.8 db.2, FWS, SWI - Dry Zonal Wet 15 10 5	PE, SE 15
13 Potential Wildfire Governance (by Wildfire Zone)	G5, R1, R2, G6, Y5, R9, Y4, TX, R3, R8, R7 1	G3, L8, R3, B4, V6, G1, G8, V8 5	G7, C5, G4, C4, V1, C1, M6 6	K3, R5, R3, C2, C3, R5, K6, M4, R7, R2 10	H1, G2, R1 15
Sub Total					30 / 34
14 Aspect (> 15% slope)	North 1	East 2	< 10% slope all aspects 3	West 4	South 5
15 Slope (%)	< 10 1	10-15 including more of North Slope 2	16-24 3	25-34 4	> 35 5
16 Terrain	Flat 1	Slight 2	Sloped terrain with all slopes 3	Consistent slope, deep dunes or shallow valleys 4	Consistent slope deep gullies 5
17 Fuelstore/Topography Continuity to Wildfire Spread	< 5 km isolated forest 1	North or South east or west contiguous, additional spread restricted from South and West 2	Mountains or terraces, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread 3	Rolling terrain, minor water barriers, minimal aspect and slope changes, minor restrictions to wildfire spread 4	Continuous, consistent topography, No restrictions to wildfire spread 5
Sub Total					21 / 751
FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					81 / 2240**
18 Proximity of Structures/Continuity on Slope	No structures Values within 2 km 0	Bottom of slope, with 100m 1	Mid slope benchland, elevated valley, < 30% slope 10	Mid slope continuous, > 35% slope 12	Upper 1/3 of slope 15
19 Age of Development	No structures Values within 2 km 0	Developed interface with 100m 1	Developed interface, with extension 5	Interface > 1 Structure/Top 8	Interface < 1 Structure/Top 16
20 Proximity of Assessment Area Relative to Values	No structures Values within 2 km 0	Above > 500 100-500 F 10 10	Satellite > 500 200-500 < 200 m F 12 25	Flat/rolling > 500 200-500 < 200 m F 12 21	Below > 500 200-500 < 200 m F 15 30
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					30 / 755
TOTAL WILDFIRE THREAT SCORE					111 / 7245

* Proceed (M) if Fuel sub total is > 10.
** Proceed to Sub total component only of Wildfire threat Behaviour Scores > 15 for critical 8 polygons

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40
 Moderate 41-95
 High 96-149
 Extreme > 149

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13
 Moderate 14-26
 High 27-39
 Extreme > 39

Last Updated: January 24, 2017

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City of Kamloops – Wildfire Threat Assessment Picture – Plot 9



Photo 9-1 @ 90 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 10

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot #: 10 Community: City of Kamloops
 Address: B. Morrow Geographic Location: Boyer's Hole
 Date: April 12/16 GPS/UTM: N50 39 08 W126 09 59
 Photos: 0 1 2 3 4 Land Ownership: Crown Private Other (Specify):

Fuel

	A	B	C	D	E
1. Duff Depth and Moisture Regime (m)	0	2-4 Dry Local Wet 5 1 1	4-10 Dry Local Wet 10 0 2	10-20 Dry Local Wet 12 4 4	>20 Dry Local Wet 15 10 5
2. Surface Fuel Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3. Vegetation Fuel Composition	Moist. Herbs, Impaired Resp. Low Flammability Needs 1	Herbs, Deciduous Shrubs 2	Loose, Coarse Details 3	Pinpoint, Turpin 4	Tightish, Barkless, Antlered, Spiney 5
4. Fine Woody Debris Continuity (<2mm (% cover))	<5% 0	Scattered, <10 coverage 1	10-15 coverage 2	>15 coverage, <18 in deep 3	>25 coverage, >18 in deep 4
5. Large Woody Debris Continuity (>2mm (% cover))	<1% 0	Scattered, <10 coverage 1	10-15 coverage 2	>15 coverage, not elevated 3	>25 coverage, partially elevated 4
6. Live and Dead Coniferous Crown Closure (%)	0	20-40 1	41-60 2	61-80 3	>80 4
7. Live Deciduous Crown Closure (%)	>50% 5	40-60 3	41-60 3	20-40 4	<20 5
8. Live and Dead Conifer Crown Base Height (m)	5-10 0	3-5 1	2-3 2	1-2 3	<1 4
9. Live and Dead Suppressed and Understory Canopies (domestic)	0	50-1000 1	100-1000 2	700-4000 3	>4000 4
10. Forest Health (% of dominant and co-dominant species)	Standing Dead and Partly Dead <5 0	Standing Dead and Partly Dead 5-25 1	Standing Dead and Partly Dead >25-50 2	Standing Dead and Partly Dead >50-75 3	Standing Dead and Partly Dead >75 4
11. Coniferous Forest/Stand Cover within 20m (%)	0-20 0	21-40 1	41-60 2	61-80 3	>80 4
Sub Total <u>20</u> /155*					

Weather

	A	B	C	D	E
12. Hydroclimatic Zone	A1, Inverted 1	CW, CM, M, Dry Local Wet 3 3 1	K1, S1, E1, Dry Local Wet 1 2 3	DE, ME, SPS, (M1,4), (6,8), (10), (12), (14), (16), (18), (20) 3 5 10 5	15 5
13. Historical Wildfire Occurrence (by Wild Fire Zone)	G5, H1, P2, G6, V5, B9, V9, V1, H5, R8, V7 1	G1, H8, B3, R4, V6, G1, G9, V8 5	G7, I5, G4, I4, V1, C1, M6 1	H1, H5, K3, C2, J1, M5, R6, M4, Z2, M2 10	M7, M8, M1 15
Sub Total <u>30</u> /34					

Topography

	A	B	C	D	E
14. Aspect (>15% slope)	North 0	East 5	<15% slope aspects 10	West 12	South 15
15. Slope (%)	0	10-25 and maximum for North slopes 5	10-44 10	45-54 12	>55 15
16. Joints	Flat 1	0	Dipped terrain, minor (no relief dips) 5	Concave slope, deep dunes or shallow gullies 7	Convex slope, deep gullies 10
17. Landscape/Topographic Limitations to Wildfire Spread	<5% related forest land 1	North and/or east aspect, domestic, wildfire spread restricted from South and/or West 2	Non-continuous forest, broken topography, regular aspect and slope changes, multiple terrain levels, multiple aspect directions 3	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor terrain levels, multiple aspect directions 10	Continuous topography, topography no restriction to wildfire spread 15
Sub Total <u>15</u> /55					

FUEL, WEATHER AND TOPOGRAPHY WILDLAND BEHAVIOUR THREAT SCORE

	A	B	C	D	E
18. Profile of Structure/Continuity on Slope	No Structure, Values within 2m 0	Bottom of slope, softy terrain 5	Mid slope, hilly land, elevated terrain, steep slope 10	Steep, continuous, >15% slope 12	Upper 1/3 of Slope 15
19. Type of Development	No Structure, Values within 2 km 0	Perennial structure, up to 100m 3	Perennial structure, with enclosure 5	Intermittent structure, up to 100m 8	Intermittent structure, up to 100m 10
20. Proximity of Assessment Area Relative to Values	No Structure, Values within 2 km 0	Above >500 200-500 <100 m 1 14 20	Level >500 200-500 <200 m 4 12 25	Hilly/rolling >500 200-500 <200 m 1 12 25	Below >500 200-500 <100 m 1 15 20
TOTAL WILDFIRE THREAT SCORE <u>47</u> /246					

* Proved only of Fuel sub total <=23
 ** Based on Structural component only (Wildfire Threat Behaviour Score >=95 for unimproved polygons)

Wildfire Behaviour Threat Class (check appropriate class):

Low 0-40
 Moderate 41-95
 High 96-149
 Extreme >149

Wildland Urban Interface Threat Class (check appropriate class):

Low 0-33
 Moderate 34-36
 High 37-39
 Extreme >39

last updated: January 26, 2015

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City of Kamloops – Wildfire Threat Assessment Picture – Plot 10



Photo 10-1 @ 45 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 11

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot # **11** Community **City of Kamloops**
 Address **B Morrow** Geographic Location/Street Name **Banham Vale**
 Date **April 17/16** GPS/UTM **NSS 39 19N W126 08 54.511**
 Photos **4** Land Ownership Crown Private A.R. Other (specify)

Fuel	FUELS				
	A	B	C	D	E
1 Dead Branch and Shrubbery Height (cm)	0-10 1	11-25 Dry Fuel Wet 5 3 1	26-40 Dry Fuel Wet 10 6 2	41-75 Dry Fuel Wet 12 3 1	>75 Dry Fuel Wet 15 10 5
2 Surface Fuel Continuity (% cover)	<20 0	20-40 2	41-60 1	61-80 4	>80 5
3 Vegetation Fuel Cooperation	None, Herb, Impaired Grass, Low Flammability Weeds 1	Herb, Deciduous Shrubs 2	Leaves, Conifer Shrub 3	Perennial, Juniper 4	Substrate, Deciduous, Impaired Grass, Under Shrub 5
4 Fine Woody Debris Continuity (<75cm) (% cover)	<1 coverage 1	16-25 coverage 2	26-35 coverage 3	>35 coverage, not elevated 4	>35 coverage, partially elevated 5
5 Large Woody Debris Continuity (>75cm) (% cover)	<1 coverage 1	Substrate, <10 coverage 2	11-15 coverage 3	>15 coverage, not elevated 4	>15 coverage, partially elevated 5
6 Live and Dead Conifer Crown Closure (%)	<20 2	21-40 3	41-60 4	61-80 5	>80 6
7 Live Deciduous Crown Closure (%)	>80% < 80% conifer crown closure 0	81-90 1	91-95 2	96-99 3	>99 4
8 Live and Dead Conifer Crown Height (m)	3-4 < 20% conifer crown closure 0	3-5 5	2-23 6	24-30 7	>30 8
9 Live and Dead Suppressed and Intermediate Canopy (storeys)	0-3 1	4-6 2	7-10 3	11-15 4	16-20 5
10 Forest Health (% of dominant and co-dominant species)	Standing Dead and Partly Dead < 5 or <20 stems/ha 0	Standing Dead and Partly Dead 5-25 1	Standing Dead and Partly Dead >25-50 2	Standing Dead and Partly Dead >50-75 3	Standing Dead and Partly Dead >75 4
11 Goldenrods Forest/Slash Cover in/Close Area (%)	0-20 0	21-40 1	41-60 2	61-80 3	>80 4
Sub Total 62 /155*					
Weather					
12 Wind-Dominant Zone	All Impacted 1	Low, Low Mid Dry Fuel Wet 5 3 1	Mid, Mid, High Dry Fuel Wet 10 7 3	High, High, Very High Dry Fuel Wet 15 10 5	>15 6
13 Potential Relative Occupancy (by Wild Fuel Zone)	G6, R1, R2, G6, V5, R9, V6, V8, R9, V7 1	G1, G4, R3, R4, V6, G1, G2, V8 5	G1, G5, G4, G4, V1, C1, H4 8	H1, H5, H4, L2, L1, H5, H4, H4, R2, R2 10	H7, H6, H7 15
Sub Total 30 /70					
Topography					
14 Aspect (>15% slope)	North 0	East 5	<15% slope aspects 10	West 17	South 15
15 Slope (%)	0-10 0	11-20 and non severe for North slopes 5	21-40 10	41-54 12	>55 15
16 Terrain	Flat 1	Rolling 2	Slope terrain, minor surface drains 3	Consistent slope, steep ditches or shallow gullies 4	Continual slope, deep gullies 5
17 Landscape/Topographic Limitations to Wildfire Spread	<5 ha isolated forest land 1	North and/or east aspects dominant, wildfire spread restricted from South and/or West 2	Non-linear terrain, diverse topography, regular aspect and slope changes, multiple restrictions to wildfire spread 3	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread 4	Continual, consistent topography, no restrictions to wildfire spread 5
Sub Total 21 /55					
FUEL, WEATHER AND TOPOGRAPHY					
Sub Total 113 /240**					
STRUCTURAL					
18 Position of Structures/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 5	Mid-slope, backland, elevated valley, top slope 10	Mid-slope, continuous, >15% slope 12	Upper 1/3 of Slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter interface with no structures 5	Perimeter interface with no structures 5	Interface > 8 structures/ha 8	Interface < 1 structure/ha < 4 structures/ha 10
20 Position of Assessment Area Relative to Fuels	No Structures Values within 2 km 0	None >100 250-500 <200 m 1 10 20	Suburb >100 250-500 <200 m 1 12 25	Rural/Rolling >500 700-1000 <200 m 1 12 25	>1000 1000-2000 <200 m 1 15 30
Sub Total 28 /55					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
TOTAL WILDFIRE THREAT SCORE 28 /240					

*Proceed only if fuel sub total >= 25.
 **Proceed to Structural component only if wildfire threat Behaviour Score >= 95 for enhanced polygons.

Wildfire Behaviour Threat Class (check applicable class)

Low	0-40	<input type="checkbox"/>
Moderate	41-95	<input type="checkbox"/>
High	96-149	<input checked="" type="checkbox"/>
Extreme	>149	<input type="checkbox"/>

Wildland Urban Interface Threat Class (check applicable class)

Low	0-13	<input type="checkbox"/>
Moderate	14-26	<input type="checkbox"/>
High	27-39	<input checked="" type="checkbox"/>
Extreme	>39	<input type="checkbox"/>

Cont Updated: January 24, 2017

City of Kamloops – Wildfire Threat Assessment Picture – Plot 11



Photo 11-1 @ 270 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 12

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot # 12 Community City of Kamloops

Assessor B. Morrow Geographic Location/Street Name Blackwell Rd

Date: April 17/16 GPS/UTM: N50 39' 2.6" W120° 08' 22"

Photos: 1, 2, 3, 4 Land Ownership: Municipal Private IR: Other (specify):

12

Fuel	LIGNAGE				
	A	B	C	D	E
1 Dead Snags and Mortars: Prognosis (low)	0	1-5 Dry Zone/Wet 5 3 1	6-10 Dry Zone/Wet 10 6 2	11-20 Dry Zone/Wet 20 4 4	>20 Dry Zone/Wet 15 10 5
2 Surface Fuel Continuity (% cover)	<10 0	10-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Compactness	Moss, Herbs, Impaired grass, low flammability needs 1	Herbs, Berberis + Shrubs 2	Loose, Cover Shrubs 3	Prognosis Landscape 4	Significant, Berberis, Arbutus + fresh Landscape 5
4 Fine Woody Debris Continuity (<=2cm) (% cover)	<10 0	Scattered, <10 coverage 5	10-25 coverage 7	>25 coverage, < 30 cm deep 10	>25 coverage, > 30 cm deep 15
5 Large Woody Debris Continuity (>2cm) (% cover)	<10 0	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, not elevated 7	>25 coverage, partially elevated 10
6 Live and Dead Continuous Crown Closure (%)	<20 2	21-40 5	41-60 10	61-80 15	>80 20
7 Live Overhanging Crown Closure (%)	>80 or <40% continuous crown closure 0	0-40 2	41-60 3	61-80 4	>80 5
8 Live and Dead Canopy Crown Base Height (m)	5+ or <20% canopy crown closure 0	0-5 5	6-10 7	11-20 10	>20 15
9 Live and Dead Suppressed and Understorey Canopy (% cover)	0 0	501-1000 5	1001-2000 10	2001-4000 20	>4000 30
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Fully Snags < 5 or <20 stems/ha 0	Standing Dead/Less Fully Snags >5-20 5	Standing Dead and Fully Snags >20-50 10	Standing Dead and Fully Snags >50-75 20	Standing Dead and Fully Snags >75-90 30
11 Continuous Forest/Steep Cover within 2km (%)	0-20 0	21-40 5	41-60 5	61-80 5	>80 10
Sub Total					41 /155*

Wildfire	WILDFIRE BEHAVIOUR THREAT SCORE				
	A	B	C	D	E
12 Approach Zone	AT, W, S, T 1	CW, CR, NW, Dry Zone/Wet 5 3 1	ICR, MS, FFF, Dry Zone/Wet 10 7 3	IE, MA, SP, F, H, H, E, W, Dry Zone/Wet 15 10 5	IP, W, S, T 20
13 Historical Wildfire Occurrence (by Wild Fire Zone)	G5, H5, R2, G6, P5, R5, V5, Y1, R5, R6, Y2 1	G3, G4, R3, H4, W4, G1, G5, W5 5	G7, G5, G4, G4, W1, C1, S6 6	H1, H5, R3, C2, C3, H5, K5, W4, D2, H2 10	H7, H4, R2, H1 20
Sub Total					30/74

Topography	WILDFIRE BEHAVIOUR THREAT SCORE				
	A	B	C	D	E
14 Aspect (>15% slope)	North 5	East 5	<10% slope all aspects 10	West 12	South 15
15 Slope (%)	<10 1	10-20 and maximum 10% slopes 5	10-44 10	45-54 12	>55 15
16 Slope	Flat 5	Sloping 5	Unpredictable, steep or shallow dunes 5	Consistent slope, steep or shallow gullies 7	Consistent slope, steep gullies 10
17 Landscape Topographic Conditions to Wildfire Spread	< 5% the natural forest land 4	North aspect and aspects < 45% slope, with the steep restricted from South and West 2	Irregular terrain, broken topography, regular slopes and slope changes, multiple topographic features 5	Rolling terrain, minor water bodies, minimal aspect and slope changes, some restrictions to wildfire spread 10	Continuous, consistent topography, no restrictions to wildfire spread 15
Sub Total					55 /224**

FUEL, WEATHER AND TOPOGRAPHY	WILDFIRE BEHAVIOUR THREAT SCORE				
	A	B	C	D	E
18 Position of Structures/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 5	Mid-slope benchland, cleared areas, 14% slope 10	Mid-slope non-leeward, > 15% slope 12	Upper 1/3 of Slope 15
19 Age of Development	No Structures Values within 2 km 0	Age-proximate interface no subdivisions 5	Intermediate interface with subdivisions 5	Modern > 1 subdivisions 10	Modern < 1 subdivisions 10
20 Position of Assessment Area Relative to Values	No Structures Values within 2 km 0	None >500 200-500 <200 m 1 10 20	Safety II >500 200-500 <200 m 1 11 25	Safety III >500 200-500 <200 m 1 12 25	Below >500 200-500 <200 m 15 20
Sub Total					49 /253

* Proceed only if fuel sub total is > 20.
** Proceed to Structural component only if Wildfire Threat Behaviour Score is > 10 for restricted slopes.

<p>Wildfire Behaviour Threat Class (where applicable only)</p> <p>Low 0-40 <input type="checkbox"/></p> <p>Moderate 41-95 <input checked="" type="checkbox"/></p> <p>High 96-119 <input type="checkbox"/></p> <p>Extreme >120 <input type="checkbox"/></p>	<p>Wildland Urban Interface Threat Class (where applicable only)</p> <p>Low 0-10 <input type="checkbox"/></p> <p>Moderate 14-26 <input type="checkbox"/></p> <p>High 27-39 <input type="checkbox"/></p> <p>Extreme >39 <input checked="" type="checkbox"/></p>
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Last Updated: January 24, 2017

City of Kamloops – Wildfire Threat Assessment Picture – Plot 12



Photo 12-1 @ 270 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 13

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot # 13 Community City of Kamloops

Assessor B. Morrow Geographic Location/Street Name 180 Barnhart Rd

Date April 17/16 GPS/Elev N50 38 26 W120 01 33'

Photos 4 Land Ownership Crown Private IR Other (specify)

13

Fuel	LEVELS				
	A	B	C	D	E
1 Fuel Type and Moisture Regime (fuel)	1-2	3-4	5-10	10-20	>20
2 Surface Fuel Continuity (No water)	<20	20-40	41-60	61-80	>80
3 Vegetation Fuel Compactness	Moss, Herbs, Impaired Crops, Low Plantability Weeds	Herbs, Deciduous Shrubs	Likens, Evergreen Shrubs	Prostrate	Sagebrush, Bushgrasses, Forbids, Small Stems Brown
4 Live Woody Debris Continuity (<100% Ph cover)	<1 coverage	Scattered, <10 coverage	10-20 coverage	>25 coverage, <10 on steep	>25 coverage, >10 on steep
5 Large Woody Debris Continuity (>100% Ph cover)	<1 coverage	Scattered, <10 coverage	10-20 coverage	>25 coverage, not elevated	>25 coverage, partially elevated
6 Live and Dead Conifers Crown Closure (%)	<20	20-40	41-60	61-80	>80
7 Live Deciduous Crown Closure (%)	>80 or <40% non-deciduous crown closure	61-80	41-60	20-40	<20
8 Live and Dead Conifer Crown Base Height (%)	5-10 <10% under crown closure	3-5	2-3	10	<1
9 Live and Dead Suppression and Obstruction Canopy (Stems/Ac)	0-500	500-1000	1000-2000	2001-4000	>4000
10 Forest Health (% of conifers and co-dominant species)	Standing Dead and Partly Dead <5 or <20 stems/ha	Standing Dead and Partly Dead 5-25	Standing Dead and Partly Dead >25-50	Standing Dead and Partly Dead >50-75	Standing Dead and Partly Dead >75
11 Continuous Forest/Slash Cover Within 2km (%)	0-20	21-40	41-60	61-80	>80
Sub Total					61 /135*

Wildfire	Sub Total				
	A	B	C	D	E
12 Biogeographic Zone	A4, Bmpores	C6a, C6b, M4, Dry, Low Wet	E1b, E1c, E5a, Dry, Low Wet	E5b, E5c, C6a, C6b, C6c, C6d, B4b, B4c, Dry, Low Wet	F5, G6
13 Historical Wildfire Occurrence (By 1km Fire Zone)	G5, H1, R2, G4, Y5, R5, Y5, R3, R5, R6, R7	G1, G4, R3, R4, W6, G1, G4, W8	G2, G5, G4, G4, V1, V1, M6	H1, H3, H1, G1, G1, H5, H5, H4, H2, H2	H1, H4, H1
Sub Total					25 /34

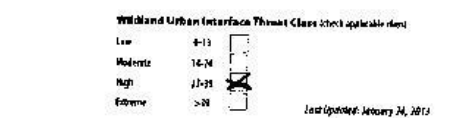
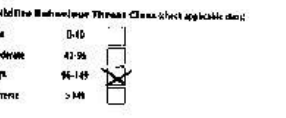
Topography	Sub Total				
	A	B	C	D	E
14 Aspect (>15% slope)	North	East	<10% slope all aspects	West	South
15 Slope (%)	<10	10-20 and less steeply sloping	20-40	41-74	>55
16 Rocks	Flat	Scattered	Steeply sloping, many rocks present	Consistent slope down as shallow gullies	Consistent slope down gullies
17 Landscape Topographic Discontinuity to Wildfire Spread	<5% rainfall forest land	North and/or east aspects dominate, wildfire spread restricted from South and/or West	Shallow to steep, drainage appropriate, local aspect and slope changes, multiple wet/dry lines to wildfire spread	Relief terrain, wetter water aspect, rainfall aspect and slope changes, minor wet/dry lines to wildfire spread	Consistent, consistent topography, no restrictions to wildfire spread
Sub Total					15 /25

FUEL, WEATHER AND TOPOGRAPHY	Sub Total				
	A	B	C	D	E
18 Position of Structures Community on Slope	No Structures Values within 2km	Bottom of slope, upper slope	Mid slope, benchland, elevated valley, <10% slope	All-slope, continuous, >15% slope	Upper 1/3 of slope
19 Type of Development	No Structures Values within 2 km	Primitive/Informal, no rock/soil	Permanent structure and/or building	Informal >1 structure/ha	Informal <1 structure/ha
20 Position of Assessment Area Relative to Values	No Structures Values within 2 km	Close	Mid	Far	Edge
Sub Total					10 /15

* Proceed only if fuel sub total >= 25.
 ** Proceed to Structural component only if WUIFI threat Behaviour Score >= 65 for relevant projects.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE **30 /55**

TOTAL WILDFIRE THREAT SCORE **131 /240****



City of Kamloops – Wildfire Threat Assessment Picture – Plot 13



Photo 13-1 @ 180 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 14

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: **14** Community: **City of Kamloops**

Address: **B. McCreaw** Geographic Location/Street Name: **Bamberton Valley Rd.**

Date: **April 18, 2016** Location: **N50° 38' 14" W 120° 05' 23"**

Photos: **0, 3** Land Ownership: Crown Private IR Other (specify)

Fuel	LEVELS				
	A	B	C	D	E
1 Duff Depth and Moisture Regime (cm)	1-2	2-4	5-10	10-20	>20
2 Surface Fuel Continuity (% cover)	<20	20-40	41-60	61-80	>80
3 Vegetative Fuel Composition	Moist herbs, Insulated logs, low flammability weeds	Herbs, Deciduous shrubs	Locher, Conifer shrubs	Flammable, larger	Flammable, herbaceous, Arborescens, Shrub, Tree
4 Fine Woody Debris Continuity (<75cm) (% cover)	< 1 coverage	Scattered, < 20 coverage	10-25 coverage	> 25 coverage, < 10 m deep	> 25 coverage, > 10 m deep
5 Large Woody Debris Continuity (>75cm) (% cover)	< 1 coverage	Scattered, < 10 coverage	10-25 coverage	> 25 coverage, not elevated	> 25 coverage, partially elevated
6 Live and Dead Conditions Crown Closure (%)	< 50	20-40	41-60	61-80	> 80
7 Live Debris Crown Closure (%)	> 50 or depth, complex structure	61-80	41-60	25-40	< 20
8 Live and Dead Crown Closure Base Height (m)	5 or < 50% coverage	1-5	1-2	1-2	< 1
9 Live and Dead Suppressed and Deciduous Canopy (stemless)	0-200	501-1000	1001-2000	2001-4000	> 4000
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Snags 5-25	Standing Dead and Snags 25-50	Standing Dead and Snags 50-75	Standing Dead and Snags 75-95	Standing Dead and Snags > 95
11 Combustion Forest/Slash Cover within 25m (%)	0-70	71-80	81-90	91-100	> 100
Sub Total 26 / 200					
Topography					
12 Aspect (> 15% slope)	North	East	West	West	South
13 Slope (%)	< 5	10-20 and more severe for North slopes	20-40	40-54	> 55
14 Form	Rolling	Rolling	Slope terrain, minor knoll draws	Consistent slope, steep draws or shallow gullies	Consistent slope, deep gullies
15 Elevation/Topographic Conditions in Interface	< 5 m reduced forest land	North aspect, east aspect, dominant, and fire spread restricted from south and/or west	Mountainous terrain, brown topography, regular aspect and slope changes, multiple rock chutes to road	Rolling terrain, minor water holes, minimal aspect and slope changes, terrain on (chutes to wildfire spread)	Continuously, consistent topography, no restrictions to wildfire spread
Sub Total 30 / 200					
FUEL, WEATHER AND TOPOGRAPHY					
Sub Total 56 / 200					
WILDLAND URBAN INTERFACE THREAT SCORES					
18 Position of Structures/Continuity on Slope	No Structures, Values within 2 km	Within 100m, valley bottom	Less than 100m, elevated, 15% slope	Also above contours, > 15% slope	Upper 1/3 of slope
19 Type of Development	No Structures, Values within 2 km	Residential interface, no structures	Residential interface, with structures	Industrial or structure/ha	Industrial or structure/ha
20 Position of Assessment Area Relative to Values	No Structures, Values within 2 km	None	Suitable	Rail/road	Below
Sub Total 31 / 200					
TOTAL WILDFIRE THREAT SCORE: 115 / 200					

Wildfire Behaviour Threat Class check applicable class:

Low 0-40

Moderate 41-95

High 96-149

Extreme > 150

Wildland Urban Interface Threat Class check applicable class:

Low 0-13

Moderate 14-26

High 27-39

Extreme > 39

[Last Updated: January 14, 2013]

14

City of Kamloops – Wildfire Threat Assessment Picture – Plot 14



Photo 14-1 @ 180 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 15

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot # 15 Community City of Kamloops

Address B. Morrow Geographic Location (Street Name) Burnheartvale Rd

Date Apr 12/16 GPS/UTM N50 38° 13' 44" W125° 01' 25.4"

Parcel: 04-3 Land Ownership: Crown Private IR Other (specify)

15

Fuel	LEVELS				
	A	B	C	D	E
1 Dead Open and Abandoned Response (cont)	2-5 Dry Fuel Wet 5 1 1	6-10 Dry Fuel Wet 10 6 2	11-15 Dry Fuel Wet 15 10 3	16-20 Dry Fuel Wet 20 12 4	>20 Dry Fuel Wet 25 18 5
2 Surface Fuel Continuity (Ft cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Moist, Herb Invasive Grass, Low Flammability Needs 4	Herb, Deciduous Shrub 2	Lichen, Conifer Shrub 3	Prognosis, Herb 4	Supergrass, Berry leaves, Astragalus & (Lupine, Sumac, Dogwood) 5
4 Fine Woody Debris Continuity (<7mm) (Ft cover)	<1 coverage 1	Scattered, <15% coverage 2	16-75 coverage 3	>75 coverage, <10cm deep 4	>75 coverage, >10cm deep 5
5 Large Woody Debris Continuity (>7mm) (Ft cover)	<5% coverage 1	Scattered, <10% coverage 2	>10% coverage 3	>25 coverage, not elevated 4	>25 coverage, partially elevated 5
6 Live and Dead Conifer Crown Closure (Ft)	<20 0	20-40 5	41-60 10	61-80 15	>80 10
7 Live Deciduous Crown Closure (Ft)	>40% canopy low to medium density 0	41-60 2	61-80 3	81-100 4	>100 5
8 Live and Dead Conifer Crown Base Height (m)	5 or < 20% canopy crown closure 0	3-5 5	6-11 7	12-17 10	>18 15
9 Live and Dead Spruce and Understorey Canopy (Ft cover)	0-500 2	501-1000 3	1001-1500 4	>1500 5	>2000 6
10 Forest Health (Ft of deadwood and woody stems)	Standing Dead and Partly Down < 5 at 10% canopy 0	Standing Dead and Partly Down 5-25 5	Standing Dead and Partly Down >25-50 10	Standing Dead and Partly Down >50-75 15	Standing Dead and Partly Down >75 20
11 Continuous Forest/Grass Cover within 20m (Ft)	0-20 0	21-40 3	41-60 5	61-80 7	>80 10
Sub Total					63 / 155*

Microclimate	LEVELS				
	A	B	C	D	E
12 Microclimate Zone	AT, Invasive 1	CWH, CMC, MH Dry Fuel Wet 5 3 1	MH, SFS, ESST Dry Fuel Wet 10 7 3	ME, MS, SPS, FWH Act & Obs, FWB, SWB - Dry Fuel Wet 15 10 5	PR, BS 15
13 Potential Wildfire Occurrence (by Wind Dir Zone)	G5, R1, R2, G4, V5, R3, V3, R5, R6, V7 1	G3, G4, R3, R4, V6, G1, G2, V2 5	G7, G5, G4, G4, V1, C1, M6 6	K1, R5, R3, R2, C3, M5, K3, M4, R7, M2 10	R7, R2, R1 15
Sub Total					25 / 70*

Topography	LEVELS				
	A	B	C	D	E
14 Aspect (> 15% slope)	North 0	East 5	< 10% slope, 10 aspects 10	West 15	South 25
15 Slope (Ft)	< 10 0	10-20 and flat slope for North slopes 5	20-40 10	40-60 12	> 60 15
16 Terrain	Rolling 3	Rolling 3	Sloped terrain, minor low relief areas 5	Consistent slope, steep slopes or shallow gullies 5	Consistent slope, steep gullies 10
17 Landforms/Topographic Constraints by Wildfire Spread	< 5 ha isolated forest 1	North and/or east aspects dominating, wildfire spread restricted from South and/or West 2	Irregular terrain, broken topography, regular aspect and slope changes, multiple obstructions to wildfire spread 5	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor obstructions to wildfire spread 10	Continuous, consistent topography, no restrictions to wildfire spread 15
Sub Total					75 / 155*

FUEL, WEATHER AND TOPOGRAPHY	WILDFIRE BEHAVIOUR THREAT SCORE				
	A	B	C	D	E
18 Position of Structures/Continuity on Slope	No Structures Values within 7m 0	Bottom of slope, valley bottom 5	Mid slope level and elevated above 10% slope 10	4th slope continuous, > 15% slope 12	Upper 1/2 of Slope 15
19 Type of Development	No Structures Values within 2 km 0	Principal interface, any 1 km 5	Penetrates interface, with structures 5	Interface > 1 km 10	Interface < 1 km, multiple structures 10
20 Position of Assessment Area Relative to Values	No Structures Values within 2 km 0	Above > 500 200-500 < 100m 1 30 20	Below > 500 200-500 < 100m 4 12 10	Below > 500 200-500 < 200 m 1 12 15	Below > 500 200-500 < 200 m 1 15 30
Sub Total					102 / 155*

*Percent only of Fuel sub total (15/20)

** Assured to Structural component only if RWMI Threat Behaviour Score is > 95 for untreated polygons.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE 302 / 155

TOTAL WILDFIRE THREAT SCORE 2295

Wildfire Behaviour Threat Class (check applicable date)

Low	0-40	<input type="checkbox"/>
Moderate	41-95	<input type="checkbox"/>
High	96-140	<input checked="" type="checkbox"/>
Extreme	>140	<input type="checkbox"/>

Wildland Urban Interface Threat Class (check applicable date)

Low	0-13	<input type="checkbox"/>
Moderate	14-26	<input type="checkbox"/>
High	27-39	<input checked="" type="checkbox"/>
Extreme	>39	<input type="checkbox"/>

Last Updated: January 26, 2012

City of Kamloops – Wildfire Threat Assessment Picture – Plot 15



Photo 15-1 @ 180 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 16

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot # 16 Community City of Kamloops
 Assessor B. Morrow Geographic Location/Street Name Barnhartville Rd
 Date Apr 12/16 GPS/UTM N50 38 25.5° W 120° 03' 46.6"
 Project 2016-1-4 Land Ownership Crown Private IR (Other (specify))

FUEL

	A	B	C	D	E
1 Dead Open and Medium-Dense Zone	1	2-3 Dry Good Wet 3 3 3	4-6 Dry Good Wet 10 6 2	10-20 Dry Good Wet 12 8 4	>20 Dry Good Wet 15 10 5
2 Surface Fuels Continuity (% cover)	< 25	25-40	41-60	61-80	81-100
3 Vegetation Fuel Composition	Herb, Herb, Impacted Grass, Low Flammability Weeds	Herb, Deciduous Decid	Lichen, Forb, Shrub	Perennial, Shrub	Shrub, Deciduous, Deciduous Shrub, Forb
4 Fine Woody Debris Continuity (< 7cm) (% cover)	< 1 coverage	Scattered, < 10% coverage	10-25 coverage	> 25 coverage, < 10cm deep	> 25 coverage, > 10cm deep
5 Large Woody Debris Continuity (> 7cm) (% cover)	< 1 coverage	Scattered, < 10% coverage	10-25 coverage	> 25 coverage, not elevated	> 25 coverage, partially elevated
6 Live and Dead Conifers Crown Closure (%)	0	20-40	41-60	61-80	81-100
7 Live Deciduous Crown Closure (%)	> 80% or > 80% crown cover	61-80	41-60	20-40	< 20
8 Live and Dead Conifer Crown Closure (%)	5-10 < 25% crown cover	3-5	2-25	1-10	< 3
9 Live and Dead Suppressed and Understorey Conifers (% crown cover)	0-50	50-100	100-200	200-400	> 400
10 Forest Health (% of development and/or disturbance events)	Standing Dead and Partly Down	Standing Dead and Partly Down	Standing Dead and Partly Down	Standing Dead and Partly Down	Standing Dead and Partly Down
11 Continuous Forest/Slash Cover within 20m (%)	0-20	21-40	41-60	61-80	> 80

Sub Total **38/155***

Weather

	A	B	C	D	E
12 Hydroclimatic Zone	41, 42, 43	CWH, EM, NH Dry Good Wet	RH, SBS, ESS Dry Good Wet	EM, AG, SWS, CWD, SA, HZ, BWS, SWB - Dry Good Wet	15
13 Historical Wildfire Occurrence (by WUB Fire Zone)	66, 81, 82, 86, 95, 96, 99, 10, 15, 16, 17, 17	63, 64, 65, 66, 70, 61, 68, 68	67, 65, 64, 64, 91, 71, 86	81, 85, 83, 82, 83, 85, 84, 84, 82, 82	87, 86, 87, 81

Sub Total **30/100**

Topography

	A	B	C	D	E
14 Aspect (> 15% slope)	North	East	< 16% slope	West	South
15 Slope (%)	< 10	10-20 and less steep for North slopes	20-44	45-54	> 55
16 Terrain	Rolling	Rolling	Slight to steep, rise on valley floor	Consistent slope, deep draw or shallow gully	Consistent slope deep gully
17 Landscape/Topographic Limitations to Wildfire Spread	< 5% isolated forest	With and/or east aspects, moderate, shallow, restricted from south and/or west	Mountainous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread	Rolling terrain, lower water bodies, minimal aspect and slope changes, some restrictions to wildfire spread	Continuous, consistent topography, no restrictions to wildfire spread

Sub Total **35/153**

FUEL, WEATHER AND TOPOGRAPHY Sub Total **83/240****

WILDLAND URBAN INTERFACE WILDFIRE BEHAVIOUR THREAT SCORE

Structural	A	B	C	D	E
18 Position of Structures/Continuity on Slope	No Structures Values within 2 km	Bottom of slope, valley bottom	Mt. slope, benchland, clearing, 10% slope	Mt. slope, continuous, > 15% slope	Upper 1/3 of Slope
19 Type of Development	No Structures Values within 2 km	Residential, interface, public works	Residential interface, agricultural	Industrial > 1 structures/ha	Industrial < 1 structures/ha
20 Position of Assessment Area Relative to Index	No Structures Values within 2 km	Below > 500 200-500 < 200 m	Below 200-500 < 200 m	Below > 500 200-500 < 200 m	Below > 500 200-500 < 200 m

WILDLAND URBAN INTERFACE WILDFIRE BEHAVIOUR THREAT SCORE **41/151**

TOTAL WILDFIRE THREAT SCORE **97/295**

* Proceed only if Fuel sub total > 29
 ** Proceed if Structural component only of Wildfire Behaviour Threat Score is > 15 for surface fuel types

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40
 Moderate 41-95
 High 96-140
 Extreme > 140

Wildland Urban Interface Threat Class (check applicable class)

Low 0-15
 Moderate 16-24
 High 25-39
 Extreme > 39

Last Updated: January 24, 2013

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City of Kamloops – Wildfire Threat Assessment Picture – Plot 16



Photo 16-1 @ 90 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 17

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 17
 Address: B Moraw
 Date: Apr 12/16
 Photos: 0 4

Comments: City of Kamloops
 Geographic Location/Street Name: Barnhartvale Rd
 GPS/UTM: N50 37' 49.4" W120° 03' 41"

Lead Ownership: Crown Private I.A. Other (specify):

Fuel	A	B	C	D	E
1 Fuel Depth and Moisture Before (mm)	0	2-3 Dry 2mm Wet 3 3 1	5-10 Dry 2mm Wet 10 6 2	10-20 Dry 2mm Wet 12 3 4	>20 Dry 2mm Wet 15 10 5
2 Surface Fuel Continuity (% cover)	<10	20-40	41-60	61-80	81-100
3 Vegetation Fuel Composition	Albs, Herb, Injuncted Grass, low flammability weeds 1	Herb, Deciduous Shrubs 2	Herb, Conifer Shrubs 3	Prograss, herb 4	Supergrass, Prograss, Arboresc, Herb, Super Grass 5
4 Free Woody Debris Continuity (Co/Fuel) (% cover)	<10	Scattered, <30 coverage 5	10-25 coverage 5	>25 coverage, <10 m deep 10	>25 coverage, >10 m deep 15
5 Edge Woody Debris Continuity (>200) (% cover)	<10	Scattered, <40 coverage 5	10-25 coverage 5	>25 coverage, not elevated 10	>25 coverage, partially elevated 15
6 Live and Dead Conifer/Decid Cover Closure (%)	0	70-80	81-90	91-95	>95
7 Live Deciduous Cover Closure (%)	>60% or low to moderate cover	61-80	81-90	91-95	>95
8 Live and Dead Conifer Cover Area (m²/ha)	5 or <2% cover	3-5	2-3	1-2	<1
9 Live and Dead Substratum and Understorey Cover (m²/ha)	0-200	501-1000	1001-2000	2001-4000	>4000
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Pithy (up to 5% of stems) 0	Standing Dead and Pithy (up to 5-15% of stems) 5	Standing Dead and Pithy (up to 15-25% of stems) 10	Standing Dead and Pithy (up to 25-50% of stems) 20	Standing Dead and Pithy (up to >50% of stems) 30
11 Continuous Forest/Slash Cover within 20m (%)	0-20	21-40	41-60	61-80	>80
Sub Total 34 / 150*					
Weather	A	B	C	D	E
12 Wind direction/Zone	AT, Injuncted 1	CW, SE, WH Dry 2mm Wet 3 3 1	NW, SE, ESE Dry 2mm Wet 10 7 3	NE, W, SW, NW and S dry, #W, SW, SE Dry 2mm Wet 10 5 5	PE, NE 15
13 Historical Wildfire Occurrence (by 1000 fire zone)	G5, R1, R2, G6, V5, W7, V3, R3, R2, V7 1	G3, M, R1, R4, W6, G1, G2, V3 5	G7, G5, G4, L4, R1, C1, M6 8	R1, R2, R3, C2, C1, K5, W6, M7, M2 10	W7, W6, W1 15
Sub Total 25 / 104					
Topography	A	B	C	D	E
14 Aspects (>15% slope)	North 0	East 5	<14% slope, aspects 10	West 10	South 15
15 Slope (%)	<5	10-20 and less slope for North slopes 5	20-30 10	40-50 12	>50 15
16 Terrain	Flat 1	Rolling 3	Stepped terrain, minor level of dunes 5	Concentrated slope, steep dunes or shallow gullies 7	Concentrated slope, deep gullies 10
17 Landscape/Topographic Characteristics to Wildfire Spread	<5 ha isolated forest land 1	North and/or east aspects dominant, midline spread restricted from South and/or West 2	Abundant open, broken topography, local aspect and slope changes, multiple restrictions on wildfire spread 5	Rolling terrain, minor waste beds, minimal aspect and slope changes, minor restrictions on wildfire spread 10	Continuous, consistent topography, no restriction to wildfire spread 15
Sub Total 13 / 55					
FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					
Sub Total 72 / 210**					
STRUCTURAL					
18 Position of Structures/Community on Slope	No Structures Values within 2 km 0	Bottom of slope 5	Low slope throughout, elevated valley, <10% slope 10	Mid-slope continuous, >15% slope 12	Upper 80% of slope 15
19 Type of Development	No Structures Values within 2 km 0	Protractor interface no landscape 3	Protractor interface, with landscape 5	Intermix > 1 Structure/ha 8	Intermix < 1 structure/ha 10
20 Position of Assessment Area Relative to Values	No Structures Values within 7 km 0	Below >500 200-500 <200 m F 10 20	Scatter >500 200-500 <200 m F 11 25	Clustering >500 200-500 <200 m F 12 25	Below >500 200-500 <200 m F 15 30
Sub Total 20 / 75					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
Sub Total 98 / 285					

* Proceed only if Fuel sub total >= 25
 ** Proceed to Structural component only if Wildfire Behaviour Score is >= 95 for initial or follow-up

Wildfire Behaviour Threat Class (check applicable class):
 Low 0-41
 Moderate 41-95
 High 96-149
 Extreme >149

Wildland Urban Interface Threat Class (check applicable class):
 Low 0-13
 Moderate 14-24
 High 25-39
 Extreme >39

LAST UPDATED: January 24, 2011

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City of Kamloops – Wildfire Threat Assessment Picture – Plot 17



Photo 17-1 @ 45 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 18

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 18
 Address: B Morrow
 Date: Apr 12/16
 Photos: 0 N = 4

Comments: City of Kamloops
 Geographic Location/Street Name: Robbing Range Rd
 GPS/UTM: N50° 37' 29.3" W120° 5' 41.8"

Land Ownership: Crown Private R.R. Other (specify):

Fuel	A	B	C	D	E
1 Soft Bark and moisture Retentive Fuels	0	1	2	3	4
2 Sapwood Fuel Conductivity (% cover)	<20	20-40	41-60	61-80	>80
3 Vegetative Fuel Compaction	None, Herb, Angled Crops, Low Flammable Air Weeds	Herb, Deciduous Shrubs	Likert, Conifer Shrubs	Fireweed, Air Weed	Sagebrush, Broomrape, Antelope Grass, Scotch Broom
4 Fine Woody Debris Conductivity (<7mm) (% cover)	<10	Scattered <10 coverage	10-25 coverage	>25 coverage, >10 cm deep	>25 coverage, >10 cm deep
5 Large Woody Debris Conductivity (>7mm) (% cover)	<10	Scattered <10 coverage	10-25 coverage	>25 coverage, not elevated	>25 coverage, partially elevated
6 Live and Dead Grasses Cover Closure (%)	<20	20-40	41-60	61-80	>80
7 Live Deadwood Cover Closure (%)	>80 or <40% cover (total)	41-60	41-60	20-40	<20
8 Live and Dead Conifer Cover Base except (m)	5 or <20% cover	3-5	2-3	1-2	<1
9 Live and Dead Spruce and Understory Conifers (stem/m)	0-500	500-1000	1000-2000	2001-4000	>4000
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Partly Down <5% at 10m DBH	Standing Dead and Partly Down 5-25%	Standing Dead and Partly Down >25-50%	Standing Dead and Partly Down >50%	Standing Dead and Partly Down >75%
11 Continuous Forest/Slash Cover within 2km (%)	0-20	21-40	41-60	61-80	>80
Sub Total 29 / 55*					
12 Prognostic Zone	N, NE, NW, S, SE	SW, E, SE, NE, Dry Zone Wet	W, SW, SE, Dry Zone Wet	W, SW, SE, NW, NE, Dry Zone Wet	W, SW, SE, NE, Dry Zone Wet
13 Historical Wildfire Occurrence by Wild Fire Zone	65, 81, 82, 86, 95, 99, 10, 11, 15, 16, 17	63, 64, 65, 66, 67, 68, 69, 70, 71	67, 68, 69, 70, 71, 72, 73	61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72	67, 68, 69, 70, 71
Sub Total 25 / 50					
14 Aspect (> 15% slope)	North	East	<10% slope, aspects	West	South
15 Slope (%)	<10	10-20 and less than for North slopes	20-40	40-50	>50
16 Terrain	Flat	Hilly	Sloped terrain, narrow low wall of dikes	Chert/ML slope, deep draws or shallow gulches	Corrosion, deep gulches
17 Landscape Topographic Limitations to Wildfire Spread	< 5% moderate forest land	North and/or east aspects, moderate wildfire spread, reduced down slope and/or West	Shallow forest, topography, regular aspect, line slope changes, multiple aspects in wildfire spread	Rolling terrain, more moderate, moderate aspect and slope changes, more moderate wildfire spread	Corrosion, moderate topography, moderate to moderate spread
Sub Total 17 / 55					
FUEL, WEATHER AND TOPOGRAPHY WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
18 Position of Structures/ Community on Slope	No Structures, Values within 2 km	Bottom of slope, half bottom	Mid slope level, level, elevated, 1/3 slope	Mid-slope, continuous, >15% slope	Upper 1/3 of slope
19 Type of Development	No Structures, Values within 2 km	Proximate interface, no structures	Proximate interface, with structures	Interface, 1 structure	Interface <1 structure
20 Position of Accession Area Relative to Values	No Structures, Values within 7 km	Above >500 200-500 <200 m	Below >500 200-500 <200 m	Below >500 200-500 <200 m	Below >500 200-500 <200 m
Sub Total 47 / 55					
TOTAL WILDFIRE THREAT SCORE 110 / 200					

* Proceed only if Subtotal score > 25
 ** Proceed to structural components only if Wildfire Threat Reference Score is > 95 for standard polygons.

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40
 Moderate 41-65
 High 66-140
 Extreme >140

Wildland Urban Interface Threat Class (check applicable class)

Low 0-10
 Moderate 11-20
 High 21-30
 Extreme >30

2011 Update, January 24, 2013

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City of Kamloops – Wildfire Threat Assessment Picture – Plot 18



Photo 18-1 @ 270 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 19

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot #: 19
 Address: B. Mcrow
 Date: Apr 12/16
 Community: City of Kamloops
 Geographic Location/Street Name: Campbell Drive Rd
 GPS/NM: NSD 36 38.4' W 102 46' 18.9' 750m
 Parcel: 011 4
 Land Ownership: Crown Private I.L. Other (Specify):

19

Item	A	B	C	D	E
1 Fuel Load and Moisture Regime (m)	1	2	3	4	5
2 Surface Fuel Continuity (% cover)	<10	10-40	41-80	81-90	>90
3 Vegetative Fuel Composition	Misc. herbs, Dispersed Grass, Low Flammability Woods	Herbs, Deciduous Shrubs	Herbs, Conifer Shrubs	Perennials, Lianas	Evergreens, Hardwoods, Unkempt Brush, Spruce/Fir
4 Fine Woody Debris Continuity (<7cm) (% cover)	<1 coverage	1-10 coverage	10-25 coverage	>25 coverage, <10 cm deep	>25 coverage, >10 cm deep
5 Large Woody Debris Continuity (>7cm) (% cover)	<1 coverage	1-10 coverage	10-25 coverage	>25 coverage, not elevated	>25 coverage, partially elevated
6 Live and Dead Conifer Crown Closure (%)	<20	20-40	41-60	61-80	>80
7 Live Deciduous Crown Closure (%)	>80 or <40% continuous crown closure	61-80	41-60	23-40	<20
8 Live and Dead Conifer Crown Base Height (m)	5+ or <10% cover	3-5	2-3	1-2	<1
9 Live and Dead Suppressed and Understory Conifer (dominant)	0-500	1000-2000	3000-4000	2000-4000	>4000
10 Forest Health (% of dominant and co-dominant trees)	Standing Dead and Snags <5 or <10 stems/ha	Standing Dead and Snags <5	Standing Dead and Snags >5-10	Standing Dead and Snags >10-20	Standing Dead and Snags >20
11 Conditioned Forest/Slash Cover Width (m)	0	1-20	21-40	41-60	61-80

Item	A	B	C	D	E
12 Diagnostic Zone	AT, Injunct	CW1, GH, WH, Dry Zone/Wet	KW, SE, ESSE, Dry Zone/Wet	ME, WE, SEPS, (with 60% B.M., 70% 50% Dry Zone/Wet)	PP, GS
13 Absence of Wildfire Overlap by NRI Fire Class	G1, R1, R2, G6, Y5, R5, Y9, Y3, R3, R6, Y7	G3, G8, R3, R4, R6, G1, G9, Y8	G7, G5, G4, R4, R1, C1, M5	R3, R5, R3, C2, C1, R5, M6, M4, R7, N1	M1, M2, M3, M1

Item	A	B	C	D	E
14 Topography	North	East	<10% slope all aspects	10-25	South
15 Slope (%)	<10	10-20 and maximum for North slopes	10-40	41-50	>50
16 Terrain	Flat	Rolling	Sloped terrain, narrow, shallow drains	Considerable slope, deep draws or shallow gulches	Considerable slope, deep gulches
17 Landscape Topographic Continuity in Visible Swath	<5 ha isolated topog. feat	North and/or east aspects dominant, weather spaced regular from South and/or West	Intermittent terrain, broken topography, regular aspect and slope changes, multiple reductions in width of visible swaths	Rolling terrain, narrow water bodies, minimal aspect and slope changes, minor restrictions to visible swaths	Continuous, consistent topography, no reductions in width of visible swaths

Item	A	B	C	D	E
18 Position of Structure/Community on Slope	No Structures Values within 2 km	Bottom of slope, valley bottom	Mid-slope, benchland, elevated valley, <10% slope	Mid-slope continuous	Upper 1/3 of slope
19 Date of Development	No Structures Values within 2 km	Pre-1970 structures, no enclosures	Pre-1970 structures, with enclosures	Structures >1 structures	Structures, with enclosures
20 Position of Accession Area Relative to Slopes	No Structures Values within 2 km	Below 100-200 <200 m	Below 200-300 <200 m	Below 300-400 <200 m	Below 400-500 <200 m

* Proceed only if fuel sub total > 25.
 ** Proceed to Structural Component only if Wildfire Threat Behaviour Score is > 95 for unimproved polygons.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE: 7/95

TOTAL WILDFIRE THREAT SCORE: 7/95

Wildfire Behaviour Threat Class (check applicable class)	Wildland Urban Interface Threat Class (check applicable class)
Low 0-40 <input type="checkbox"/>	Low 0-13 <input type="checkbox"/>
Moderate 41-95 <input type="checkbox"/>	Moderate 14-26 <input checked="" type="checkbox"/>
High 96-143 <input checked="" type="checkbox"/>	High 27-39 <input type="checkbox"/>
Extreme >143 <input type="checkbox"/>	Extreme >39 <input type="checkbox"/>

Cell Updated: January 24, 2012

City of Kamloops – Wildfire Threat Assessment Picture – Plot 19



Photo 19-1 @ 90 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 20

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-1918 Home Post-1918 Home

Plot # **20** Community **City of Kamloops**
 Address **B Morrow** Geographic Location/Street Name **Bonhôteville**
 Date **April 16** GPS/UTM: **N50 38 41.6 W120 09 09' 60.3m**
 Photos: **0 1 4** Land Ownership: Crown Private I.L. Other (specify):

20

Fuel	Landscape				
	A	B	C	D	E
1 Fuel Depth and Moisture Regime (mm)	0-10 1	21-45 2 Dry forest fuel 5 3 1	51-100 3 Dry forest fuel 10 6 7	101-200 4 Dry forest fuel 22 8 4	>200 5 Dry forest fuel 33 10 3
2 Surface Fuel Continuity (% cover)	<10 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetative Fuel Composition	Herb. Forbs, (Highly) crisp, low flammability weeds 1	Herb. Berberis, shrubs 2	Shrub, Conifer shrubs 3	Shrub 4	Sagebrush, Barkhousia, Arctostaphylos, Scotch Broom 5
4 Fine Woody Debris Continuity (<2cm) (% cover)	<10 0	Scattered <10 coverage 1	10-45 coverage 2	>45 coverage <10 cm deep 3	>25 coverage >10 cm deep 4
5 Large Woody Debris Continuity (>2cm) (% cover)	<10 0	Scattered <10 coverage 1	10-45 coverage 2	>45 coverage not elevated 3	>75 coverage partially elevated 4
6 Live and Dead Conifers Crown Closure (%)	<20 0	20-40 1	41-60 2	61-80 3	>80 4
7 Live Deciduous Crown Closure (%)	>80 or <20% conifer/shrub closure 0	20-40 1	41-60 2	61-80 3	>80 4
8 Live and Dead Conifer Crown Base Height (m)	5+ or <10% smaller crown closure 0	20-40 1	41-60 2	61-80 3	>80 4
9 Live and Dead Suppressed and Decumbent Canopy (Decumbent)	<10 0	10-20 1	20-40 2	40-60 3	>60 4
10 Forest Health (% of deadwood and/or dead/dying trees)	Standing Dead and Partially Dead <5% 0	Standing Dead and Partially Dead 5-25 1	Standing Dead and Partially Dead >25-50 2	Standing Dead and Partially Dead >50-75 3	Standing Dead and Partially Dead >75 4
11 Continuous Forest/Slash Layer Width (m)	<10 0	10-20 1	20-40 2	40-60 3	>60 4

Sub Total **26** /133*

Weather	Landscape				
	A	B	C	D	E
12 Temperature Zone	A1 (Highland)	(W4, C6, H4) Dry forest fuel 1	(W4, S5, E5) Dry forest fuel 2	(W4, S5, E5) (H4) & (H4) Dry forest fuel 3	(H4) Dry forest fuel 4
13 Historical Wildfire Occurrence (by Wild Fire Zone)	G5, B1, R2, G6, Y5, R3, Y6, Y7, R5, R4, Y7 1	G5, G6, R3, R4, Y6, Y7, G4, Y6 2	G7, G5, G4, F4, Y1, G1, R6 3	F1, K5, K3, C2, C1, W5, W6, W4, R2 4	F1, K5, K3, C2, C1, W5, W6, W4, R2 5

Sub Total **25** /34

Topography	Landscape				
	A	B	C	D	E
14 Aspect (% 15% slope)	North 1	East 2	<10% slope all aspects 3	West 4	South 5
15 Slope (°)	<10 1	10-20 (all aspects except North) 2	20-40 3	40-50 4	>50 5
16 Profile	Flat 1	Rolling 2	Stepped terrain, many low ridges 3	Concentric slope, deep draws or shallow gullies 4	Concentric slope, deep gullies 5
17 Landforms/Topographic Limitations to Wildfire Spread	<10 m isolated forest 1	North aspect or east aspect dominates, wildfire spread inhibited from South and/or West 2	Across-slope terrain, barrier topography, regular aspect and slope changes, and/or steepness to wildfire spread 3	Rolling terrain, regular aspect and slope changes, and/or steepness to wildfire spread 4	Concentric, consistent topographic orientation to wildfire spread 5

Sub Total **15** /55

FUEL, WEATHER AND TOPOGRAPHY Sub Total **46** /198*

Structural	Wildland Behaviour Threat Score				
	A	B	C	D	E
18 Position of Structures/Community on Slope	No Structures Kickers within 2 km 0	Bottom of slope, valley bottom 1	Mid-slope, hillside, steep valley, south slope 2	Mid-slope conditions, >15% slope 3	Upper 1/3 of Slope 4
19 Type of Development	No Structures Kickers within 2 km 0	Perimeter interface, no increase 1	Perimeter interface, with structures 2	Interface > 1 structure/ha 3	Interface < 1 structure/ha 4
20 Position of Structures Area Relative to Values	No Structures Kickers within 2 km 0	Above >500 200-500 1 10 20	Below >500 200-500 <200 m 1 12 25	Below >500 200-500 <200 m 1 12 25	Below >500 200-500 <200 m 1 15 10

Sub Total **33** /55

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE **79** /253

TOTAL WILDFIRE THREAT SCORE **79** /253

* Proceed only if Fuel sub total <= 25.
 ** Proceed to structural component only if Wildfire Behavior Score is > 85 in unshaded polygons.

Wildfire Behaviour Threat Class (check applicable class)

Low 0-19
 Moderate 20-49
 High 50-69
 Extreme >70

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13
 Moderate 14-26
 High 27-39
 Extreme >39

Last Updated: January 24, 2017

City of Kamloops – Wildfire Threat Assessment Picture – Plot 20



Photo 20-1 @ 180 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 21

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-Inspected Post-Inspected

Plot #: 20 Community: City of Kamloops

Assessor: B. Brown Geographic Location/Street Name: Plot 21

Date: April 12/16 GPS/UTM: N50° 39' 13" W120° 10' 37.4" 700m 20

Photos: 0 H 4 Land Ownership: Crown Private I.R. Other Specify:

Plot	A	B	C	D	E
1 Dead Down and Whisker Spruce (%)	0-5	6-10 Dry Down/Wet 5 5 1	11-15 Dry Down/Wet 10 6 2	16-20 Dry Down/Wet 12 8 4	>20 Dry Down/Wet 15 10 5
2 Surface Fuel Continuity (M cover)	<20	20-40	41-60	61-80	>80
3 Vegetation Fuel Composition	Moist Herbs, Impacted Grass, Low Flammability Weeds	Herbs, Darker Shrubs	Shrubs, Conifer Shrubs	Pyrogenic, Clumped	Sagebrush, Blackberry, Ambrosia Bush, Scotch Broom
4 Fine Woody Debris (Continuity <10cm) (%) cover)	<1 coverage	Scattered, <10 coverage	10-25 coverage	>25 coverage, >10 cm deep	>25 coverage, partially elevated
5 Large Woody Debris Continuity (>10cm) (%) cover)	<1 coverage	Scattered, <10 coverage	10-25 coverage	>25 coverage, not elevated	>25 coverage, partially elevated
6 Live and Dead Conifers Crown Closure (%)	<20	20-40	41-60	61-80	>80
7 Live and Dead Conifers Crown Closure (%)	>80w <80% coniferous crown closure	81-82	41-60	10-40	>80
8 Live and Dead Conifer Crown Base Height (m)	5-8 or <20% conifer crown closure	3-5	2-4.5	1-2.5	<1
9 Live and Dead Suppressed and Understory Conifers (Stems) (%)	0-200	201-500	501-1000	1001-4000	>4000
10 Forest Health (% of dominant and co-dominant trees)	Standing Dead and Parly Down <5	Standing Dead and Parly Down 5-25	Standing Dead and Parly Down >25-50	Standing Dead and Parly Down >50-75	Standing Dead and Parly Down >75
11 Coniferous Forest Health Crown Health 20m (%)	0-10	11-40	41-60	>60	>80

Sub Total 55 /55*

Weather	A	B	C	D	E
12 Synoptic Air	41, Inverted	CWS, CG, MH, Dry Down/Wet	H1, CG, ESE, Dry Down/Wet	M, M, SWS, LWH, G1 & G2, EWS, Synoptic Dry Down	FD, H, S
13 Synoptic Weather Occurrence (By WMB Fire Zone)	G5, A1, R2, G4, V5, R9, V9, A3, R3, R6, V7	G3, G4, R1, G4, W6, G1, G2, V8	G7, G5, G4, C4, V1, C1, M4	M1, M2, B3, C2, C4, M3, M5, M4, R7, N3	W, E, S, W, N

Sub Total 25 /29

Topography	A	B	C	D	E
14 Aspect (>25% slope)	Flat	Just S	<10% slope all aspects	West	South
15 Slope (%)	<10	10-20 and/or less than 20% slope	20-40	41-60	>60
16 Erosion	Flat	Rolling	Sloped terrain, eroded low relief dunes	Consistent slope, deep drainage	Consistent slope, deep gulches
17 Landcover/Topographic Obstacles to Wildfire Spread	<5 ha isolated forest land	North-south road, aspects dominated, wildfire spread restricted from south	Irregular terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread	Rolling terrain, lower water bodies, irregular aspect and slope changes, minor restrictions to wildfire spread	Continuous, consistent topography, no restrictions to wildfire spread

Sub Total 17 /33**

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE 97 /33**

Structural	A	B	C	D	E
18 Position of Structures Community on Slope	No structures, Values within 2 km	Bottom of slope, valley bottoms	Mid-slope benches, elevated safety, <10% slope	Mid-slope benches, >10% slope	Upper 1/3 of Slope
19 Type of Development	No structures, Values within 2 km	Permitted structures, no encroachment	Permitted structures, with encroachment	Permitted structures, with encroachment	Permitted structures, with encroachment
20 Position of Allotment Area Relative to Tables	No structures, Values within 2 km	Below >500 (200-500) <100 m	Suitable >500 (200-500) <100 m	Not Suitable >500 (200-500) <100 m	Below >500 (200-500) <100 m

* Proceed only if fuel sub total is >25.

** Proceed to the next component only if Wildfire Behaviour Score is >95 for all mapped polygons.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE 45 /55

TOTAL WILDFIRE THREAT SCORE 142 /335

Wildfire Behaviour Threat Class (check applicable class):
 Low 0-40
 Moderate 41-55
 High 56-100
 Extreme >100

Wildland Urban Interface Threat Class (check applicable class):
 Low 0-11
 Moderate 12-25
 High 26-39
 Extreme >40

10/1 Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 21



Photo 21-1 @ 180 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 22

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot #: 22
 Address: B. Mcrow
 Date: Apr 12/16
 Photos: 0 N 4

Comments: City of Kamloops
 Geograph. Loc./Access/Street Name: Road 22
 GPS/UTM: N55° 57' 22" W120° 10' 7.9"

Land Ownership: A Crown Private RR Other (specify):

Factor	A	B	C	D	E
1 Fuel Depth and Moisture Regime (cm)	3	2-3 Dry Fuel Wet 3 3 1	6-10 Dry Fuel Wet 10 4 3	10-20 Dry Fuel Wet 12 8 4	>20 Dry Fuel Wet 15 10 5
2 Surface Fuel Continuity (% cover)	<20 0	20-40 3	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Compaction	Moist, Herb. Impacted (logs, lvs & floral/bark) Wrecks	Herb. Detritus Sheds	Lichen, Larder Sheds	Fireweed, Aster	Supernat. Detritus, Aster, Fireweed, Sedge Sheds
4 Fine Woody Debris Continuity (<7mm) (% cover)	<1 coverage 1	Scattered <10 coverage 2	70-85 coverage 3	>15 coverage >10 cm deep 10	>15 coverage >10 cm deep 15
5 Large Woody Debris Continuity (>7mm) (% cover)	<2 coverage 1	Scattered <10 coverage 2	70-85 coverage 3	>15 coverage not elevated 7	>15 coverage partially elevated 10
6 Live and Dead Conifers Crown Closure (%)	<20 2	20-40 3	41-60 3	61-80 4	>80 5
7 Live Deciduous Crown Closure (%)	>80% <60% contiguous crown closure	41-60 3	41-60 3	20-40 4	<20 3
8 Live and Dead Conifer Crown Base Density (m ²)	5+ or <20% cover over 20m ² 0	3-5 3	6-10 4	1-2 10	<1 15
9 Live and Dead Supplemental and Adjunctory Canopies (Forest, Rd)	2-3 3	501-1000 1	1001-2000 2	2001-4000 3	>4000 4
10 Forest Health (% of dominant and co-dominant trees)	Standing Dead and Partially Dead > 20 adjacent trees 3	Standing Dead and Partially Dead 1-25 5	Standing Dead and Partially Dead >25-50 10	Standing Dead and Partially Dead >50-75 15	Standing Dead and Partially Dead >75-100 20
11 Combustible Forest/Shrub Cover within 20m (%)	0-20 0	21-40 3	41-60 3	61-80 4	>80 5
Sub Total 43 / 100%					
12 Biopersistent Fuel	All Impacted 8	CM, DM, MH Dry Fuel Wet 5 3 1	RM, SRS, ESSF Dry Fuel Wet 10 2 3	DF, MS, SRS, LWM, G&B, S&Z, S&Z, S&Z Dry Fuel Wet 10 3 3	PS, BS 15
13 Historical Wildfire Occurrence by Wildfire Zone	05, 01, 02, 06, 05, 09, 19, V3, K5, M4, Y7 1	03, 04, 03, 06, 04, 01, 05, 01 5	02, 05, 04, 04, V1, 01, M4 3	11, K5, R1, C2, C3, M5, S6, M4, K7, M2 10	R7, 06, 02, 01 15
Sub Total 25 / 25%					
Topography					
14 Aspect (>12% slope)	North 0	East 5	<16% slope all aspects 10	West 17	South 15
15 Slope (%)	<16 1	16-20 and 20% slope for north slopes 5	21-46 16	47-54 12	>55 15
16 Terrain	Flat 1	Rolling 3	Stepped, rolling, minor low water courses 5	Consistent slope, steep draws or shallow gulches 7	Consistent slope, deep gulches 10
17 Landscape/Topographic Features that facilitate Spread	<5 ha isolated forest 1	North and/or east aspects dominant, wildfire spread restricted from South and/or West 3	Mountainous terrain, broken topography, regular aspect and slope changes, wildfire restricted to individual forest types 5	Rolling terrain, minor water bodies, mixed aspect and slope changes, minor water courses in sensitive riparian 10	Continuous, consistent topography, horizontal line to wildfire spread 15
Sub Total 70 / 70%					
FUEL, WEATHER AND TOPOGRAPHY					
Sub Total 240 / 240%					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
Structural					
18 Position of Structures/Continuity on Slope	No Structures Values within 2 km 0	Buffered or slope valley bottom 5	Mid-slope benches, elevated valley, <16% slope 10	Mid-slope, mid-slopes, <16% slope 12	Open 1/3 of Slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter lotteries, no inclusions 3	Perimeter lotteries, with inclusions 5	Structures > 1 structure/ha 8	Structures > 1 structure/ha 10
20 Position of Assessment Area Relative to Values	No Structures Values within 2 km 0	Above >500 200-500 1 30 30	Below >500 200-500 <200 m 1 12 25	Flat/Rolling >500 200-500 <200 m 1 12 25	Edge >500 200-500 <200 m 1 15 30
Sub Total 21 / 21%					
TOTAL WILDFIRE THREAT SCORE 295					

Percent of Fuel Sub Total 150/240
 Percent to Structural Component only in Wildfire Threat Behaviour Score = 95 (for combined subgroups)

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40
 Moderate 41-95
 High 96-144
 Extreme >145

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13
 Moderate 14-26
 High 27-39
 Extreme >39

LAST UPDATE: January 24, 2013

22

City of Kamloops – Wildfire Threat Assessment Picture – Plot 22



Photo 22-1 @ 270 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 23

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot # **23** Community **City of Kamloops**

Address **Brimarow** Geographic Location/Street Name **Plot 23**

Date **Apr 17/16** GPS: **N 50° 37' 20.3" W 120° 18' 5.5"**

Photo **Apr 17** Land Ownership Crown Private LR Other (specify)

23

Factor	A	B	C	D	E
1 Fuel Depth and Moisture Regime (m)	1-12 1	13-15 Dry Fuel Wet 3 1	16-18 Dry Fuel Wet 10 6 2	19-20 Dry Fuel Wet 12 9 4	>20 Dry Fuel Wet 15 10 5
2 Surface Fuel Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Tree/Tree Fuel Continuity	Most herbs, irrigated (cop), low flammability Week 1	Herbs, Deciduous Shrub 2	Lichen, Canes, Shrubs 3	Progress, Runners 4	Supergrass, Barkfires, Melting, South Slope 5
4 Fuel Windy Debris Continuity (<1cm) (% cover)	<1 coverage 1	Scattered, <10 coverage 2	10-15 coverage 3	>15 coverage, <10 cm deep 4	>15 coverage, >10 cm deep 5
5 Large Windy Debris Continuity (>7cm) (% cover)	<1 coverage 1	Scattered, <10 coverage 2	10-15 coverage 3	>15 coverage, not stacked 4	>15 coverage, partially stacked 5
6 Live and Dead Canopy Crown Closure (%)	<20 1	20-40 2	41-60 3	61-80 4	>80 5
7 Live and Dead Canopy Crown Closure (%)	>40 or >40% continuous crown closure 1	41-60 2	61-80 3	81-100 4	>100 5
8 Live and Dead Canopy Crown Closure (%)	54 or >20% continuous crown closure 1	3-5 2	7-15 3	16-20 4	>20 5
9 Live and Dead Canopy Crown Closure (%)	0-100 1	100-1000 2	1001-1000 3	2001-4000 4	>4000 5
10 Fuel Health (% of dominant and co-dominant stems)	Standing Dead and Partly Down < 5 or <10 stems/ha 0	Standing Dead and Partly Down 5-10 1	Standing Dead and Partly Down >10-15 2	Standing Dead and Partly Down >15-20 3	Standing Dead and Partly Down >20-25 4
11 Continuity: Forest/Shrub Cover within 30m (%)	0-10 1	11-40 2	41-60 3	61-80 4	>80 5

Weather	A	B	C	D	E
12 Wind Speed and Direction	All directions 1	SW, SE, NW, Dry Fuel Wet 3 5 8	NW, SE, SW, Dry Fuel Wet 10 7 3	SW, NE, SE, SW, NW, Dry Fuel Wet 15 10 5	100-100 15
13 Humidity: Relative Humidity (RH) (5m)	05, 01, 02, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15 1	05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15 2	07, 05, 04, 04, 07, 07, 08, 08 3	07, 05, 04, 04, 07, 07, 08, 08 4	07, 05, 04, 04, 07, 07, 08, 08 5

Topography	A	B	C	D	E
14 Aspect (>15% slope)	North 0	East 1	<10% slope, all aspects 2	West 3	>15 4
15 Slope (%)	<10 1	10-20 2	20-40 3	40-54 4	>54 5
16 Terrain	Flat 1	Rolling 2	Sloped terrain, open (no 100% grass) 3	Concentric slope, deep draws or shallow gulches 4	Concentric slope, deep gulches 5
17 Canopy/Spacings: Continuity in Wildfire Spread	< 5 ha isolated forest 1	Herb and/or open aspects, moderate, wildfire spread restricted from South and/or West 2	Marshy areas, trees, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread 3	Rolling terrain, mixed water bodies, minimal aspect and slope changes, some restrictions to wildfire spread 4	Continuous, consistent topography, few restrictions to wildfire spread 5

FUEL, WEATHER AND TOPOGRAPHY	A	B	C	D	E
18 Continuity of Structure/Community on Slope	No structure, Values within 2 km 0	Islands of slope, valley bottoms 1	Mid-slope benches, elevated valley, <10% slope 2	Mid-slope continuation, >10% slope 3	Upper 1/3 of slope 4
19 Type of Development	No structure, Values within 2 km 0	Perimeter intrusion, no reductions 1	Perimeter intrusion, with reductions 2	Intrusion > 1 km, 10% or more 3	Intrusion > 1 km, 20% or more 4
20 Proximity of Development Area Relative to 100m	No structure, Values within 2 km 0	Slope >500 200-500 <200 m 1 2 3	Slope >500 200-500 <200 m 1 12 25	Flat/rolling >500 200-500 <200 m 1 12 25	Below >500 200-500 <200 m 1 12 25

* Proceed only if Fuel Sub Factor is >2
 ** Proceed to Structural component only if Wildfire Threat Between Scores is >=3 for untreated polygons.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE

TOTAL WILDFIRE THREAT SCORE

Wildfire Behaviour Threat Class (check applicable class)	Wildland Urban Interface Threat Class (check applicable class)
Low 0-49	Low 0-13
Moderate 41-95	Moderate 14-16
High 96-149	High 17-19
Extreme >149	Extreme >19

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 23



Photo 23-1 @ 270 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 24

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot #: 24
 Location: City of Kamloops
 Address: B Morrow
 Date: Apr 12/16
 GPS UTM: NS0 39 X.8 UTM 11 S 21.4
 Photos: 4
 Land Ownership: Crown Private IR Other (Identify)

FUEL

Fuel	A	B	C	D	E
1 Dead Upright and Non-lignin Residue Fuel	1-3	4-5 Dry Zone Wet	6-8 Dry Zone Wet	9-11 Dry Zone Wet	12-20 Dry Zone Wet
2 Surface Fuels Continuity (No cover)	< 30	30-60	61-90	91-80	80
3 Vegetation Fuel Composition	North Herb, Injuncted Cover, low flammability needs	Herb, Deciduous Shrubs	Herb, Conifer Shrubs	Herb, Conifer	Sagebrush, Bunchgrass, Arid/steppe brush, Scrub-shrub
4 Fine Woody Debris Continuity (< 5cm) (% cover)	0	Scattered, < 10 coverage	10-25 coverage	> 25 coverage, < 10 cm deep	> 25 coverage, > 10 cm deep
5 Large Woody Debris Continuity (> 5cm) (% cover)	0	Scattered, < 10 coverage	10-25 coverage	> 25 coverage, not adjacent	> 25 coverage, partially adjacent
6 Live and Dead Cover/cover Crown Closure (%)	0	0	10	10	10
7 Live Deciduous Crown Closure (%)	> 80 or < 80% continuous crown closure	0	0	0	0
8 Live and Dead Conifer Crown Base Ratio (%)	> 3 or < 30% conifer crown closure	0	0	0	0
9 Live and Dead Suppressed and Overstory Canopy (forming)	0	0	0	0	0
10 Forest Health (% of dominant and co-dominant species)	Standing Dead and Partly Down < 5 or > 50% of live	Standing Dead and Partly Down 5-25	Standing Dead and Partly Down 25-50	Standing Dead and Partly Down > 50-75	Standing Dead and Partly Down > 75
11 Coniferous Forest/Stand Cover within Area (%)	0	0	0	0	0
Sub Total					40 / 155*

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET	A	B	C	D	E
12 Regional Fire Zone	AT, Intersect	CM, DM, DM Dry Zone Wet	KH, SH, ESSE Dry Zone Wet	KE, ME, SEPS, (M) (L) (R) (S) (T) (U) (V) (W) (X) (Y) (Z) (AA) (AB) (AC) (AD) (AE) (AF) (AG) (AH) (AI) (AJ) (AK) (AL) (AM) (AN) (AO) (AP) (AQ) (AR) (AS) (AT) (AU) (AV) (AW) (AX) (AY) (AZ) (BA) (BB) (BC) (BD) (BE) (BF) (BG) (BH) (BI) (BJ) (BK) (BL) (BM) (BN) (BO) (BP) (BQ) (BR) (BS) (BT) (BU) (BV) (BW) (BX) (BY) (BZ) (CA) (CB) (CC) (CD) (CE) (CF) (CG) (CH) (CI) (CJ) (CK) (CL) (CM) (CN) (CO) (CP) (CQ) (CR) (CS) (CT) (CU) (CV) (CW) (CX) (CY) (CZ) (DA) (DB) (DC) (DD) (DE) (DF) (DG) (DH) (DI) (DJ) (DK) (DL) (DM) (DN) (DO) (DP) (DQ) (DR) (DS) (DT) (DU) (DV) (DW) (DX) (DY) (DZ) (EA) (EB) (EC) (ED) (EE) (EF) (EG) (EH) (EI) (EJ) (EK) (EL) (EM) (EN) (EO) (EP) (EQ) (ER) (ES) (ET) (EU) (EV) (EW) (EX) (EY) (EZ) (FA) (FB) (FC) (FD) (FE) (FF) (FG) (FH) (FI) (FJ) (FK) (FL) (FM) (FN) (FO) (FP) (FQ) (FR) (FS) (FT) (FU) (FV) (FW) (FX) (FY) (FZ) (GA) (GB) (GC) (GD) (GE) (GF) (GG) (GH) (GI) (GJ) (GK) (GL) (GM) (GN) (GO) (GP) (GQ) (GR) (GS) (GT) (GU) (GV) (GW) (GX) (GY) (GZ) (HA) (HB) (HC) (HD) (HE) (HF) (HG) (HH) (HI) (HJ) (HK) (HL) (HM) (HN) (HO) (HP) (HQ) (HR) (HS) (HT) (HU) (HV) (HW) (HX) (HY) (HZ) (IA) (IB) (IC) (ID) (IE) (IF) (IG) (IH) (II) (IJ) (IK) (IL) (IM) (IN) (IO) (IP) (IQ) (IR) (IS) (IT) (IU) (IV) (IW) (IX) (IY) (IZ) (JA) (JB) (JC) (JD) (JE) (JF) (JG) (JH) (JI) (JJ) (JK) (JL) (JM) (JN) (JO) (JP) (JQ) (JR) (JS) (JT) (JU) (JV) (JW) (JX) (JY) (JZ) (KA) (KB) (KC) (KD) (KE) (KF) (KG) (KH) (KI) (KJ) (KK) (KL) (KM) (KN) (KO) (KP) (KQ) (KR) (KS) (KT) (KU) (KV) (KW) (KX) (KY) (KZ) (LA) (LB) (LC) (LD) (LE) (LF) (LG) (LH) (LI) (LJ) (LK) (LL) (LM) (LN) (LO) (LP) (LQ) (LR) (LS) (LT) (LU) (LV) (LW) (LX) (LY) (LZ) (MA) (MB) (MC) (MD) (ME) (MF) (MG) (MH) (MI) (MJ) (MK) (ML) (MN) (MO) (MP) (MQ) (MR) (MS) (MT) (MU) (MV) (MW) (MX) (MY) (MZ) (NA) (NB) (NC) (ND) (NE) (NF) (NG) (NH) (NI) (NJ) (NK) (NL) (NM) (NN) (NO) (NP) (NQ) (NR) (NS) (NT) (NU) (NV) (NW) (NX) (NY) (NZ) (OA) (OB) (OC) (OD) (OE) (OF) (OG) (OH) (OI) (OJ) (OK) (OL) (OM) (ON) (OO) (OP) (OQ) (OR) (OS) (OT) (OU) (OV) (OW) (OX) (OY) (OZ) (PA) (PB) (PC) (PD) (PE) (PF) (PG) (PH) (PI) (PJ) (PK) (PL) (PM) (PN) (PO) (PP) (PQ) (PR) (PS) (PT) (PU) (PV) (PW) (PX) (PY) (PZ) (QA) (QB) (QC) (QD) (QE) (QF) (QG) (QH) (QI) (QJ) (QK) (QL) (QM) (QN) (QO) (QP) (QQ) (QR) (QS) (QT) (QU) (QV) (QW) (QX) (QY) (QZ) (RA) (RB) (RC) (RD) (RE) (RF) (RG) (RH) (RI) (RJ) (RK) (RL) (RM) (RN) (RO) (RP) (RQ) (RR) (RS) (RT) (RU) (RV) (RW) (RX) (RY) (RZ) (SA) (SB) (SC) (SD) (SE) (SF) (SG) (SH) (SI) (SJ) (SK) (SL) (SM) (SN) (SO) (SP) (SQ) (SR) (SS) (ST) (SU) (SV) (SW) (SX) (SY) (SZ) (TA) (TB) (TC) (TD) (TE) (TF) (TG) (TH) (TI) (TJ) (TK) (TL) (TM) (TN) (TO) (TP) (TQ) (TR) (TS) (TT) (TU) (TV) (TW) (TX) (TY) (TZ) (UA) (UB) (UC) (UD) (UE) (UF) (UG) (UH) (UI) (UJ) (UK) (UL) (UM) (UN) (UO) (UP) (UQ) (UR) (US) (UT) (UU) (UV) (UW) (UX) (UY) (UZ) (VA) (VB) (VC) (VD) (VE) (VF) (VG) (VH) (VI) (VJ) (VK) (VL) (VM) (VN) (VO) (VP) (VQ) (VR) (VS) (VT) (VU) (VV) (VW) (VX) (VY) (VZ) (WA) (WB) (WC) (WD) (WE) (WF) (WG) (WH) (WI) (WJ) (WK) (WL) (WM) (WN) (WO) (WP) (WQ) (WR) (WS) (WT) (WU) (WV) (WW) (WX) (WY) (WZ) (XA) (XB) (XC) (XD) (XE) (XF) (XG) (XH) (XI) (XJ) (XK) (XL) (XM) (XN) (XO) (XP) (XQ) (XR) (XS) (XT) (XU) (XV) (XW) (XX) (XY) (XZ) (YA) (YB) (YC) (YD) (YE) (YF) (YG) (YH) (YI) (YJ) (YK) (YL) (YM) (YN) (YO) (YP) (YQ) (YR) (YS) (YT) (YU) (YV) (YW) (YX) (YZ) (ZA) (ZB) (ZC) (ZD) (ZE) (ZF) (ZG) (ZH) (ZI) (ZJ) (ZK) (ZL) (ZM) (ZN) (ZO) (ZP) (ZQ) (ZR) (ZS) (ZT) (ZU) (ZV) (ZW) (ZX) (ZY) (ZZ)	
Sub Total					25 / 100

TOPOGRAPHY

Topography	A	B	C	D	E
14 Aspects (> 15% slope)	North	East	< 15% slope all aspects	West	South
15 Slope (%)	< 10	10-29 and max slope for terrain type	10-44	45-54	> 55
16 Swales	Flat	Shallow	Sloped terrain, inter-valley draws	Consistent slope, deep draws or shallow gulches	Consistent slope, deep gulches
17 Lithology/Topographic Limitations to Wildfire Spread	< 5 ha isolated forest	North aspect, all aspects dominant, and low spatial restriction from South and West	Non-continuous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread	Rolling terrain, linear water bodies, minimal aspect and slope changes, other restrictions to wildfire spread	Continuous, continuous topography, no restrictions to wildfire spread
Sub Total					15 / 155*

FUEL, WEATHER AND TOPOGRAPHY WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE

Structural	A	B	C	D	E
18 Position of Structures/Continuity on Slope	No Structures Values within 2 km	Bottom of slope, valley bottom	Mid-slope benchland, elevated ridges, < 34% slope	Mid-slope continuous, > 34% slope	Upper 1/3 of Slope
19 Age of Development	No Structures Values within 2 km	Armed interface, no structures	Proximate interface, structures	Interface > 1 structure/ha	Interface < 1 structure/ha
20 Position of Assessment Area Relative to Values	No Structures Values within 2 km	None > 500 200-500 < 200 m	Setback > 500 200-500 < 200 m	Not/rolling > 500 200-500 < 200 m	Below > 500 200-500 < 200 m
Sub Total					15 / 155*

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE

TOTAL WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE 75/155

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40
 Moderate 41-95
 High 96-149
 Extreme > 149

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13
 Moderate 14-26
 High 27-39
 Extreme > 39

City Updated: January 24, 2013

part
24

City of Kamloops – Wildfire Threat Assessment Picture – Plot 24



Photo 24-1 @ 90 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 25

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot #: 25 Community: City of Kamloops

Address: B. P. Brown Geographic Location/Street Name: Iron Works

Date: Apr 12/16 GPS/UTM: N50° 38' 50.3" W 120° 25' 43"

Photos: 4 Land Ownership: Crown Private I.R. Other (specify):

25

Factor	A	B	C	D	E
1 Fuel Depth and Moisture Regime (cm)	1-2 1	3-5 Dry (1) 2	6-10 Dry (2) 3	10-20 Dry (3) 4	>20 Dry (4) 5
2 Surface Fuel Continuity (% cover)	<20 1	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Non, Herb, Injunctive (1) Flammable (1)	Herb, Deciduous (2)	Conifer, Conifer (3)	Deciduous (4)	Softwood, Deciduous, Injunctive (5)
4 Fine Woody Debris Continuity (<7mm) (% cover)	<10 1	10-25 2	26-50 3	>50 4	>75 5
5 Large Woody Debris Continuity (>7mm) (% cover)	<10 1	10-25 2	26-50 3	>50 4	>75 5
6 Live and Dead Conifer Crown Closure (%)	<10 1	10-25 2	26-50 3	>50 4	>75 5
7 Live Deciduous Crown Closure (%)	<10 1	10-25 2	26-50 3	>50 4	>75 5
8 Live and Dead Conifer Base Height (m)	<10 1	10-25 2	26-50 3	>50 4	>75 5
9 Live and Dead Conifer and Deciduous Canopy Cover (area/ha)	<10 1	10-25 2	26-50 3	>50 4	>75 5
10 Forest Health (% of dominant and co-dominant species)	<10 1	10-25 2	26-50 3	>50 4	>75 5
11 Continuous Forest/Stack Cover Within 20m (%)	<10 1	10-25 2	26-50 3	>50 4	>75 5
Sub Total					
12 Slope/Aspect	A1, Injunctive 1	C1, D1, E1 2	F1, G1, H1 3	I1, J1, K1 4	L1, M1 5
13 Historical Wildfire Occurrence (by WUI Risk Zone)	G1, H1, I1, J1, K1, L1, M1 1	N1, O1, P1, Q1, R1, S1, T1, U1, V1, W1, X1, Y1, Z1 2	AA1, AB1, AC1, AD1, AE1, AF1, AG1, AH1, AI1, AJ1, AK1, AL1, AM1, AN1, AO1, AP1, AQ1, AR1, AS1, AT1, AU1, AV1, AW1, AX1, AY1, AZ1 3	BA1, BB1, BC1, BD1, BE1, BF1, BG1, BH1, BI1, BJ1, BK1, BL1, BM1, BN1, BO1, BP1, BQ1, BR1, BS1, BT1, BU1, BV1, BW1, BX1, BY1, BZ1 4	CA1, CB1, CC1, CD1, CE1, CF1, CG1, CH1, CI1, CJ1, CK1, CL1, CM1, CN1, CO1, CP1, CQ1, CR1, CS1, CT1, CU1, CV1, CW1, CX1, CY1, CZ1 5
Sub Total					
14 Topography	A 1	B 2	C 3	D 4	E 5
15 Aspect (>15% slope)	<15 1	16-25 2	26-35 3	36-45 4	>45 5
16 Slope (%)	<15 1	16-25 2	26-35 3	36-45 4	>45 5
17 Aspect	Flat 1	Rolling 2	Sloped (low), no steep slopes 3	Steep (low), no steep slopes 4	Steep (high), steep slopes 5
18 Landscape/Topographic Limitations to Wildfire Spread	<5 ha isolated forest 1	North and/or all aspects suitable, wildfire spread restricted from South and/or West 2	Mountainous terrain, involves topography, vegetation, aspect and slope changes, multiple interconnections to wildland/urban interface 3	Rolling terrain, minor water bodies, minimal aspect and slope changes, multiple interconnections to wildland/urban interface 4	Extremes, (mountain) topography, no restriction to wildfire spread 5
Sub Total					
FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					
18 Position of Structures/Community on Slope	No structures Values within 2 km 1	Bottom of slope, valley bottom 2	Mid-slope hillside, elevated areas, <15% slope 3	Mid-slope continuous, >15% slope 4	Upper 1/3 of Slope 5
19 Type of Development	No structures, Values within 2 km 1	Perimeter interface, no structures 2	Perimeter interface, with structures 3	Interior > 1 structure 4	Interior < 1 structure 5
20 Position of Assessment Area Relative to Values	No structures, Values within 2 km 1	Above >500-2000 <1000 m 2	Below >500-2000 <1000 m 3	Below >100-200-500 <200 m 4	Below >100-200-500 <200 m 5
Sub Total					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
TOTAL WILDFIRE THREAT SCORE					

* Proceed only if fuel sub total is > 23.

** Proceed to structural component only if Wildfire Threat Behaviour Score is > 93 for dispersed polygons.

Wildfire Behaviour Threat Class (check applicable ones):
 Low 0-40
 Moderate 41-95
 High 96-140
 Extreme >140

Wildland Urban Interface Threat Class (check applicable ones):
 Low 0-35
 Moderate 36-60
 High 61-85
 Extreme >85

(last updated: January 24, 2013)

City of Kamloops – Wildfire Threat Assessment Picture – Plot 25



Photo 25-1 @ 270 degrees

City of Kamloops – Wildfire Threat Assessment Picture – Plot 26



Photo 26-1 @ 180 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 27

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot # **27** Community: **City of Kamloops**

Assessor: **B Morrison** Geographic Location (Street Name): **Loc Le Juana Rd**

Date: **Apr 12/16** GPS UTM: **N30 38' 24S W126 26' 50W**

Parcel: **0 11 44** Land Ownership: **2 (Govt)** Private: **1 (R)** Other (Specify):

27

Fuel	A	B	C	D	E
1 Fuel Height and Moisture Regime (m)	1-2 1	2-5 Dry (20-40) 2	5-10 Dry (20-40) 4	10-20 Dry (20-40) 12	>20 Dry (20-40) 15
2 Surface Fuel Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	81-100 5
3 Vegetation Fuel Composition	Moss, Herbs, Intertwined Clipp, Low Horizontal Fuel	Herbs, Deciduous Shrubs	Lichens, Conifer Shrubs	Prostrate Fuel	Superior, Burdock, Knowledge Branch, Struck Branch
4 Fine Woody Debris Continuity (<2cm) (% cover)	<1 coverage 1	Scattered, <10 coverage 5	10-25 coverage 7	>25 coverage, <10 cm deep 10	>25 coverage, >10 cm deep 15
5 Large Woody Debris Continuity (>2cm) (% cover)	<1 coverage 1	Scattered, <10 coverage 2	10-25 coverage 5	>25 coverage, not elevated 7	>25 coverage, partially elevated 10
6 Live and Dead Coniferous Crown Closure (%)	<20 0	20-40 5	41-60 10	61-80 15	>80 19
7 Live Deciduous Crown Closure (%)	>80-100% coverage (50% closure) 10	61-80 2	41-60 5	20-40 4	<20 3
8 Live and Dead Coniferous Base Height (m)	0-5 1	5-15 5	15-25 7	25-40 10	>40 15
9 Live and Dead Deciduous and Understorey Canopies (Stems/ha)	0-500 1	501-1000 5	1000-2000 10	2001-4000 15	>4000 20
10 Fuel Moisture (% of available and/or dependent stores)	Standing Dead and Partly Dead <5 or <20 percent 0	Standing Dead and Partly Dead 5-25 5	Standing Dead and Partly Dead >25-50 10	Standing Dead and Partly Dead >50-75 15	Standing Dead and Partly Dead >75-100 20
11 Continuous Forest/Slash Cover within 20m (%)	0-20 0	21-40 3	41-60 5	61-80 7	>80 10

Sub Total **51 / 155***

Woodstock	A	B	C	D	E
12 Woodstock Zone	AT, Impaled 1	CWH, CNE, MH Dry (20-40) 5	EH, SB, ESW Dry (20-40) 10	EA, MS, SPS, (WH) (L) (L), (L), (L), (L) Dry (20-40) 15	EP, EG 15
13 Alternative Wildfire Occurrence (Dry Wind Free Zone)	D5, R1, R2, G6, V5, R9, V9, V3, R5, R6, V7 1	G3, R3, R4, R6, G1, G2, V9 5	G7, G5, G4, G4, V1, C1, G6 8	K4, R5, R3, C2, C3, M3, R6, M4, R7, R3 10	M2, M4, M1, M1 15

Sub Total **25 / 50**

Topography	A	B	C	D	E
14 Aspect (>15% slope)	North 0	East 5	<15% slope, all aspects 10	West 15	South 15
15 Slope (%)	<10 1	10-20 and near zero for North slopes 5	20-40 10	40-54 12	>55 15
16 Terrain	Flat 1	Rolling 5	Sloped terrain, minor (less than 10%) slopes 5	Consistent slope, steep (10% to shallow gullies) 7	Extensive slope, deep gullies 10
17 (contours) Topographic Limitations to Wildfire Spread	<5 has isolated forest 1	North and/or east aspects, moderate, wildfire spread restricted from South and/or West 2	Profound terrain, limited topography, regular aspect and slope changes, multiple orientations to wildfire spread 5	Rolling terrain, minor slope breaks, minimal aspect and slope changes, minor orientations to wildfire spread 10	Continuous, regular aspect, topography, no restriction to wildfire spread 15

Sub Total **24 / 55**

FUEL, WEATHER AND TOPOGRAPHY	A	B	C	D	E
18 Position of Structures/Community on Slope	No Structures Valley width > 1 km 0	Bottom of deep valley bottom 5	Mid-slope, horizontal, elevated valley, <1 km slope 10	Mid-slope, continuous, >15% slope 12	Upper 1/3 of slope 15
19 Type of Development	No Structures Valued within 2 km 0	Annular interface, perimeter 1	Perimeter interface with enclosures 5	Interface > 1 structure/ha 8	Interface < 1 structure/ha 10
20 Position of Accession Area Relative to Values	No Structures Valued within 2 km 0	Above >500 200-500 <200 m 1 10 20	Sidehill >500 200-500 <200 m 1 12 25	Back of ridge >500 200-500 <200 m 1 12 25	Below >500 200-500 <200 m 1 15 30

Sub Total **100 / 200****

* Proceed only if fuel sub total > 25
** Proceed to Structural component only if Wildfire Threat Behaviour Score is > 95 for enhanced polygons

Wildfire Behaviour Threat Class (check applicable class)

Low	0-40	<input type="checkbox"/>
Moderate	41-65	<input type="checkbox"/>
High	66-140	<input checked="" type="checkbox"/>
Extreme	>140	<input type="checkbox"/>

Wildland Urban Interface Threat Class (check applicable class)

Low	0-13	<input checked="" type="checkbox"/>
Moderate	14-26	<input type="checkbox"/>
High	27-39	<input type="checkbox"/>
Extreme	>39	<input type="checkbox"/>

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 27



Photo 27-1 @ 250 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 28

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot #: **28** Community: **City of Kamloops**

Address: **B. Morrow** Geographic Location/Street Name: **Loc. le Jenke Rd.**

Date: **Apr 12/16** GPS/UTM: **N50 37 41.2 W 120 26 21.4**

Photos: **01, 04** Land Ownership: Crown Private Other (specify):

28

Factor	A	B	C	D	E
1 Fuel Type and Maximum Height (m)	1-2	3-4	5-10 Dry forest 10 6 2	10-20 Dry forest 12 3 4	>20 Dry forest 15 10 5
2 Surface Fuels Continuity (No cover)	<25	25-45	45-65	65-80	>80
3 Vegetation Fuel Composition	Moist, Herb, Impaired Crops, Low Flammability Weeds	Aerob, Deciduous Shrubs	Elbow, Conifer Shrubs	Fireproof	Speckled, Berchgrass, Red-edge Birch, Scotch Broom
4 Fine Woody Debris Continuity (<75cm) (No cover)	0	Scattered, <10 coverage	15-25 coverage	>25 coverage, <10 cm deep	>25 coverage, >10 cm deep
5 Large Woody Debris Continuity (>75cm) (No cover)	0	Scattered, <10 coverage	10-25 coverage	>25 coverage, not elevated	>25 coverage, partially elevated
6 Live and Dead Coniferous Crown Closure (%)	0-20	20-40	40-60	60-80	>80
7 Live Deciduous Crown Closure (%)	0-20 or <50% coniferous crown closure	20-40	40-60	60-80	>80
8 Live and Dead Conifer Crown Base Height (m)	5 or >30% conifer crown base height	3-5	5-10	10-15	>15
9 Live and Dead Suppressed and Mortarless Conifer (Percent)	0	50-1000	1000-2000	2000-4000	>4000
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Fully Down < 5 or <20% in 10	Standing Dead and Fully Down 5-25	Standing Dead and Fully Down 25-50	Standing Dead and Fully Down 50-75	Standing Dead and Fully Down >75
11 Condition Forest/Slash Cover within 20m (%)	0-20	20-40	40-60	60-80	>80
Sub Total 28 715**					
12 Meteorologic Zone	A1, Bmpact 1	EW, CH, AH, Dry Forest Wet	KN, SB, FST, Dry Forest Wet	ME, M, SB, CH, H, F, B, D, PWS, WB - Dry Forest Wet	7
13 Historical Wildfire Occurrence (by Wildfire Zone)	66, 81, 82, 86, 95, 99, 101, 105, 106, 107	65, 68, 83, 84, 98, 99, 101, 105, 106	67, 69, 74, 76, 91, 101, 106	81, 83, 85, 87, 92, 93, 95, 98, 99, 104, 107, 108	87, 88, 89, 90
Sub Total 30 718					
14 Aspect (>15% slope)	North	East	<15% slope, all aspects	West	South
15 Slope (%)	<5	5-29 and more steep for North slopes	30-44	45-74	>75
16 Form	Flat	1	H	7	15
17 Landcover/Topography Obstacles to Wildfire Spread	< 5 ha isolated forest	North aspect, road aspects dominant, midline spaced restricted trees, 500m West	Mountainous terrain, broken topography, regular aspect and slope changes, multiple rockfalls to midline areas, large water bodies	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor rockfalls to midline areas	Continuous, consistent topography, no restrictions to wildfire spread
Sub Total 24 753					
FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					
18 Position of Structure/Community on Slope	No Structures Values within 2 km	Bottom of slope, valley bottom	Mid slope, bench and elevated areas, 20% slope	Mid-slope continuous, >15% slope	Upper 1/3 of slope
19 Type of Development	No Structures Values within 2 km	Permitted buildings, 200m West	Permitted buildings, with setbacks	Structure > 1 structure/ha	Structure < 1 structure/ha
20 Position of Development Area Relative to Values	No Structures Values within 2 km	Above >200 200-500 <200 m	Setback >500 200-500 <200 m	Flat/rolling >500 200-500 <200 m	Roller >500 200-500 <200 m
Sub Total 13 759					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
TOTAL WILDFIRE THREAT SCORE 95 795					

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 41-95

High 96-169

Extreme >169

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13

Moderate 14-20

High 21-39

Extreme >39

(Last Updated: January 24, 2017)

City of Kamloops – Wildfire Threat Assessment Picture – Plot 28



Photo 28-1 @ 70 degrees

City of Kamloops – Wildfire Threat Assessment Picture – Plot 29



Photo 29-1 @ 90 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 30

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot # 30 Community City of Kamloops

Assessor B. Morrow Geographic Location/Street Name Trink's Lake

Date Apr 12/16 GPS/UTM N50 37°32' W120° 21' 56"

Photos N E S W Land Ownership Crown Private R.R. Other (specify):

30

Fuel	A	B	C	D	E
1 Dead Duff and Moisture Regime (cm)	1-2 3	2-5 Dry Fuel Wet 1	5-10 Dry Fuel Wet 10 6 2	10-20 Dry Fuel Wet 12 8 4	>20 Dry Fuel Wet 15 10 5
2 Surface Fuel (Continuity Per cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Mass, Herbs, Injuncted Crops, Low Flammability Weeds 1	Herbs, Deciduous Shrubs 2	Lithes, Conifer Shrubs 3	Herbiferous 4	Sagebrush, Birch, Willow, Alder, Spruce, Fir, Larch 5
4 Fine Woody Debris Continuity (<750µm) (% cover)	<1 coverage 1	Scattered <25 coverage 2	10-25 coverage 3	>25 coverage <10 on trees 4	>25 coverage >10 on trees 5
5 Large Woody Debris Continuity (>750µm) (% cover)	<1 coverage 1	Scattered <25 coverage 2	10-25 coverage 3	>25 coverage not elevated 4	>25 coverage partially elevated 5
6 Live and Dead Conifer Crown Closure (%)	<20 2	21-40 3	41-60 4	61-80 5	>80 6
7 Live Deciduous Crown Closure (%)	>80 or <20% conifer crown closure 0	61-80 2	41-60 3	20-40 4	<20 5
8 Live and Dead Conifer Crown Base Height (m)	5+ or <20% conifer crown closure 0	3-5 5	7-13 7	15-20 8	>20 9
9 Live and Dead Suppressed and Opportunity Canopies (Stems/m²)	0-500 2	501-1000 3	1001-2000 4	2001-4000 5	>4000 6
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Fully Dead < 5 or <10 stems/ha 0	Standing Dead and Fully Dead 5-10 stems/ha 1	Standing Dead and Fully Dead 10-25 stems/ha 2	Standing Dead and Fully Dead 25-50 stems/ha 3	Standing Dead and Fully Dead >50 stems/ha 4
11 Coniferous Forest/Stand Cover Within 20m (m)	4-20 b	21-40 c	41-60 d	61-80 e	>80 f
Sub Total					2156*

Wildfire	A	B	C	D	E
12 Dispersal Zone	A1, Injuncted 1	CW, GB, JN, Dry Fuel Wet 3 3 1	KJ, SB, FST, Dry Fuel Wet 10 7 3	DE, MS, SPS, LWH, L, G, GZ, PWS, SWS, W, Dry Fuel Wet 15 10 5	PP, BG 15
13 Historical Wildfire Occurrence (by Wild Fire Zone)	G5, R1, R2, G6, V5, W9, Y9, Y3, Y4, W8, V7 1	G3, G8, F1, R4, W6, G1, G9, W8 2	G7, G5, G4, G4, W1, G1, W6 3	K1, K5, R3, G2, G1, K5, W6, W4, R7, W1 4	W7, W1, R2, W1 5
Sub Total					30/216

Topography	A	B	C	D	E
14 Aspects (>25% slope)	North 8	East 5	<10% slope all aspects 10	West 12	South 15
15 Slope (%)	<10 1	10-29 and max slope for North slopes 5	30-44 10	45-54 12	>55 15
16 Rocks	R1 1	R2 2	Winged terrain, minor low relief areas 3	Consistent slope, steep drops at shallow cycles 4	Consistent slope deep gulches 5
17 Landforms/Topographic Limitations to Wildfire Spread	<5 ha isolated forest 1	North-south east-west 400m, with the slight restriction from South and West 2	Mountainous terrain, broken topography, regular ridges and slope changes, multiple restrictions to wildfire spread large water bodies 3	Rolling terrain, minor water bodies, minimal aspect and slope changes, some restrictions to wildfire spread 4	Continuous, forested topography, no restriction to wildfire spread 5
Sub Total					24/255

FUEL, WEATHER AND TOPOGRAPHY	A	B	C	D	E
18 Structure	No Structures Values within 2 km 0	Bottom of slope, valley bottom 5	Mid-slope bandstand, elevated valley, 25% slope 10	Mid-slope residential, >15% slope 12	Open R3 or Slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter interface, no structures 1	Perimeter interface with residences 5	Interiors > 3 structures/ha 10	Interiors < 1 structure/ha 15
20 Proximity of Development Area Relative to Risks	No Structures Values within 2 km 0	Alluvial >500 200-500 <200 m 5 10 20	Subsidiary >500 200-500 <200 m 1 12 25	Flat/rolling >500 200-500 <200 m 1 10 25	Relief >500 200-500 <200 m 1 15 30
Sub Total					13/135

* Based only if Fuel sub total is > 20

** Based on Structural component only if Wildfire Behavior Score is > 25 for untreated plot/area.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE 13 / 135

TOTAL WILDFIRE THREAT SCORE 178 / 255

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 41-95

High 96-140

Extreme > 140

Wildland Urban Interface Threat Class (check applicable class)

Low 0-15

Moderate 16-25

High 26-39

Extreme > 39

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 30



Photo 30-1 @ 90 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 31

31

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET					
Plot: 31		Community: City of Kamloops			
Appraiser: B. Morrow		Geographic Location (Sheet Name): Highway 5			
Date: Dec 12, 16		GPS UTM: N50°39'12.9" W120°28'38.5"			
Photo: 0 K - 4		Land Ownership: <input checked="" type="checkbox"/> Crown <input type="checkbox"/> Private <input type="checkbox"/> IR <input type="checkbox"/> Other (Specify)			
FUELS					
Point	A	B	C	D	E
1 Fuel Depth and Moisture Regime (cm)	1-12 2	13-24 Dry Zone Wet 3	25-30 Dry Zone Wet 4	31-36 Dry Zone Wet 5	>36 Dry Zone Wet 6
2 Surface Fuels Continuity (M score)	<20 4	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Compaction	Moss, Berries, Impaired Grass, Low Flammability Needs 1	Herbs, Deciduous Shrubs 2	Lichens, Coarse Shrubs 3	Pinus, Juniper 4	Sagebrush, Kunthgrass, Umbrella Pines, Scotch Pines 5
4 Fine Woody Debris Continuity (<4cm) (M score)	<1 coverage 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, <10 cm deep 4	>25 coverage, >10 cm deep 5
5 Large Woody Debris Continuity (>4cm) (M score)	<1 coverage 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, not elevated 4	>25 coverage, elevated 5
6 Live and Dead Conifer Cover (Class) (%)	0-20 1	21-40 2	41-60 3	61-80 4	>80 5
7 Live Deciduous Crown Cover (%)	>20 or <40% 1	41-60 2	61-80 3	81-100 4	>100 5
8 Live and Dead Conifer Cover (Max Height) (m)	<3 or <40% cover 1	3-5 2	5-10 3	10-15 4	>15 5
9 Live and Dead Spruce and Deciduous Cover (Intens.) (m)	0-100 1	101-1000 2	1001-2000 3	2001-4000 4	>4000 5
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Partly Down < 5% of <50mm dbh 1	Standing Dead and Partly Down 5-25 2	Standing Dead and Partly Down >25-50 3	Standing Dead and Partly Down >50-75 4	Standing Dead and Partly Down >75 5
11 Crownless Forest/Slash Cover within 20m (M)	0-10 1	11-20 2	21-30 3	31-40 4	>40 5
Sub Total					76 / 155*
WEATHER					
Weather	A	B	C	D	E
12 Microclimate Zone	AT, Inlet 1	CH, CH, AH, Dry Zone Wet 2	KH, SH, ESF, Dry Zone Wet 3	HE, ME, SEF, W1-W3, Dry Zone Wet 4	HE, ME, SEF, W4-W5, Dry Zone Wet 5
13 Humid Month Occurrence by Wind (For Zone)	G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z 1	G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z 2	G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z 3	G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z 4	G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z 5
Sub Total					30 / 50
TOPOGRAPHY					
Topography	A	B	C	D	E
14 Aspects (>10% slope)	North 1	East 2	<10% slope, all aspects 3	10-20% slope 4	South 5
15 Slope (%)	<10 1	10-19 or all aspects for North slopes 2	20-40 3	41-54 4	>55 5
16 Terrain	Flat 1	Rolling 2	Sloped terrain, minor draw 3	Conspicuous slope, deep draw or shallow gulch 4	Conspicuous slope, deep gulch 5
17 Landscape Topographic Limitations or Enhance Spread	< 5 ha isolated forest land 1	North and/or east aspects dominant, wind fire spread restricted from South and/or West 2	Heterogeneous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread 3	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread 4	Continuous, consistent topography, no restrictions to wildfire spread 5
Sub Total					27 / 50
FUEL, WEATHER AND TOPOGRAPHY					
WILDLAND URBAN INTERFACE THREAT SCORE					
Structural	A	B	C	D	E
18 Position of Structures/Continuity on Slope	No structures Value within 2 km 1	Bottom of slope, valley bottom 2	Mid-slope, top of hill, elevated sites, 10% slope 3	Mid-slope continuation, >15% slope 4	Upper 1/3 of slope 5
19 Type of Development	No structures Value within 2 km 1	Residential interface, regular structures 2	Residential interface with outposts 3	Industrial > 1 structure/ha 4	Industrial < 1 structure/ha 5
20 Position of Assessment Area Relative to Values	No structures Value within 2 km 1	Above >200 200-500 <100 m 2	Below >500 200-500 <100 m 3	Below >500 200-500 <100 m 4	Below >500 200-500 <100 m 5
Sub Total					13 / 50
TOTAL WILDFIRE THREAT SCORE					96 / 155
* Proceed only if Fuel sub total is > 20.					
** Proceed to Structural component only if Wildfire Threat Behaviour Score is > 45 for unmitigated category.					

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 41-95

High 96-149

Extreme > 149

Wildland Urban Interface Threat Class (check applicable class)

Low 0-33

Moderate 34-26

High 27-30

Extreme > 30

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 31



Photo 31-1 @ 90 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 32

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot #: 32 Community: City of Kamloops

Assessor: B Maxwell Geographic Location/Street Name: Alexis

Date: Apr 12/16 GPS/UTM: N50 39' 7.7" W 120° 24' 23.7"

Photos: 0 K 4 Land Ownership: X Crown 0 Private 0 IR 0 Other (specify):

32

Factor	A	B	C	D	E
1 Fuel Depth and Moisture (before fire)	1-2	3-6	7-10	11-20	>20
2 Surface Fuel Continuity (% cover)	<10	20-40	41-60	61-80	>80
3 Vegetation Fuel Composition	Med. Herb. Irrigated Grass, Low Flammability Weeds	Herb. Deciduous Shrubs	Lichen Covered Shrubs	Firegrass	Aggressive, Backlogs, Multiple Strata, Scatterwood
4 Fine Woody Debris Continuity (<=100% cover)	<10 coverage	Scattered, <10 coverage	10-25 coverage	>25 coverage, < 30 cm deep	>25 coverage, > 30 cm deep
5 Large Woody Debris Continuity (>100% cover)	<10 coverage	Scattered, <10 coverage	10-25 coverage	>25 coverage, not stacked	>25 coverage, partially stacked
6 Live and Dead Continuous Crown Closure (%)	<20	20-40	41-60	61-80	>80
7 Live Deciduous Crown Closure (%)	>60 m, <40% continuous crown closure	61-80	41-60	20-40	>40
8 Live and Dead Conifer Crown Base Height (m)	5+ or <20% conifer crown density	5-5	7	1-5	< 1
9 Live and Dead Suppressed and Unsuppressed Canopies (Stems/ha)	0-500	501-1000	1001-3000	3001-6000	>6000
10 Forest Health (% of unrotted and un-damaged stems)	Standing Dead and Partly Down < 5 or > 50% Snags	Standing Dead and Partly Down 5-15	Standing Dead and Partly Down 16-25	Standing Dead and Partly Down 26-35	Standing Dead and Partly Down >35
11 Continuous Forest/Slash Cover within 20m (%)	0-20	21-40	41-60	61-80	>80
Sub Total					41 /155*

Wildfire	A	B	C	D	E
12 Proximate Zone	Af, Irrigated	WH, CH, MH, Dry Decid. Bel	KH, ES, ESF, Dry Decid. Bel	DF, MS, SPS, LWH, M, S, MS, MSF, Irrigated Decid. Bel	FF, BU
13 Historical WMA#s (domestic by Wild Fire Zone)	65, 81, 82, 86, 93, 95, 102, 103, 105, 106, 107	66, 68, 83, 88, 96, 97, 98, 104	67, 15, 64, 64, 81, 11, 80	83, 85, 82, 82, 83, 82, 86, 84, 87, 82	84, 87, 81
Sub Total					25 /79

Topography	A	B	C	D	E
14 Aspect (> 15% slope)	North	East	<10% slope, all aspects	West	South
15 Slope (%)	<10	10-25 and less slope for North slopes	26-40	41-55	>55
16 Rocks	Flat	Bedrock	Sloped terrain, some overturned trees	Consistent slope, steep draws or shallow gullies	Consistent slope, steep gullies
17 Landcover/Topographic Limitation to Wildfire Spread	< 5 ha isolated forest land	North aspect and aspect dominated, wildfire spread restricted from South and West	Most all consistent, broken topographic, regular aspect and slope changes, multiple forest types to wildfire spread	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor roughness to wildfire spread	Consistent consistent topography, no roughness to wildfire spread
Sub Total					27 /55

Structural	A	B	C	D	E
18 Position of Structures/Community on Slope	No Structures Values within 2 km	Bottom slope, valley bottom	Mid-slope level land, elevated valley, <10% slope	Mid-slope conditions, >10% slope	Upper 1/3 of Slope
19 Type of Development	No Structures Values within 2 km	Perimeter interface of structures	Perimeter interface, with structures	Interior > 1 structure/ha	Interior < 1 structure/ha
20 Position of Development from Public Road	No Structures Values within 2 km	Home >500-200-500-100m	Home >500-200-500-100m	Home >500-200-500-100m	Home >500-200-500-100m
Sub Total					23 /55

Proceed only if fuel sub total >= 25

Proceed to Structural component only if Wildfire Threat Behaviour Score >= 35 for unrotted logs.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE 93 /195

TOTAL WILDFIRE THREAT SCORE /195

Wildfire Behaviour Threat Class (select applicable class)

Low 0-40

Moderate 41-95

High 96-149

Extreme >149

Wildland Urban Interface Threat Class (select applicable class)

Low 0-13

Moderate 14-26

High 27-39

Extreme >39

LWF Updated: January 24, 2017

City of Kamloops – Wildfire Threat Assessment Picture – Plot 32



Photo 32-1 @ 315 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 33

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 33 Community: City of Kamloops
 Assessor: B. Moran Geographic Location/Street Name: Commissariat
 Date: Apr 15/16 GPS/UTM: N 50° 52' 52.8" W 108° 11' 34" 397m
 Photos: 1, 2, 3, 4 Land Ownership: Crown Private RR Other (specify)

Final	A	B	C	D	E
1 Soil Depth and Moisture Regime (cm)	1-2 5	2-5 Dry Local Wet 5 3	5-10 Dry Local Wet 10 6 2	10-20 Dry Local Wet 12 8 4	>20 Dry Local Wet 15 10 5
2 Secondary Fuel Continuity (% cover)	<20 4	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Alfalfa, Hedges, Irrigated Grass, Low Flammability Woods 1	Herb, Deciduous Shrubs 2	Alfalfa, Conifer Shrubs 3	Plumtree 4	Sagebrush, Barberry, Knutson Birch, Sucker Willow 5
4 Fine Woody Debris Continuity (<7mm) (% cover)	<1 coverage 1	Scattered <10 coverage 2	10-25 coverage 3	>25 coverage, not elevated 4	>25 coverage, partially elevated 5
5 Large Woody Debris Continuity (>7mm) (% cover)	<1 coverage 1	Scattered <10 coverage 2	10-25 coverage 3	>25 coverage, not elevated 4	>25 coverage, partially elevated 5
6 Live and Dead Conifers Crown Closure (%)	<20 1	21-40 2	41-60 3	61-80 4	>80 5
7 Live Deciduous Crown Closure (%)	>80 or <40% conifer crown closure 0	41-60 2	41-60 3	61-80 4	>80 5
8 Live and Dead Conifer Crown Closure (%)	50% or <20% conifer crown closure 0	21-40 2	41-60 3	61-80 4	>80 5
9 Live and Dead Spruce and Deciduous Crown Closure (%)	0-50 1	51-100 2	101-150 3	151-200 4	>200 5
10 Forest Health (% of dominant and co-dominant trees)	Standing Dead and Partly Dead <5% <20 stems 1	Standing Dead and Partly Dead 5-25% 2-25 2	Standing Dead and Partly Dead >25-50% 3-50 3	Standing Dead and Partly Dead >50-75% 4-75 4	Standing Dead and Partly Dead >75-100% 5-100 5
11 Grasses/Forbs/Blank Cover (within 2m)	0-20 0	21-40 1	41-60 2	61-80 3	>80 4
Sub Total					57 / 750*
12 Hydrologic Zone	A1, B1, B2 1	CW1, C2, C3, C4, C5 Dry Local Wet 5 3 6	D1, D2, D3, D4, D5 Dry Local Wet 10 7 8	E1, E2, E3, E4, E5, E6, E7, E8 Dry Local Wet 15 10 13	F1, F2, F3 15
13 Structural Features (Distance to Wildfire Zone)	G1, H1, H2, G4, Y1, Y2, Y3, Y4, Y5, Y6, Y7 1	I1, I2, I3, I4, I5, I6, I7, I8 2	J1, J2, J3, J4, J5, J6, J7, J8 3	K1, K2, K3, K4, K5, K6, K7, K8 4	L1, L2, L3, L4 5
Sub Total					25 / 250
14 Aspect (>10% slope)	North 0	East 1	<10% slope, all aspects 10 2	West 42	South 15
15 Slope (%)	0-10 1	10-25 and max slope for North slopes 5	26-40 10	41-54 12	>55 15
16 Roads	0 1	Full 3	Shoulder, narrow, low relief drains 5	Consistent slope, deep ditches or shallow gutters 7	Consistent slope, deep gutters 10
17 Landcover/Topographic Limitation to Wildfire Spread	<5 ha cultivated forest 1	North and/or east aspects, dominant, wildfire spread restricted from South and/or West 2	Shoulder, narrow, low relief drains, topography, regular aspect and slope changes, multiple roadways to reduce wildfire spread 3	Rolling terrain, fence, water bodies, minimal aspect and slope changes, some restrictions to wildfire spread 4	Consistent, consistent topography, no restrictions to wildfire spread 5
Sub Total					57 / 750*
FUEL WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					
18 Position of Structures/Community on Slope	No Structures Values within 2 km 0	Bottom slopes, upper slopes 1	Mid-slope benefits, elevated valleys, <10% slope 10	Mid-slope benefits, >10% slope 17	Upper 1/3 of slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter interface, no enclosures 3	Perimeter interface, with enclosures 5	Interior > 1 structure/ha 8	Interior > 3 structures/ha 10
20 Position of Development Area Relative to Hazard	No Structures Values within 2 km 0	0-500 >500-200-500 1 10 20	0-500 >500-200-500 1 17 25	0-500 >500-200-500 1 12 25	0-500 >500-200-500 1 15 30
Sub Total					47 / 750
TOTAL WILDFIRE THREAT SCORE					
Sub Total					155 / 750*
Sub Total					124 / 750*

* Proceed only if fuel sub total is >25.
 ** Proceed to Structural component only if Wildfire Threat Behaviour Score is >5 for structured polygons.

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40
 Moderate 41-55
 High 56-140
 Extreme >141

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13
 Moderate 14-24
 High 25-34
 Extreme >35

Last Updated: January 24, 2013

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City of Kamloops – Wildfire Threat Assessment Picture – Plot 33



Photo 33-1 @ 90 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 34

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 34 Community: City of Kamloops

Assessor: B. Morrow Geographic Location/Street Name: W. 42nd St

Date: Apr 15/16 GPS/UTM: N50° 52' 42" W 120° 16' 47.2"

Photos: 0 Land Ownership: Crown Private I.L. Other (specify):

Point	A	B	C	D	E
1 Soil Depth and Moisture Regime (m)	1-2 3	2-5 Dry Zone/Hic 5 (3) 1	6-8 Dry Zone/Hic 10 0 2	10-20 Dry Zone/Hic 12 0 4	>20 Dry Zone/Hic 15 10 5
2 Surface Fuel Continuity (Fu cover)	<20 0	20-40 2	41-60 3	61-80 4	81-100 5
3 Vegetation Fuel Composition	Non-Perish, Limited Crown, Low Flammability Woods 1	Herb, Deciduous Shrubs 2	Lichen, Coastal Shrubs 3	Shrub 4	Aggressive, Barkless, Intertwined, Lichen Growth 5
4 Fine Woody Debris (Continuity < 7cm) (Fu cover)	<10 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, <10 cm deep 4	>25 coverage, >10 cm deep 5
5 Large Woody Debris (Continuity > 7cm) (Fu cover)	<10 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, not stacked 4	>25 coverage, partially stacked 5
6 Live and Dead Continuous Crown Closure (Fu)	<20 1	20-40 2	41-60 3	61-80 4	>80 5
7 Live Deadness Crown Closure (Fu)	>80 or >20% canopy cover 5	61-80 4	41-60 3	20-60 2	<20 1
8 Live and Dead Crown Closure (No Height on)	5 or >20% canopy cover 5	3-5 3	2-3 2	1 1	<1 1
9 Live and Dead Spruce and Red Spruce Canopy (Fu)	<20 1	20-40 2	41-60 3	61-80 4	>80 5
10 Fuel Loads (Fu of live/wood and or deadwood stems)	Standing Dead and Partly Down < 3 or <100 lbs/ha 1	Standing Dead and Partly Down 3-25 2	Standing Dead and Partly Down > 25-50 3	Standing Dead and Partly Down > 50-75 4	Standing Dead and Partly Down > 75 5
11 Continuous Forest/Shrub Cover within 20m (Fu)	0-20 0	21-40 1	41-60 2	61-80 3	>80 4
Sub Total					35 / 100
Woodfuel					
12 Regeneration Zone	Not Regenerated 1	Open, Open, Dry Zone/Hic 5 3 1	RM, SM, ESH, Dry Zone/Hic 10 7 3	RM, SM, ESH, RM, SM, ESH, Dry Zone/Hic 10 10 3	RM, SM, ESH 15
13 Historical Wildfire Occurrence (Fu)	05, 01, 01, 06, 09, 09, 09, 09, 09, 09, 09, 09 1	03, 08, 01, 04, 05, 05, 05, 05 5	07, 15, 04, 04, 01, 01, 04 5	01, 05, 03, 02, 03, 03, 03, 03, 03, 03 10	07, 08, 01 15
Sub Total					25 / 100
Topography					
14 Aspect (> 75% slope)	North 0	East 1	<15% slope, aspect 10	West 10	South 15
15 Slope (%)	<10 1	10-20 and not score for fire exposure 2	20-40 3	40-54 4	>55 5
16 Terrain	Flat 1	Rolling 2	Slope terrain, lower fire risk 3	Consistent slope, deep snow or shallow gullies 4	Complex slope, deep gullies 5
17 Landscape/Topographic Continuity or Discontinuity	< 5% isolated forest land 1	North and/or east aspect towards, wildfire spread restricted from South and/or West 2	Non-continuous terrain, broken topography, regular aspect and slope changes, multiple microsites to windward large water bodies 3	Rolling terrain, other water bodies, irregular aspect and slope changes, some microsites to windward 4	Continuous, consistent topography, non-continuous to windward 5
Sub Total					41 / 100
FUEL, WEATHER AND TOPOGRAPHY WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
18 Fuel of Structure/Continuity on Slope	No Structure Values within 2 km 0	Bottom of slope, wildfire threat 1	Mid-slope benchmark, exposed slopes, <14% slope 2	Mid-slope continuous, >15% slope 3	Upper 1/3 of slope 4
19 Age of Development	No Structure Values within 2 km 0	Perimeter interface, no structures 1	Perimeter interface, with structures 2	Interior > 5 structures 3	Interior < 5 structures 4
20 Position of Assessment Area Relative to Values	No Structure Values within 2 km 0	None >500 200-500 <100m 1 10 20	Scattered >500 200-500 <200m 1 10 20	Highly dense >500 200-500 <200m 1 10 20	Very dense >500 200-500 <200m 1 10 20
Sub Total					75 / 100
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
TOTAL WILDFIRE THREAT SCORE					104 / 235

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 41-95

High 96-149

Extreme >150

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13

Moderate 14-26

High 27-39

Extreme >40

Last Updated: January 24, 2013

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City of Kamloops – Wildfire Threat Assessment Picture – Plot 34



Photo 34-1 @ 270 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 35

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 35 Community: City of Kamloops

Address: 3 Meadow Geographic Location/Street Name: 6 Corner Rd

Date: April 18/16 GPS UTM: N50 51 39.5" W 126° 13' 10.2"

Photos: 0 Land Ownership: R (Owner Private I.L. Other (specify):

Factor	A	B	C	D	E
1 Leaf Litter and Moisture Regime (Lm)	1-2	3-5 Dry Leaf Litter 1	6-8 Dry Leaf Litter 2	9-10 Dry Leaf Litter 3	>10 Dry Leaf Litter 4
2 Surface Fuels Continuity (Fm)	<10 0	10-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Moss, herbs, ligulate grass, low flammability shrubs 1	Herbs, Deciduous shrubs 2	Lichen, Conifer shrubs 3	Prostrate, Conifer 4	Significant, flammable, fire-prone shrubs, South-facing 5
4 Fine Woody Debris Continuity (<7cm) (Fm cover)	<1 coverage 1	Scattered <10 coverage 2	10-25 coverage 3	>25 coverage <10 up steep 4	>25 coverage >10 up steep 5
5 Large Woody Debris Continuity (>7cm) (Fm cover)	<1 coverage 1	Scattered <10 coverage 2	10-25 coverage 3	>25 coverage not elevated 4	>25 coverage partially elevated 5
6 Live and Dead Conifers Crown Closure (%)	<25 1	26-50 2	51-60 3	61-80 4	>80 5
7 Live Deciduous Crown Closure (%)	>80 or <20% coniferous crown closure 0	61-80 2	41-60 3	26-60 4	<25 5
8 Live and Dead Canopy Crown Area Weight (%)	5+ or <20% conifer crown closure 0	3-5 1	7-25 2	3-10 3	<1 15
9 Live and Dead Suppression and Obstruction Fuel Load (Structural)	0-500 0	501-1000 1	1001-2000 2	2001-4000 3	>4000 4
10 Fuel Health (% of deadwood and re-vegetation status)	Standing Dead and Partly Down <5 or <10% 0	Standing Dead and Partly Down 5-15 1	Standing Dead and Partly Down >15-25 2	Standing Dead and Partly Down >25-75 3	Standing Dead and Partly Down >75 4
11 Continuous Forest/Shrub Cover within 200 m (%)	0-20 0	21-40 1	41-60 2	61-80 3	>80 4
Sub Total <u>53</u> / 755*					
12 Windiness	A, Unobstructed 1	DWR, CD, AH, Dry Leaf Litter 2	KM, SB, ESF, Dry Leaf Litter 3	MS, MS, GMP, EMI-d1 & d2, WFS, WFS, WFS, WFS 4	PE, B4 5
13 Potential Wildfire Occurrence by Wind Flow (Wind)	G3, B1, G2, G4, G5, B5, G6, G7, B7, B8, G7 1	G3, G4, B1, B4, G6, G7, G8, B8 2	G7, G5, G4, G4, G7, G5, B8 3	K3, B3, B3, G2, G3, G5, B5, B6, B7, B7 4	H2, G4, G4, B1 5
Sub Total <u>25</u> / 100					
14 Aspect (>75% slope)	North 0	East 1	<15% slope, all aspects 2	West 3	South 4
15 Slope (%)	0-10 1	10-25 and less slope for North slopes 2	30-44 3	45-54 4	>55 5
16 Slope	Flat 1	Rolling 2	Sloped terrain, steep slope, shallow gullies 3	Consistent slope, deep gullies or shallow gullies 4	Consistent slope, steep gullies 5
17 Landcover/Topographic (Influences to Wildfire Spread)	<5% isolated forest land 1	North-south aspect, moderate, wildfire spread restricted from South and West 2	North-south terrain, broken topographic, regular aspect and slope changes, multiple restrictions to wildfire spread 3	Rolling terrain, minor water bodies, minimal aspect and slope changes, many restrictions to wildfire spread 4	Consistent topographic, no restrictions to wildfire spread 5
Sub Total <u>20</u> / 755**					
FUEL, WEATHER AND TOPOGRAPHY WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
18 Position of Structures/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, values within 2 km 1	Mid-slope, broadland, elevated valley, <10% slope 2	Mid-slope, coniferous, >15% slope 3	Upper 1/3 of Slope 4
19 Type of Development	No Structures Values within 2 km 0	Perimeter interface, no buildings 1	Perimeter interface with topography 2	Interior > 2 structures/ha 3	Interior < 1 structure/ha 4
20 Position of Assessment Area Relative to Values	All Structures Values within 2 km 0	All Structures >200-500 <100 m 1	Scattered >200-500 <100 m 2	Rare/Rolling >500-1000 <100 m 3	Dense >500-1000 <100 m 4
TOTAL WILDFIRE THREAT SCORE <u>1</u> / 755					

* Proceed only if Fuel sub total >= 25.
** Proceed if Structural component only if Wildfire Threat Behaviour Score is >= 5 for unretreated category.

Wildland Urban Interface Threat Class (check applicable class)

Low 0-40

Moderate 41-55

High 56-70

Extreme > 70

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13

Moderate 14-25

High 26-39

Extreme > 39

Last Updated: January 24, 2013

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City of Kamloops – Wildfire Threat Assessment Picture – Plot 35



Photo 35-1 @ 350 degrees

City of Kamloops – Wildfire Threat Assessment Picture – Plot 36



Photo 36-1 @ 225 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 37

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 37 Community: City of Kamloops

Assessor: B. Morrow Geograph/Mit Location/Street Name: O'Connor Loop

Date: Apr 15/16 GPS UTM: N50° 51' 25.0" W 120° 17' 52"

Photos: 0 Land Ownership: Crown Private I.R. Other (specify):

Point	A	B	C	D	E
1. Duff Depth and Ashfall Height (cm)	1-2	3-6 Dry Fuel Wet 5 1	7-10 Dry Fuel Wet 10 2	11-20 Dry Fuel Wet 12 4	>20 Dry Fuel Wet 15 5
2. Surface Fuel Continuity (0-100%)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3. Vegetative Fuel Competition	None, herbs, bristled tops, low flammability weeds 1	Herbs, Deciduous Shrubs 2	1 shrub, Conifer Shrubs 3	2 shrubs, 1 shrub 4	Scrub-shrub, Redwood, Huckleberry, Scotch Broom 5
4. Fine Woody Debris Continuity (<5mm) (% cover)	<1 coverage 1	Scattered <10 coverage 2	10-25 coverage 3	>25 coverage, < 80 on steep 4	>25 coverage, > 10 on steep 5
5. Large Woody Debris Continuity (>7cm) (% cover)	<1 coverage 1	Scattered <10 coverage 2	10-25 coverage 3	>25 coverage, not clustered 4	>25 coverage, partially clustered 5
6. Live and Dead Conifer Crown Closure (%)	<20 0	20-40 1	41-60 2	61-80 3	>80 4
7. Live Deciduous Crown Closure (%)	>20 or <40% continuous crown closure 0	61-80 1	61-80 2	70-80 3	>80 4
8. Live and Dead Conifer Crown Closure (%)	5+ or <20% crown closure 0	3-5 1	6-10 2	11-20 3	>20 4
9. Live and Dead Deciduous and Subshrub Crown Closure (%)	4-500 0	501-1000 1	1001-2000 2	2001-4000 3	>4000 4
10. Fuel Health (% of dominant and co-dominant stems)	Standing Dead and Partly Down < 5 or partially down 1	Standing Dead and Partly Down 5-25 2	Standing Dead and Partly Down >25-50 3	Standing Dead and Partly Down >50-75 4	Standing Dead and Partly Down >75 5
11. Continuous Forest/Shrub Cover within 20m (%)	0-20 0	21-40 1	41-60 2	61-80 3	>80 4
Sub Total 55 / 155*					
12. Topographic Zone	All irregular 1	EW, ED, NH Dry Fuel Wet 2	WH, WS, ESW Dry Fuel Wet 3	HW, HS, SW, NW Dry Fuel Wet 4	PE, SE 5
13. Historical Wildfire Occurrence (by Wild Fire Zone)	G5, R1, R2, G6, F5, F6, V5, V7, F8, R8, V7 1	G5, G6, R3, R4, V6, G1, G6, V8 2	G7, G5, G6, R4, V1, C1, G6 3	F8, R5, R3, C1, C5, H5, R6, R4, R7, R8 4	H1, R1, R1 5
Sub Total 25 / 70					
14. Aspect (> 15% slope)	North 0	East 1	<10% slope, all aspects 2	West 3	South 4
15. Slope (%)	<10 0	10-20 and non-south facing slopes 1	30-44 2	45-54 3	>55 4
16. Terrain	Flat 0	Rolling 1	Slope terrain, never over 10% down 2	Consistent slope, steep down or shallow roller 3	Consistent slope, steep roller 4
17. Landscape/Topographic Obstacles to Wildfire Spread	< 5% reduced forest level 1	North and/or east aspects, moderate, wildfire spread restricted from south and/or west 2	Mountainous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread, large water bodies 3	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread 4	Continuous, consistent topography, no restrictions to wildfire spread 5
Sub Total 20 / 55					
FUEL WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					
Sub Total 100 / 240**					
18. Position of Structures/Community on Slope	No Structures Values within 2 km 0	Between 2 slopes, valley bottom 1	Mid-slope or in low, elevated valley, <10% slope 2	Mid-slope or in low, >10% slope 3	Upper 1/3 of Slope 4
19. Type of Development	No Structures Values within 2 km 0	Perimeter interface, no encroachers 1	Perimeter interface, with encroachers 2	Interface > 1 km interface 3	Intrusive < 1 km interface 4
20. Position of Development Area Relative to Terrain	No Structures Values within 2 km 0	Above >100 200-500 <200 m 1 2	Side Hill >500 200-500 <200 m 3 4	Flat/rolling >500 200-500 <200 m 5 6	Below >500 200-500 <200 m 7 8
TOTAL WILDFIRE THREAT SCORE 130 / 295					

* Based only on Fuel sub-total 10-25.
** Based on Structural component only if Wildfire Threat Behaviour Score is > 55 for untreated polygons.

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40
 Moderate 41-95
 High 96-149
 Extreme > 150

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13
 Moderate 14-26
 High 27-39
 Extreme > 40

Last Updated: January 24, 2013

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City of Kamloops – Wildfire Threat Assessment Picture – Plot 37



Photo 37-1 @ 360 degrees

City of Kamloops – Wildfire Threat Assessment Picture – Plot 38



Photo 38-1 @ 110 degrees

City of Kamloops – Wildfire Threat Assessment Picture – Plot 39



Photo 39-1 @ 280 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 40

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-assessment Post-assessment

Plot #: 40 Community: City of Kamloops

Assessor: B. Marlow Geographic Location/Sheet Name: Nelson Creek

Date: Apr 15/16 GPS/UTM: N58° 47' 32" W 120° 19' 41" W

Parcel: 01-4 Land Ownership: Forest Private I.L. Other (Specify):

40

Fuel	A	B	C	D	E
1 Fuel Type and Moisture Regime (FR)	1-4 3	2-5 Dry Junct Wet 5	5-6 Dry Junct Wet 10 6 2	16-20 Dry Junct Wet 12 4 4	>20 Dry Junct Wet 15 10 5
2 Surface Fuel Continuity (FR cover)	<10 0	10-40 2	41-80 3	61-80 4	81-100 5
3 Vegetation Fuel Composition	Herb. Herb. Bright Green, Low Flammability Herbs 1	Herb. Dark Green Shrubs 2	Lichen, Cortex Shrubs 3	Program. Angios 4	Saprotic, Resinous, High Fuel Moisture 5
4 Live Woody Debris Continuity (<= 7cm FR cover)	<1 coverage 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, <10cm deep 4	>25 coverage, >10cm deep 5
5 Large Woody Debris Continuity (>7cm FR cover)	<1 coverage 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, not elevated 4	>25 coverage, partially elevated 5
6 Live and Dead Canopies Crown Closure (FR)	<10 2	10-40 3	41-60 4	61-80 5	>80 6
7 Live and Dead Canopies Crown Closure (FR)	>80 or <40% continuous crown closure 1	41-60 2	61-80 3	81-100 4	>100 5
8 Live and Dead Canopies Crown Closure (FR)	5-4 or <20% canopy crown closure 1	5-5 2	5-5 3	5-5 4	5-5 5
9 Live and Dead Canopies and Dispersed Canopies (FR cover)	0-500 2	501-1000 3	1001-2000 4	2001-4000 5	>4000 6
10 Fuel Health (% of live/total and crown/total cover)	Standing Dead and Partly Dead < 1 or <10% FR cover 1	Standing Dead and Partly Dead 1-25 2	Standing Dead and Partly Dead >25-50 3	Standing Dead and Partly Dead >50-75 4	Standing Dead and Partly Dead >75 5
11 Continuous Forest/Shrub Cover (FR cover)	0-10 1	11-40 2	41-60 3	61-80 4	>80 5
Sub Total 61 / 135*					

Weather	A	B	C	D	E
12 Atmospheric Zone	AT, Instab 1	CMH, LM, MH Dry Junct Wet 2 3	KH, HS, ESF Dry Junct Wet 10 7 3	BA, MS, SPS, WH, BFD, PWS, WS, WS Dry Junct Wet 15 10 5	PS, WS 15
13 Potential Wildfire Occurrence by Wind (FR cover)	02, 01, 02, 04, 05, 06, 07, 08, 09, 10, 11, 12 1	03, 04, 05, 06, 07, 08, 09, 10, 11, 12 2	07, 08, 09, 10, 11, 12, 13 3	09, 10, 11, 12, 13, 14, 15, 16, 17, 18 4	10, 11, 12, 13, 14, 15, 16, 17, 18 5
Sub Total 25 / 30					

Topography	A	B	C	D	E
14 Aspects (>15% slope)	North 1	East 2	<10% slope on aspects 3	West 4	South 5
15 Slope (FR)	<10 1	10-20 and max score for North Slopes 2	20-40 3	40-60 4	>60 5
16 Terrain	Flat 1	Rolling 2	Sloped terrain, minor low relief draws 3	Considerable slope, deep draw/canion gullies 4	Considerable slope, deep gullies 5
17 Landscape/Topographic Orientation to Wildfire Spread	< 5 km isolated forest land 1	North and/or east aspect, moderate wildfire spread restricted from South and/or West 2	Mountainous terrain, broken topography, require aspect and slope changes, multiple restrictions to wildfire spread 3	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread 4	Considerable topography, numerous restrictions to wildfire spread 5
Sub Total 15 / 35					

Structural	A	B	C	D	E
18 Position of Structures/Continuity on Slope	No Structures Values within 2 km 0	Bottom of slope, slight building 1	Mid slope, steep bank, elevated valley, <10% slope 2	All slope, continuous, >15% slope 3	Upper 1/3 of Slope 4
19 Type of Development	No Structures Values within 2 km 0	Perimeter barrier, no windows 1	Perimeter barrier, with windows 2	Interior > 1 structure 3	Interior < 1 structure 4
20 Position of Access Road Relative to Values	No Structures Values within 2 km 0	None >500 100-500 200-400 1 2 3	Shoulder >500 100-500 <200 m 1 2 3	Flat/rolling >500 200-500 <200 m 1 2 3	Below >500 200-500 <200 m 1 2 3
Sub Total 10 / 35					

* Proceed only if Fuel Sub Total (1-7) > 20

** Proceed to Structural component only if Wildfire Threat Behaviour Score > 93 for elevated polygons

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE **125 / 200****

Wildfire Behaviour Threat Class (check applicable class)

Low	0-40	<input type="checkbox"/>
Modest	41-95	<input checked="" type="checkbox"/>
High	96-140	<input type="checkbox"/>
Extreme	>140	<input type="checkbox"/>

Wildland Urban Interface Threat Class (check applicable class)

Low	0-33	<input type="checkbox"/>
Modest	34-26	<input type="checkbox"/>
High	27-39	<input checked="" type="checkbox"/>
Extreme	>39	<input type="checkbox"/>

Last Updated January 26, 2015

City of Kamloops – Wildfire Threat Assessment Picture – Plot 40



Photo 40-1 @ 360 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 41

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 41 Community: City of Kamloops
 Assessor: B. Morrison Geographic Location/Street Name: Whiteside Rd
 Date: April 15/16 UTM: N50 47 2227 W 191 475
 Photos: 0 x 4 Land Ownership: Crown Private I.L. Other (specify):

41

Fuel	A	B	C	D	E
1 Buff Grass and Miscare Regime (m)	1	2-3 Dry Dead Wet 5 3 1	4-10 Dry Dead Wet 10 4 2	10-24 Dry Dead Wet 12 8 4	24-34 Dry Dead Wet 15 10 5
2 Softleaf Fuel Community (m cover)	<20 4	20-40 3	41-60 3	61-80 4	81-100 5
3 Populus Fuel Composition	Moist, Wet, Intolerant to fire, Low flammability woods	Moist, Woodless, Shrubs	Light, Coarse Shrubs	Pinpoint, Spruce	Scruboak, Blackberry, Intolerant to fire, High flammability
4 Fine Woody Debris Community (<7cm) (% cover)	1	Scattered, <18 coverage 5	10-25 coverage 7	>25 coverage, <10 cm deep 10	>25 coverage, >10 cm deep 15
5 Large Woody Debris Community (>7cm) (% cover)	1	Scattered, <10 coverage 2	10-25 coverage 5	>25 coverage, not elevated 7	>25 coverage, partially elevated 10
6 Live and Dead Conifers Crown Closure (%)	1	20-40 5	41-60 5	61-80 15	>80 10
7 Live and Dead Conifers Crown Closure (%)	>80 1	61-80 2	41-60 2	20-40 4	<20 5
8 Live and Dead Conifer Crown Base Height (m)	5-6 or <20 1	3-5 5	2-3 7	1-2 10	<1 15
9 Live and Dead Conifer Crown Base Height (m)	1	561-1800 5	1001-2000 10	2001-4000 20	>4000 30
10 Forest Health (% of dominant and co-dominant species)	Standing Dead and Partially Down <25 1	Standing Dead and Partially Down <25 5	Standing Dead and Partially Down >25-50 10	Standing Dead and Partially Down >50-75 20	Standing Dead and Partially Down >75 30
11 Continuous Forest/Slash Cover within 2km (m)	0-20 8	21-40 5	41-60 5	61-80 10	>80 10
Sub Total 25 /35*					
12 Biogeographic Zone	A1 Boreal	C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100	D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D13, D14, D15, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25, D26, D27, D28, D29, D30, D31, D32, D33, D34, D35, D36, D37, D38, D39, D40, D41, D42, D43, D44, D45, D46, D47, D48, D49, D50, D51, D52, D53, D54, D55, D56, D57, D58, D59, D60, D61, D62, D63, D64, D65, D66, D67, D68, D69, D70, D71, D72, D73, D74, D75, D76, D77, D78, D79, D80, D81, D82, D83, D84, D85, D86, D87, D88, D89, D90, D91, D92, D93, D94, D95, D96, D97, D98, D99, D100	E1, E2, E3, E4, E5, E6, E7, E8, E9, E10, E11, E12, E13, E14, E15, E16, E17, E18, E19, E20, E21, E22, E23, E24, E25, E26, E27, E28, E29, E30, E31, E32, E33, E34, E35, E36, E37, E38, E39, E40, E41, E42, E43, E44, E45, E46, E47, E48, E49, E50, E51, E52, E53, E54, E55, E56, E57, E58, E59, E60, E61, E62, E63, E64, E65, E66, E67, E68, E69, E70, E71, E72, E73, E74, E75, E76, E77, E78, E79, E80, E81, E82, E83, E84, E85, E86, E87, E88, E89, E90, E91, E92, E93, E94, E95, E96, E97, E98, E99, E100	
13 Historical Wildfire Occurrence (m)	U1, U2, U3, U4, U5, U6, U7, U8, U9, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U20, U21, U22, U23, U24, U25, U26, U27, U28, U29, U30, U31, U32, U33, U34, U35, U36, U37, U38, U39, U40, U41, U42, U43, U44, U45, U46, U47, U48, U49, U50, U51, U52, U53, U54, U55, U56, U57, U58, U59, U60, U61, U62, U63, U64, U65, U66, U67, U68, U69, U70, U71, U72, U73, U74, U75, U76, U77, U78, U79, U80, U81, U82, U83, U84, U85, U86, U87, U88, U89, U90, U91, U92, U93, U94, U95, U96, U97, U98, U99, U100	V1, V2, V3, V4, V5, V6, V7, V8, V9, V10, V11, V12, V13, V14, V15, V16, V17, V18, V19, V20, V21, V22, V23, V24, V25, V26, V27, V28, V29, V30, V31, V32, V33, V34, V35, V36, V37, V38, V39, V40, V41, V42, V43, V44, V45, V46, V47, V48, V49, V50, V51, V52, V53, V54, V55, V56, V57, V58, V59, V60, V61, V62, V63, V64, V65, V66, V67, V68, V69, V70, V71, V72, V73, V74, V75, V76, V77, V78, V79, V80, V81, V82, V83, V84, V85, V86, V87, V88, V89, V90, V91, V92, V93, V94, V95, V96, V97, V98, V99, V100	W1, W2, W3, W4, W5, W6, W7, W8, W9, W10, W11, W12, W13, W14, W15, W16, W17, W18, W19, W20, W21, W22, W23, W24, W25, W26, W27, W28, W29, W30, W31, W32, W33, W34, W35, W36, W37, W38, W39, W40, W41, W42, W43, W44, W45, W46, W47, W48, W49, W50, W51, W52, W53, W54, W55, W56, W57, W58, W59, W60, W61, W62, W63, W64, W65, W66, W67, W68, W69, W70, W71, W72, W73, W74, W75, W76, W77, W78, W79, W80, W81, W82, W83, W84, W85, W86, W87, W88, W89, W90, W91, W92, W93, W94, W95, W96, W97, W98, W99, W100	X1, X2, X3, X4, X5, X6, X7, X8, X9, X10, X11, X12, X13, X14, X15, X16, X17, X18, X19, X20, X21, X22, X23, X24, X25, X26, X27, X28, X29, X30, X31, X32, X33, X34, X35, X36, X37, X38, X39, X40, X41, X42, X43, X44, X45, X46, X47, X48, X49, X50, X51, X52, X53, X54, X55, X56, X57, X58, X59, X60, X61, X62, X63, X64, X65, X66, X67, X68, X69, X70, X71, X72, X73, X74, X75, X76, X77, X78, X79, X80, X81, X82, X83, X84, X85, X86, X87, X88, X89, X90, X91, X92, X93, X94, X95, X96, X97, X98, X99, X100	
Sub Total 25 /30					
14 Aspect (>15% slope)	North 0	1	<15% slope, all aspects 10	West 12	South 15
15 Slope (%)	<16 1	16-19 and maximum for North slopes 5	20-40 10	41-60 12	>60 15
16 Terrain	Flat 1	Rolling 3	Shallowly sloping, with some steep slopes 4	Carroted slope, steep areas on shallow patches 7	Concave slope, deep gullies 10
17 Landcover/Topography (Dominant Wildfire Spread)	<5 ha isolated forest 1	North on low rise aspect, moderate, wildfire spread restricted from South and/or West 1	Mountainous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread 10	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread 10	Concave, consistent topography, no restrictions to wildfire spread 15
Sub Total 25 /35					
FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORES					
18 Position of Structures/Community on Slope	No Structures Values within 2 km 0	Bottom of slope valley 5	Mid-slope ridge/valley, elevated valley, <10% slope 10	Mid-slope crevasses, >10% slope 15	Upper 1/3 of slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter defence, no structures 5	Perimeter defence, with structures 5	Interior > 1 structure/ha 8	Interior < 1 structure/ha 10
20 Position of Assessment Area Relative to Values	No Structures Values within 2 km 0	None >500-1000-1500-2000 m 1 10 20 30	>400 m >500-1000-1500-2000 m 1 12 23	Flat/Rolling >500-1000-1500-2000 m 1 12 25	Below >500-1000-1500-2000 m 1 15 30
Sub Total 20 /35					
TOTAL WILDFIRE THREAT SCORE 107 /195					

* Proceed only if fuel sub total >= 20.
 ** Proceed to Structural component only if Wildfire Threat Behaviour Score is >= 95 for untreated polygons.

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40
 Moderate 41-95
 High 96-145
 Extreme >146

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13
 Moderate 14-26
 High 27-39
 Extreme >39

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 41



Photo 41-1 @ 270 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 42

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot # 42 Community City of Kamloops

Assessor B. Morrow Geograph/M.A. Location/Street Name Wainwright - Westgate

Date April 15/16 GPS/UTM N50 45' 5" W 120 21' 18.5" W

Phone 250-833-4141 Land Ownership Crown Private A.R. Other (specify)

42

Panel	A	B	C	D	E
1 Duff Depth and Moisture Regime (cm)	1-5	7-15 Dry Annual Wet 3 1	15-20 Dry Annual Wet 4 2	20-30 Dry Annual Wet 5 4	>30 Dry Annual Wet 6 5
2 Surface Fuel Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Meas. Herb. Impacted Grass, Low flammability Woods 1	Herbs, Deciduous Shrubs 2	Shrubs, Conifer Shrubs 3	Fireweed, Forb 4	Shrubland, Barkstrip, Arbutus, Death Scrub 5
4 Live Woody Debris Continuity (< 7cm) (% cover)	< 10 1	Scattered, < 10 coverage 5	> 10 coverage 7	> 25 coverage, > 10 cm deep 10	> 25 coverage, > 10 cm deep 15
5 Large Woody Debris Continuity (> 7cm) (% cover)	< 10 1	Scattered, < 10 coverage 2	10-25 coverage 5	> 25 coverage, not elevated 7	> 25 coverage, partially elevated 14
6 Live and Dead Continuous Crown Closure (%)	< 20 0	20-40 1	41-60 2	61-80 3	> 80 4
7 Live Deciduous Crown Closure (%)	> 20 per cent understory forest 1	0-40 2	41-60 3	61-80 4	> 80 5
8 Live and Dead Greater Crown Base Height (m)	5+ or 5+ canopy 1	3-5 5	2-3 7	1-2 10	< 1 15
9 Live and Dead Squegnal and Unconquered Canopy (m)	500 2	501-1000 3	1001-2000 10	2001-4000 20	> 4000 30
10 Forest Health (Fr of deciduous and non-deciduous stems)	Standing Dead and Partially Dead < 5% or < 10% stems 0	Standing Dead and Partially Dead 5-15 3	Standing Dead and Partially Dead > 15-50 10	Standing Dead and Partially Dead > 50-75 20	Standing Dead and Partially Dead > 75 30
11 Continuous Forest/Slash Layer within 2km (m)	0-20 4	21-40 3	41-60 2	61-80 1	> 80 0
Sub Total <u>160/55*</u>					

Weather	A	B	C	D	E
12 Microclimate Zone	AT, Irrigated 1	CRH, CR, MH dry Annual Wet 5 1	III, SBS, ESS dry Annual Wet 10 2	IV, MS, SPS, CWS, BSA, d2, WET, SPS - dry Annual Wet 15 5	> 75 15
13 Microclimate Temperature (per 1000 ft/300m)	65, R1, R2, G4, Y5, R9 18, 19, E3, M1, Y7 1	G5, G8, R3, R6 16, 17, G1, G1, 18 3	G7, E3, G4, E4, Y1, E1, M2 3	R1, R5, E2, C2, C3, M5, M6, R4, G7, R2 10	> 75 15
Sub Total <u>30/20</u>					

Topography	A	B	C	D	E
14 Slope (> 15% slope)	North 8	< 15% 5	< 10% slope all aspects 10	West 12	South 15
15 Slope (%)	< 14 1	14-20 and 20+ more for flat slopes 5	30-60 10	60-74 12	> 75 15
16 Terrain	Flat 1	Hilly 3	Sloped terrain, exposure relief aspect 5	Consistent slope, steep drainage gullies 7	Complex slope, steep gullies 14
17 Landforms/Topographic Orientation to Weather-Spread	< 5 m isolated forest low 1	North and West aspects exposed, while a good retained from South and/or West 3	Mountainous terrain, broken aspect and slope changes, multiple windward to windward slopes 5	Hilly terrain, narrow water beds, minimal aspect and slope changes, many windward to windward slopes 10	Complex, rugged topography Northwest to windward slopes 15
Sub Total <u>75/240**</u>					

FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					
Structural	A	B	C	D	E
18 Position of Structures/Continuity on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 3	Mid-slope benches, elevated valley, < 15% slope 10	Mid-slope continuous, > 15% slope 12	Upper 1/3 of Slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter Development, aggregated 3	Perimeter Interiors, with residences 5	Interiors > 1 low density 8	Interiors < 1 structure high density 15
20 Position of Assessment Area Relative to Values	No Structures Values within 2 km 0	Above > 500 200-500 10 3	Shaded > 500 200-500 < 200 m 12 25	Flat/rolling > 500 200-500 < 200 m 1 12 25	Below > 500 200-500 < 200 m 1 15 30
TOTAL WILDFIRE THREAT SCORE <u>28/156</u>					

* Proceed only if Fuel is total L1-20.
** Proceed if Structural component only if Wildfire Threat Behaviour Score is > 95 for unretreated polygons.

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Medium 41-95

High 96-140

Extreme > 140

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13

Medium 14-25

High 27-30

Extreme > 30

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 42



Photo 42-1 @ 270 degrees

City of Kamloops – Wildfire Threat Assessment Picture – Plot 43



Photo 43-1 @ 290 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 44

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 44 Community: City of Kamloops

Assessor: B. Morrow Geographic Location/Street Name: Datchford Heights

Date: Apr 15/16 GPS UTM: NSR 43 222 W 2805.7

Photos: 2 N 4 Land Ownership: Crown Private I.R. Other (specify)

44

Fuel	A	B	C	D	E
1 Duff Depth and Moisture Regime (cm)	1-3 3	2-5 Dry Zonal Wet 5 3 1	5-10 Dry Zonal Wet 10 6 2	10-20 Dry Zonal Wet 12 8 4	>20 Dry Zonal Wet 15 10 5
2 Surface Fuels Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Moss, Herbs, Irrigated Crops, Low Flammability Weeds 1	Herbs, Deciduous Shrubs 2	Lichen, Conifer Shrubs 3	Pinegrass, Juniper 4	Sagebrush, Bunchgrass, Antelope Brush, Serotinous 5
4 Fine Woody Debris Continuity (<=7cm) (% cover)	<1 coverage 1	Scattered, <10 coverage 5	10-25 coverage 7	>25 coverage, <10 cm deep 10	>25 coverage, >10 cm deep 15
5 Large Woody Debris Continuity (>7cm) (% cover)	<1 coverage 0	Scattered, <10 coverage 2	10-25 coverage 5	>25 coverage, not elevated 7	>25 coverage, partially elevated 10
6 Live and Dead Coniferous Crown Closure (%)	<20 0	20-40 5	41-60 10	61-80 15	>80 20
7 Live Deciduous Crown Closure (%)	>80 or <40% coniferous crown closure 0	61-80 2	41-60 3	20-40 4	<20 5
8 Live and Dead Conifer Crown Base Height (m)	5+ or <20% conifer crown closure 0	3-5 5	2-3 7	1-2 10	<1 15
9 Live and Dead Suppressed and Understorey Canifers (stems/ha)	<500 0	501-1000 5	1001-2000 10	2001-4000 20	>4000 30
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Partly Down <5 or <10 stems/ha 0	Standing Dead and Partly Down 5-25 5	Standing Dead and Partly Down >25-50 10	Standing Dead and Partly Down >50-75 20	Standing Dead and Partly Down >75 30
11 Continuous Forest/Slash Cover within 2km (%)	0-20 0	21-40 3	41-60 5	61-80 10	>80 15
Sub Total					26/155*

Weather	A	B	C	D	E
12 Bioclimatic Zone	AT, Irrigated 1	CWH, CDF, MH Dry Zonal Wet 3 1	KCH, SBS, ESSF Dry Zonal Wet 10 7 3	IDF, MS, SBPS, CWH 4:1 & 4:2, BWBS, SWB - Dry Zonal Wet 15 10 5	
13 Historical Wildfire Occurrence (by WMB Fire Zone)	G5, R1, R2, G6, V6, R8, V9, V3, R5, R8, V7 1	G3, G8, R3, R4, V6, G1, G9, V8 5	G7, G5, G4, C6, V1, C1, N6 8	K1, K5, K3, C2, C3, N5, K6, N4, N7, N2 10	N7, N4, N5, N1 15
Sub Total					30/30

Topography	A	B	C	D	E
14 Aspects (>15% slope)	North 0	East 5	<16% slope all aspects 10	West 12	South 15
15 Slope (%)	<16 1	16-29 and max score for North Slopes 5	30-44 10	45-54 12	>55 15
16 Terrain	Flat 1	Rolling 3	Sloped terrain, minor water bodies 5	Consistent slope, deep draws or shallow gullies 7	Consistent slope, deep gullies 10
17 Landscape/Topographic Limitations to Wildfire Spread	<5 ha isolated forest land 1	North and/or east aspects dominate, wildfire spread restricted from South and/or West 2	Mountainous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread 5	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread 10	Continuous, consistent topography, No restriction to wildfire spread 15
Sub Total					33/55

FUEL, WEATHER AND TOPOGRAPHY	WILDFIRE BEHAVIOUR THREAT SCORE				
18 Position of Structures/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 5	Mid-slope benchland, elevated valley, steep slope 10	Mid-slope continuous, >15% slope 12	Upper 1/3 of Slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter Interface 5	Perimeter Interface, with inclusions 5	Intermix > 1 structure/ha 8	Intermix < 1 structure/ha 10
20 Position of Assessment Area Relative to Values	No Structures Values within 2 km 0	Above >500 200-500 <200 m 1 10 10	Sidehill >500 200-500 <200 m 1 12 25	Flat/Rolling >500 200-500 <200 m 1 12 25	Below >500 200-500 <200 m 1 15 30
Sub Total					91/240**

* Proceed only if Fuel sub total is >29.

** Proceed to Structural component only if Wildfire Threat Behaviour Score is >95 for untreated polygons.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE 23/155

TOTAL WILDFIRE THREAT SCORE 795

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 41-95

High 96-149

Extreme >149

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13

Moderate 14-26

High 27-39

Extreme >39

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 44



Photo 44-1 @ 270 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 45

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-Work Post-Work

Plot # 45 Community: City of Kamloops

Assessor: B. Williams Geographic Location/Street Name: Ord Road

Date: Jan 15/16 GPS/UTM: N50° 41' 41.3" W120° 23' 36.9"

Photo: 1-4 Land Ownership: Crown Private IR Other (Specify)

45

Pool	A	B	C	D	E
1 Soil Depth and Moisture Regime (cm)	1-3	2-4.5 Dry Soil Wet 5 3 1	5-10 Dry Soil Wet 10 6 2	10-20 Dry Soil Wet 12 8 4	>20 Dry Soil Wet 15 10 5
2 Surface Fuel Continuity (Ft cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Mass Herb. Impregnated Droplets, Low Flammability Needs 1	Herb. Detritus Droplets 2	Lichen, Lard/Fat Droplets 3	Progressive, A-lign 4	Significant Detritus, A-lign, Soft Droplets 5
4 Fine Woody Debris Continuity (<7cm) (Ft cover)	<10% 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, <10 on steep 4	>25 coverage, >10 on steep 5
5 Large Woody Debris Continuity (>7cm) (Ft cover)	<10% 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, not stacked 4	>25 coverage, partially stacked 5
6 Live and Dead Grassland Cover (Percent %)	<20 1	20-40 2	41-60 3	61-80 4	>80 5
7 Live Grassland Cover (Percent %)	>40 or <40% 1	41-60 2	61-80 3	81-100 4	>100 5
8 Live and Dead Grassland Cover (Height cm)	<10 1	10-20 2	20-40 3	40-60 4	>60 5
9 Live and Dead Sedge/Scrub and Herbaceous Cover (Percent %)	<10 1	10-20 2	20-40 3	40-60 4	>60 5
10 Fuel Moisture (Ft of Available and in-situ cover)	Standing Dead and Partly Dead 1	Standing Dead and Partly Dead 2	Standing Dead and Partly Dead 3	Standing Dead and Partly Dead 4	Standing Dead and Partly Dead 5
11 Continuous Forest/Grass Cover within 20m (Ft)	0-20 0	21-40 1	41-60 2	61-80 3	>80 4

Sub Total: 26 /155*

Structure	A	B	C	D	E
12 Structural Type	All Insulated 1	EW, CP, AH Dry Insulation 5 3 1	KI, SI, EISF Dry Insulation 10 7 3	MS, SS, SPS, (with wet G. cl.) WES, SW - (Dry Insulation) 15 10 5	>15 1
13 Structural Material (According to NRM/Tree Data)	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 1	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 2	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 3	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 4	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 5

Sub Total: 30 /20

Topography	A	B	C	D	E
14 Aspect (>15% slope)	North 0	East 5	<10% slope, all aspects 10	West 12	>15% 15
15 Slope (%)	<16 1	16-29 and less, more than 10% slope 2	30-40 3	40-54 4	>55 5
16 Slope	Flat 1	Rolling 2	Slope (up to 10% slope) 3	Consistent slope, steep slopes or shallow slopes 4	Consistent slope, steep slopes 5
17 Landform/Topographic Orientation to Interface (Slope)	< 5 ha isolated forest land 1	North and/or east aspects (avoidance, interface up hill and/or west) 2	Mountainous terrain, broken topography, regular aspect and slope changes, multiple meanders to interface 3	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor meanders to interface 4	Consistent topography, consistent aspect, no meanders to interface 5

Sub Total: 35 /55

FUEL, WEATHER AND TOPOGRAPHY	A	B	C	D	E
18 Position of Structures/Community on Slope	No Structures Values within 2 ft 1	Amount of slope, 10-20% 2	Mid-slope benchmark, elevated walls, <10% slope 3	Mid-slope continuous, >15% slope 4	Upper 1/3 of Slope 5
19 Type of Development	No Structures Values within 2 ft 1	Permeable Interface 2	Permeable Interface with insulation 3	Interior > 1 (structure/ha) 4	Interior < 1 structure/ha 5
20 Position of Assessment Area Relative to Features	No Structures Values within 2 ft 1	Above >500 200-500 2	Below >500 200-500 <200 ft 3	Flat/rolling >500 200-500 <200 ft 4	Below >500 200-500 <200 ft 5

Sub Total: 28 /75

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE 28 /75

TOTAL WILDFIRE THREAT SCORE 128 /240**

* Based only if Fuel sub total is >20

** Based on structural component only if Wildlife Threat Subtotal Score is >95 for untreated polygons.

Wildfire Behaviour Threat Class (check applicable class)	Wildland Urban Interface Threat Class (check applicable class)
Low <input type="checkbox"/> 0-40	Low <input type="checkbox"/> 0-13
Moderate <input checked="" type="checkbox"/> 41-95	Moderate <input checked="" type="checkbox"/> 14-26
High <input type="checkbox"/> 96-149	High <input type="checkbox"/> 27-39
Extreme <input type="checkbox"/> >150	Extreme <input type="checkbox"/> >40

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 45



Photo 45-1 @ 315 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 46

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 46 Community: City of Kamloops

Assessor: B.M. Brown Geographic Location/Street Name: Kransville

Date: April 15/16 GPS/UTM: NSD 43 23.7 W 128 29 43.9

Photos: 1 N #: 21 Land Ownership: Crown Private I.R. Other (specify)

46

Fuel	A	B	C	D	E
1. Duff Depth and Moisture Regime (cm)	1-2 3	2-5 Dry Zonal Wet 5 3 1	5-10 Dry Zonal Wet 10 6 2	10-20 Dry Zonal Wet 12 8 4	>20 Dry Zonal Wet 15 10 5
2. Surface Fuels Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3. Vegetation Fuel Composition	Moss, Herbs, Irrigated Crops, Low Rainfall Weeds 3	Herbs, Deciduous Shrubs 2	Lichen, Conifer Shrubs 3	Pinegrass, Juniper 4	Sagebrush, Bunchgrass, Antelope Brush, Scotch Broom 5
4. Fine Woody Debris Continuity (<=7cm) (% cover)	<10 0	Scattered, <10 coverage 2	10-25 coverage 5	>25 coverage, <10 cm deep 7	>25 coverage, >10 cm deep 15
5. Large Woody Debris Continuity (>7cm) (% cover)	<10 0	Scattered, <10 coverage 2	10-25 coverage 5	>25 coverage, not elevated 7	>25 coverage, partially elevated 10
6. Live and Dead Coniferous Crown Closure (%)	>80 or <40% coniferous crown closure 3	20-40 5	41-60 10	61-80 15	>80 10
7. Live Deciduous Crown Closure (%)	>80 or <40% coniferous crown closure 3	61-80 2	41-60 3	20-40 4	<20 5
8. Live and Dead Conifer Base Height (m)	3+ or more conifer base 3	3-5 5	2-3 7	1-2 10	<1 15
9. Live and Dead Suppressed and Understorey Canopies (Stems/ha)	<10 0	501-1000 5	1001-2000 10	2001-4000 20	>4000 30
10. Forest Health (% of dominant and co-dominant stems)	Standing Dead and Partly Down <5 or 10 stems/ha 3	Standing Dead and Partly Down 5-25 5	Standing Dead and Partly Down >25-50 10	Standing Dead and Partly Down >50-75 20	Standing Dead and Partly Down >75 30
11. Continuous Forest/Slash Cover within 20m (%)	>80 0	21-40 3	41-60 5	61-80 7	>80 10
Sub Total					155*

Weather	A	B	C	D	E
12. Bioclimatic Zone	AT, Irrigated 3	CW, CDE, H1, Dry Zonal Wet 5 3 1	EH, SBS, ESS, Dry Zonal Wet 10 7 3	DS, MS, SBP, CWH-d1 & d2, BWS, SWS - Dry Zonal Wet 15 10 5	P2, B6 15
13. Historical Wildfire Occurrence (by WMB Fire Zone)	G5, R1, R2, G6, V5, R9, V9, V3, R5, R8, V7 1	G3, G8, R3, R4, V6, G1, G9, V8 5	G7, C5, G4, C4, V1, C1, H6 8	K1, K5, K3, C2, C3, N5, K6, N4, K7, N2 10	N7, K4, K2, N1 15
Sub Total					730

Topography	A	B	C	D	E
14. Aspects (>15% slope)	North 0	East 5	<16% slope - all aspects 10	West 12	South 15
15. Slope (%)	<16 0	16-29 and max score for North slopes 5	30-44 10	45-54 12	>55 15
16. Terrain	Flat 0	Rolling 3	Sloped terrain, minor low relief draws 5	Consistent slope, deep draws or shallow gullies 7	Consistent slope, deep gullies 10
17. Landscape/Topographic Limitations to Wildfire Spread	<5 ha isolated forest land 1	North and/or east aspects dominate, wildfire spread restricted from South and/or West 2	Mountainous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread 5	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread 10	Continuous, consistent topography, No restriction to wildfire spread 15
Sub Total					75

FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					
Structural	A	B	C	D	E
18. Position of Structure/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, valley floor 5	Mid-slope benchland, elevated valley, <16% slope 10	Mid-slope continuous, >15% slope 12	Upper 1/3 of Slope 15
19. Type of Development	No Structures Values within 2 km 0	Perimeter Interface, no inclusions 3	Perimeter Interface, with inclusions 5	Intermix >1 structure/ha 8	Intermix <1 structure/ha 10
20. Position of Assessment Area Relative to Values	No Structures Values within 2 km 0	Above >500 200-500 <200 m 1 10 20	Sideline >500 200-500 <200 m 1 12 25	Flat/Rolling >500 200-500 <200 m 1 12 25	Slope >500 200-500 <200 m 1 15 30
Sub Total					240**

** Proceed only if Fuel sub total is >25.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE: 155

TOTAL WILDFIRE THREAT SCORE: 295

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 41-95

High 96-149

Extreme >149

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13

Moderate 14-26

High 27-39

Extreme >39

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 46



Photo 46-1 @ 180 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 47

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot # 47 Community City of Kamloops

Assessor B. M... Geographic Location/Sheet Name: ...

Date Nov 15/16 GPS/UTM N50 44' 32.5" W120 33' 28"

Photos: H C 4 Land Ownership: Crown Private I.R. Other (Specify):

47

Fuel	A	B	C	D	E
1 Duff Depth and Maximum Profile (cm)	1-5	6-10	11-15	16-20	>20
2 Surface Fuel Continuity (75 score)	<20	20-40	41-60	61-80	>80
3 Vegetation Fuel Composition	Most Herbs, Irregular Grass, Low Flammability Woods	Herbs, Deciduous Shrubs	Lignin, Conifer, Shrub	Progressive Shrub	Sagebrush, Berberis, Arbutus, Shrub, Scaevola
4 Fine Woody Debris Continuity (<4cm) (70 score)	Scattered, <10 coverage	Scattered, <10 coverage	10-25 coverage	>25 coverage, <10 cm deep	>25 coverage, >10 cm deep
5 Large Woody Debris Continuity (>7cm) (70 score)	Scattered, <10 coverage	Scattered, <10 coverage	10-25 coverage	>25 coverage, not elevated	>25 coverage, partially elevated
6 Live and Dead Conifer Crown Closure (%)	<20	20-40	41-60	61-80	>80
7 Live and Dead Conifer Crown Closure (%)	<20 or <40% continuous canopy cover	41-60	61-80	81-100	>100
8 Live and Dead Conifer Crown Closure (%)	54 or < 20% conifer crown closure	3-5	2-1	1-1	<1
9 Live and Dead Suppressor and Midstory Canopy (Intersect)	501-1000	1001-2000	2001-4000	4001-8000	>8000
10 Forest Health (% of development and development sites)	Standing Dead and Partly Dead <5 or <25 stems/ha	Standing Dead and Partly Dead	Standing Dead and Partly Dead	Standing Dead and Partly Dead	Standing Dead and Partly Dead
11 Crowned Plant/Shrub Cover within 20m (%)	0-20	21-40	41-60	61-80	81-100
Sub Total					31 / 100*

Woodstore	A	B	C	D	E
12 Geographic Zone	AL, BRG	EM, GDF, AH, Dry Zone	TR, SB, LSF, Dry Zone	W, MS, SPS, CWH, B & C, BWS, SLD - Dry Zone	
13 Historical Wildfire Occurrence (by 100m Fire Zone)	G1, H1, R2, G4, V5, B5, V6, E1, E2, H6, V7	G3, G5, R3, B4, V6, D1, S6, V8	G7, G5, G4, E4, E1, C1, H6	R1, R5, E3, E2, C1, H5, H4, H1, H2, H3	H7, E4, H1, H2
Sub Total					30 / 100

Topography	A	B	C	D	E
14 Aspects (> 17% slope)	North	East	<10% slope, all aspects	West	South
15 Slope (%)	<10	10-20, with a score restriction	20-44	45-54	>55
16 Terrain	Flat	Rolling	Sloped terrain, some open slopes	Undulating slope, deep narrow shallow gullies	Continuous slope, deep gullies
17 Landcover/Topographic Conditions to Weather Speed	<5 ha isolated forest	North winds not aspects dominated, weather speed restricted from south and/or west	Mountainous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wind speed, large water bodies	Rolling terrain, minor slope breaks, several aspect and slope changes, some restrictions to wind speed	Continuous, consistent topography, no restriction to wind speed
Sub Total					20 / 100

FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE	A	B	C	D	E
18 Position of Developments/Community on Slope	No Structures	Bottom of slope, valley bottom	Mid-slope, bench land, elevated valley, <10% slope	Mid-slope, continuous, >15% slope	Upper 1/3 of Slope
19 Type of Development	No Structures	Perimeter interface, no structures	Perimeter interface, with structures	Interior >1 structure/ha	Interior <1 structure/ha
20 Position of Assessment Area Relative to Values	No Structures	Above >500 700-500 <100m	Below >500 700-500 <100m	Flattening >500 200-500 <100m	Below >500 200-500 <100m
Sub Total					9 / 100

* Proceed only if Fuel sub total > 20.

** Proceed to Structural Consideration of Wildfire Threat Behaviour Score is > 55 for unretreated polygons.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE 91 / 240**

Wildfire Behaviour Threat Class (not applicable dist)

Low 0-40

Moderate 41-55

High 56-141

Extreme >142

Wildland Urban Interface Threat Class (not applicable dist)

Low 0-33

Moderate 34-38

High 39-59

Extreme >60

Cell Update: January 24, 2012

City of Kamloops – Wildfire Threat Assessment Picture – Plot 47



Photo 47-1 @ 360 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 48

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: **48** Community: **City of Kamloops**
 Assessor: **B Morrow** Geographic Location/Street Name: **W Pineview**
 Date: **April 19, 2016** GPS/UTM: **N50° 38' 54" W120° 23' 54.8" 800m**
 Photos: **4** Land Ownership: Crown Private I.R. Other (specify):

48

Fuel	A	B	C	D	E
1. Duff Depth and Moisture Regime (cm)	1-2 3	3-5 Dry Zonal Wet 5 1	5-10 Dry Zonal Wet 10 6 2	10-20 Dry Zonal Wet 12 8 4	>20 Dry Zonal Wet 15 10 5
2. Surface Fuel Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3. Vegetation Fuel Composition	Moss, Herbs, Irrigated Crops, Low Flammability Weeds 1	Herbs, Deciduous Shrubs 2	Lichen, Conifer Shrubs 3	Pinegrass, Autotop 4	Sagebrush, Bunchgrass, Antelope Brush, Scotch Broom 5
4. Fine Woody Debris Continuity (<=7cm) (% cover)	<1 coverage 1	Scattered, <10 coverage 2	10-25 coverage 7	>25 coverage, <10 cm deep 10	>25 coverage, >10 cm deep 15
5. Large Woody Debris Continuity (>7cm) (% cover)	<1 coverage 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, not elevated 7	>25 coverage, partially elevated 10
6. Live and Dead Coniferous Crown Closure (%)	<20 2	21-40 3	41-60 10	61-80 15	>80 10
7. Live Deciduous Crown Closure (%)	>80 or <40% coniferous crown closure 0	61-80 2	41-60 5	20-40 4	>80 5
8. Live and Dead Coniferous Base Height (m)	5+ or <20% conifer crown closure 0	3-5 5	0 0	1-2 10	<1 15
9. Live and Dead Suppressed and Understorey Canopies (stems/ha)	0 0	501-1000 5	1001-2000 10	2001-4000 20	>4000 30
10. Forest Health (% of dominant and co-dominant stems)	Standing Dead and Partly Down <5 or <20 stems/ha 0	Standing Dead and Partly Down >25 5	Standing Dead and Partly Down >50 10	Standing Dead and Partly Down >75 20	Standing Dead and Partly Down >75 30
11. Continuous Forest/Slash Cover within 2km (%)	0-20 0	21-40 3	41-60 5	61-80 10	>80 10
Sub Total					49 /155*

Weather	A	B	C	D	E
12. Biogeoclimatic Zone	AT, Irrigated 1	CWH, CBS, M4, Dry Zonal Wet 5 3 1	ICB, SBS, ESSF, Dry Zonal Wet 10 7 3	IB, MS, SPS, CWH, B, ds2, BWS, SWP, Dry Zonal Wet 15 10 5	PP, BG 15
13. Historical Wildfire Occurrence (by WUI Fire Zone)	G5, R1, R2, G6, V5, R9, V9, V3, R5, R8, V7 1	G2, G8, R3, R4, V6, G1, G9, V8 5	G7, G5, G4, G4, V1, C1, N6 8	K1, K5, K3, C2, C3, H5, H6, W4, K7, N2 10	N7, N2, N1 15
Sub Total					25 /30

Topography	A	B	C	D	E
14. Aspects (>15% slope)	North 0	East 5	<16% slope all aspects 10	West 12	South 15
15. Slope (%)	<16 1	16-20 max score for North Slopes 5	30-44 10	45-54 12	>55 15
16. Terrain	Flat 1	Rolling 3	Sloped terrain, minor low relief draws 5	Consistent slope, deep draws of 20m or gullies 7	Consistent slope, deep gullies 10
17. Landscape/Topographic Limitations to Wildfire Spread	<5 ha isolated forest land 1	North and/or east aspects dominate, wildfire spread restricted from South and/or West 2	Mountainous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread, large water bodies 5	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread 10	Continuous, consistent topography, No restriction to wildfire spread 15
Sub Total					17 /55

FUEL, WEATHER AND TOPOGRAPHY	WILDFIRE BEHAVIOUR THREAT SCORE				
Structural	A	B	C	D	E
18. Position of Structure/Community on Slope	No Structures Values within 2 km 0	Bottom of Slope, valley bottom 5	Mid-slope benches, elevations of valley - 10% slope 10	Mid-slope continuous, >15% slope 12	Upper 1/3 of Slope 15
19. Type of Development	No Structures Values within 2 km 0	Perimeter Interface, 6m or less 3	Perimeter Interface, with inclusions 5	Intermix >1 structure/ha 8	Intermix <1 structure/ha Infrastructure 10
20. Position of Assessment Area Relative to Values	No Structures Values within 2 km 0	Above >500 200-500 <200 1 10 20	Sideline >500 200-500 <200 m 12 25	Flat/Rolling >500 200-500 <200 m 1 12 25	Below >500 200-500 <200 m 1 30
Sub Total					91 /240**

* Proceed only if Fuel sub total is >29.
 ** Proceed to Structural component only if Wildfire Threat Behaviour Score is >95 for untreated polygons.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE **37** /55
 TOTAL WILDFIRE THREAT SCORE **124** /295

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40
 Moderate 41-95
 High 96-149
 Extreme >149

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13
 Moderate 14-26
 High 27-39
 Extreme >39

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 48



Photo 48-1 @ 270 degrees

City of Kamloops – Wildfire Threat Assessment Picture – Plot 49



Photo 49-1 @ 270 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 50

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-Graded Post-treatment

Plot #: **50** Community: **City of Kamloops**

Assessor: **B. Marou** Geographic Location/Street Name: **Rose Hill Park**

Date: **Nov 18/16** GPS/UTM: **N50 31' 33.5" W120 17' 51" 610m**

Photos: **0 N 1 E 415** Land Ownership: Crown Private LR Other (specify):

Factor	A	B	C	D	E
1 Fuel Depth and Moisture Regime (m)	1-5 3	5-10 Dry Dead Wet 5 3 1	10-20 Dry Dead Wet 10 6 2	20-30 Dry Dead Wet 12 8 4	>30 Dry Dead Wet 15 10 5
2 Surface Fuels Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Wet. Herb. Impaired Crops. Low Flammability Weeds 1	Herb. Deciduous Shrubs 2	Lichen, Conifer Shrubs 3	Prograss, Angler 4	Sagebrush, Buckgrass, Felting Grass, Small Spruce 5
4 Fine Woody Debris Continuity (<7cm) (% cover)	<5 coverage 0	Scattered, <10 coverage 5	10-25 coverage 7	>25 coverage, <10cm deep 10	>25 coverage, >10cm deep 15
5 Large Woody Debris Continuity (>7cm) (% cover)	<5 coverage 0	Scattered, <10 coverage 2	10-25 coverage 5	>25 coverage, not elevated 7	>25 coverage, vertically elevated 10
6 Live and Dead Conifer Crown Closure (%)	20-40 5	41-60 10	61-80 15	81-100 20	>80 25
7 Live Deciduous Crown Closure (%)	>80% of PU covering 20m diameter 0	41-80 2	41-60 3	20-40 4	<20 5
8 Live and Dead Conifer Crown Base Height (m)	5-10 or <20m height/overlapping 0	3-5 5	3-11 7	1-2 10	<3 15
9 Live and Dead Supercrown and Understorey Canopy Closure (%)	>80 0	501-1000 5	1001-2000 10	2001-4000 20	>4000 30
10 Forest Health (% of dominant and co-dominant species)	Standing Dead and Partly Dead <5 or <30 stems/ha 0	Standing Dead and Partly Dead 5-25 5	Scrambling Dead and Partly Dead >25-50 10	Standing Dead and Partly Dead >50-75 20	Standing Dead and Partly Dead >75 30
11 Calthicoid Forest/Slash Cover Within 20m (%)	0-20 0	21-40 3	41-60 5	61-80 7	>80 10
Sub Total 25 / 250*					
12 Biophysical Zone	A1, B1, B2 1	CW1, CW, WH Dry Dead Wet 5 3 1	KH, HS, ESS Dry Dead Wet 10 7 3	EC, MS, SPS, CH, SH, A, A2, BWS, TBW - Dry Dead Wet 15 11 5	20 15
13 Wetland Wetland Category (by WUB Fire Zone)	G1, A1, F2, G1, V5, R9, V9, Y2, B1, B6, V7 1	G3, G4, R3, R4, W1, G1, G2, W8 5	G7, C3, G4, G4, V3, C1, M1 8	M1, K3, B3, C2, C3, N5, M2, M4, K7, M2 10	M2, A2, H2, H1 15
Sub Total 30 / 250					
14 Aspects (> 15% slope)	North 0	East 5	<10% slope, all aspects 10	West 12	South 15
15 Slope (%)	0-10 1	10-20 and area score for North slopes 5	30-44 10	45-54 12	>55 15
16 Rocks	0 0	Light 3	Sloped rocks, under low relief areas 5	Consistent slope, steep dunes or shallow gullies 7	Consistent slope, deep gullies 10
17 Landscape Topographic Characteristics to Wildfire Spread	<5 isolated forest 1	North and/or east aspects, somewhat, wildfire spread restricted from South and/or West 2	Mountainous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread 3	Rolling terrain, minor water bodies, minimal aspect and slope changes, some restrictions to wildfire spread 4	Continuous, consistent topography, few restrictions to wildfire spread 5
Sub Total 71 / 250**					
FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORES					
18 Position of Structures/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 5	All slope breakdown, elevated valley, <16% slope 10	Mid slope (all slopes, 16-30%) 12	Upper 1/3 of Slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter interface, no structures 5	Perimeter interface, with structures 5	Interior > 1 structure 10	Interior < 1 structure 10
20 Proximity of Assessment Area Relative to Values	No Structures Values within 2 km 0	None >500 200-500 <200 m 1 10 20	Suburb >500 200-500 <200 m 1 12 25	Flat/Rolling >500 200-500 <200 m 1 12 25	Urban >100 200-500 <200 m 1 15 30
TOTAL WILDLAND THREAT SCORE 119 / 250					

* Proceed only if Fuel Sub Total >= 25.
** Proceed to STRUCTURAL component only if Wetland Biophys. Behavior Score is >= 95 for critical developments.

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40
 Moderate 41-95
 High 96-140
 Extreme >140

Wildland Urban Interface Threat Class (check applicable class)

Low 0-15
 Moderate 16-25
 High 26-39
 Extreme >39

Last Updated: January 24, 2012

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City of Kamloops – Wildfire Threat Assessment Picture – Plot 50



Photo 50-1 @ 360 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 51

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-1978 Home Post-1978 Home

Plot #: **51** Comments: **City of Kamloops**

Assessor: **B. Marlow** Geographic Location/Sheet Name: **Rose Hill Park**

Date: **Apr 18/16** GPS/UTM: **N 50° 39' 25.1" W 125° 17' 43.5"** **611m**

Photos: **0** N **1** F: **2*** Land Use/Type: Crown Private R.R. Other (Specify):

Factor	A	B	C	D	E
1 Duff Depth and Moisture Regime (m)	3	2-5 Dry Zonal Wet 5 3 1	4-10 Dry Zonal Wet 10 6 2	10-20 Dry Zonal Wet 12 8 4	>20 Dry Zonal Wet 15 10 5
2 Surface Fuel Continuity (M cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetative Fuel Composition	Moist, Herbic, Impacted Grass, Low Flammability Weeds 1	Herbic, Deciduous Shrubs 2	Lithic, Conifer Shrubs 3	Herbiviv, Juniper 4	Sagebrush, Deciduous, Angiosperm, Lithic, Softwood 5
4 Fine Woody Debris Continuity (<7.5cm) (M cover)	<20 0	Scattered, <10 coverage 5	10-25 coverage 7	>25 coverage, <10 cm deep 10	>25 coverage, >10 cm deep 15
5 Large Woody Debris Continuity (>7.5cm) (M cover)	<20 0	Scattered, <10 coverage 2	10-25 coverage 5	>25 coverage, not elevated 7	>25 coverage, partially elevated 10
6 Live and Dead Continuous Crown Closure (%)	<20 0	40-60 5	61-80 10	81-90 15	>90 20
7 Live Deciduous Crown Closure (%)	>80 or >40% continuous crown closure 0	61-80 2	61-80 3	20-60 4	<20 5
8 Live and Dead Canopy Crown Base Height (m)	1+ or <20% center crown closure 0	3-5 5	3-10 7	1-2 10	>15 15
9 Live and Dead Suppressed and Overstory Canopy (Stems/ha)	0-500 2	500-1000 5	1001-2000 10	2001-4000 20	>4000 30
10 Forest Health (% of deadwood and or deadwood stems)	Standing Dead and Puffy Crown < 5 or <20 Stems/ha 0	Standing Dead and Puffy Crown 5-25 5	Standing Dead and Puffy Crown >25-50 10	Standing Dead and Puffy Crown >50-75 20	Standing Dead and Puffy Crown >75 30
11 Continuous Forest/Shrub Cover within 1km (%)	0-20 0	21-40 3	41-60 5	>60 7	>80 10
Sub Total 42 /133*					
12 Neighborhood Score	A1, Ineligible 1	CW1, CP, M1 Dry Zonal Wet 5 3 1	(C1, S1, S2F, Dry Zonal Wet) 10 7 3	(C1, M1, S1F, (C1, S1) & (C1, S1F), S1F - Dry Zonal Wet) 15 10 5	>15 15
13 Potential Wildfire Exposure (M Flare Zone)	G5, R1, R2, G6, Y5, R3, Y4, R3, R4, R4, Y7 1	G1, G4, R3, R4, Y4, G1, G6, Y4 5	G7, G3, G4, G4, Y1, G1, H6 5	R1, R3, R3, G2, G3, Y5, M4, H4, K7, R2 10	H7, R1, R2, R1 15
Sub Total 10 /30					
14 Aspect (>20% slope)	North 0	East 5	<10% slope all aspects 10	West 12	South 15
15 Slope (%)	<16 1	16-20 (all max score for slope angles) 5	21-40 10	41-54 12	>55 15
16 Terrain	Flat 1	Rolling 5	Heterogeneous, minor topographic features 5	Consistent slope, deep draws or shallow gulches 7	Consistent slope, deep gulches 10
17 Landscape Topographic Limitations to Wildfire Spread	< 5 ft isolated forest land 1	North and/or east aspects dominant, whether spread restricted from south and/or West 2	Unusual topographic features, topographic features associated with changes, multiple restrictions to wildfire spread, large-scale features 5	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread 10	Continuous, consistent topographic No restriction to wildfire spread 15
Sub Total 5 /35					
FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORES					
18 Position of Structures/Community on Slope	No Structures Values within 2 km 4	Bottom of slope, valley bottoms 5	Mid-slope hillside, elevated ridges, <10% slope 10	Mid-slope, hillside, >10% slope 12	Upper 1/3 of slope 15
19 Type of Development	No Structures Values within 2 km 4	Perimeter detection, no exposures 5	Perimeter detection, with exposures 10	Interiors > 1 structures 12	Interiors < 1 structures infrastructure 15
20 Position of Assessment Area Relative to Features	No Structures Values within 2 km 4	Above >500 200-500 <200 m 1 10 20	Sideline >500 200-500 <200 m 1 12 25	Flat/Rolling >500 200-500 <200 m 1 12 25	Below >500 200-500 <200 m 1 15 30
Sub Total 41 /135					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
TOTAL WILDFIRE THREAT SCORE 134 /243**					

* Proceed only if fuel size (log) > 20.
** Proceed to Structural Response only if Wildfire Threat Behaviour Score is >15 for unmitigated plots.

Wildfire Behaviour Threat Class (check applicable class)

Low 1-10
 Moderate 11-25
 High 26-40
 Extreme >40

Wildland Urban Interface Threat Class (check applicable class)

Low 0-15
 Moderate 16-25
 High 26-39
 Extreme >39

Last Updated: January 24, 2013

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City of Kamloops – Wildfire Threat Assessment Picture – Plot 51



Photo 51-1 @ 45 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 52

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot # 52 Community City of Kamloops
 Address B. Brown Geographic Location/Street Name Road Hill Park
 Date Apr 13/16 UTM N 50° 39' 25.5" W 126° 17' 30.8"
 Photos 2016 Land Ownership: Crown Private I.L. Other (specify)

Item	A	B	C	D	E
1 Fuel Depth and Moisture Regime (cm)	0-5	2-15 Dry-Zonal Wet 5 3 1	5-10 Dry-Zonal Wet 10 6 2	10-20 Dry-Zonal Wet 12 4 4	>20 Dry-Zonal Wet 15 10 5
2 Surface Fuel Conductivity (W/cm)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Moss, Herbs, Lignified twigs, low flammability weeds 1	Herbs, Grasses, Shrubs 2	Lichen, Coffer shrubs 3	Prognosis, Juniper 4	Sagebrush, Juniper, Artemisia, Pinus, Scotch Pine 5
4 Fine Woody Debris Conductivity (<5cm) (W/cm)	<10 0	Scattered, <10 coverage 5	10-25 coverage 7	>25 coverage, <30cm deep 10	>25 coverage, >30cm deep 15
5 Large Woody Debris Conductivity (>5cm) (W/cm)	<10 0	Scattered, <10 coverage 2	10-25 coverage 5	>25 coverage, not elevated 7	>25 coverage, partially elevated 10
6 Live and Dead Continuous Crown Closure (m)	0-5 1	20-40 5	41-60 10	61-80 15	>80 20
7 Live Discontinuous Crown Closure (m)	>20 1	61-80 1	41-60 3	20-40 4	<20 5
8 Live and Dead Conifer Crown Base Height (m)	5-10 <20% conifer crown base 0 5	1-5 5	2-10 7	1-12 10	>15 15
9 Live and Dead Suppressed and Mortalities (m)	0-500 2	501-1000 5	1001-2000 10	2001-4000 20	>4000 30
10 Snags (m)	Standing Dead and Partly Dead 0	Standing Dead and Partly Dead 2-15 5	Standing Dead and Partly Dead >25-50 10	Standing Dead and Partly Dead >50-75 20	Standing Dead and Partly Dead >75 30
11 Continuous Snag/Slash Cover Within 20m (m)	0-20 0	21-40 3	41-60 5	>60 7	>80 10
Sub Total <u>219</u> /250*					
Woodstore					
12 Dispersive Store	AT, Juniper 1	CWH, CM, MH Dry-Zonal Wet 5 3 1	WH, SWS, ESSF Dry-Zonal Wet 10 7 3	WC, WS, SWS, (with 1 B, 2, 3) SWS, WH - Dry-Zonal Wet 15 10 5	>20 15
13 Structural Fuel Store (m)	G5, R1, R2, G4, V5, W5, W6, W7, W8, W9 1	G3, G4, R3, R4, W6, W7, W8, W9 5	G7, G8, G4, L4, V1, C2, W6 8	R1, R5, W3, C2, L1, H5, W6, W4, L7, W3 10	>20 15
Sub Total <u>70</u> /50					
Topography					
14 Aspect (>15% slope)	North 0	East 5	<15% slope, all aspects 10	West 12	South 15
15 Slope (%)	<10 1	10-25 and maximum for North slopes 5	10-44 10	45-54 12	>55 15
16 Terrain	Flat 1	Rolling 3	Steep terrain, some (10-15% slopes) 5	Consistent slope, deep draws or shallow gulches 7	Consistent slope, deep gulches 10
17 Landscape Topography Continuity to Wildfire Spread	<5 ha isolated forest tract 1	North and/or east aspects dominant, wildfire spread restricted from South and/or West 2	West and/or South aspects dominant, wildfire spread, topography, irregular aspect and slope changes, multiple ridges to wildfire spread 5	Nothing between, where water bodies, natural aspect and slope changes, reduce restrictions to wildfire spread 10	Continuous, consistent topography by the ridges to wildfire spread 15
Sub Total <u>21</u> /50					
FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					
Sub Total <u>130</u> /250**					
Structural					
18 Position of Structures/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 5	Mid-slope level/valley, elevated valley, <10% slope 10	Mid-slope level/valley, <15% slope 12	Upper 1/3 of Slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter structures, no exposures 3	Perimeter structures, with exposures 5	Interior >1 structures 8	Interior >3 structures, infrastructure 10
20 Position of Assessment Area Relative to Values	No Structures Values within 2 km 0	Above >500-200-500 <100 m 1 10 20	Below >500-200-500 <200 m 1 10 25	Flat/Rolling >100-200-500 <200 m 1 12 25	Below >500-200-500 <200 m 1 15 30
Sub Total <u>47</u> /50					
* Proceed only if Fuel sub total is >25					
** Proceed to Structural component only if Wildfire Behaviour Score is >37 for unretreated polygons					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE <u>47</u> /250					
TOTAL WILDFIRE THREAT SCORE <u>132</u> /250					

Wildfire Behaviour Threat Class (when applicable only)

Low 0-40
 Moderate 41-95
 High 96-140
 Extreme >140

Wildland Urban Interface Threat Class (when applicable only)

Low 0-15
 Moderate 16-25
 High 26-39
 Extreme >39

Last Updated: January 26, 2017

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City of Kamloops – Wildfire Threat Assessment Picture – Plot 52



Photo 52-1 @ 360 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 53

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 53 Community: City of Kamloops

Assessor: B Morrow Geographic Location/Street Name: Rose Hill Park

Date: Apr 10/16 GPS/UTM: N50° 39' 29.9" W120° 17' 24.9"

Photos: 0 N #: 4 Land Ownership: Crown Private I.R. Other (specify)

53

Fuel	A	B	C	D	E
1 Duff Depth and Moisture Regime (cm)	3	2-5 Dry Zonal Wet 5 3 1	5-10 Dry Zonal Wet 10 6 2	10-20 Dry Zonal Wet 12 8 4	>20 Dry Zonal Wet 15 10 5
2 Surface Fuel Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Moss, Herbs, Irrigated Crops, Low Flammability Weeds 1	Herbs, Deciduous Shrubs 2	Lichen, Conifer Shrubs 3	Pinegrass, Juniper 4	Sagebrush, Branchgrass, Antelope Brush, Scotch Broom 5
4 Fine Woody Debris Continuity (<7cm) (% cover)	<10 coverage 0	Scattered, <10 coverage 1	10-25 coverage 2	>25 coverage, <10 cm deep 3	>25 coverage, >10 cm deep 4
5 Large Woody Debris Continuity (>7cm) (% cover)	<10 coverage 0	Scattered, <10 coverage 1	10-25 coverage 2	>25 coverage, not elevated 3	>25 coverage, partially elevated 4
6 Live and Dead Conifers Crown Closure (%)	20-40 1	20-40 2	41-60 3	61-80 4	>80 5
7 Live Deciduous Crown Closure (%)	>80 or >40% conifer/crown closure 1	61-80 2	41-60 3	20-40 4	<20 5
8 Live and Dead Conifer Crown Base Height (m)	5+ or <20% conifer crown closure 0	3-5 1	2-3 2	1-2 3	15 4
9 Live and Dead Suppressed and Understorey Canifers (stems/ha)	<500 0	501-1000 1	1001-2000 2	2001-4000 3	>4000 4
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Partly Down <5% or <20 stems/ha 0	Standing Dead and Partly Down 5-25 1	Standing Dead and Partly Down >25-50 2	Standing Dead and Partly Down >50-75 3	Standing Dead and Partly Down >75 4
11 Continuous Forest/Slash Cover within 2km (%)	0-20 0	21-40 1	41-60 2	>60 3	>80 4
Sub Total					41 /155*

Weather	A	B	C	D	E
12 Bioclimatic Zone	AT, Irrigated 1	CW1, CDE, AH, Dry Zonal Wet 5 3 1	KH, SWS, ESSF, Dry Zonal Wet 10 7 3	DI, MS, SBPS, CW1 d1 & d2, BWS, SW - Dry Zonal Wet 15 10 5	PP, BQ 15
13 Historical Wildfire Occurrence (by Wild Fire Zone)	G5, R1, R2, G6, V5, R9, V9, V3, R5, R8, R7 1	G3, G8, R3, R4, V6, G1, G9, V8 5	G7, C5, G4, C4, V1, C1, N6 8	N1, K5, K3, C2, C3, N5, N6, M4, K7, N2 10	N7, R2, N1 15
Sub Total					30 /30

Topography	A	B	C	D	E
14 Aspects (>15% slope)	North 0	East 5	<16% slope, 2 aspects 10	West 12	South 15
15 Slope (%)	15 1	16-29 and max score for North slopes 5	30-44 10	45-54 12	>55 15
16 Terrain	Flat 1	Rolling 3	Sloped terrain, minor low ridges/ draws 5	Consistent slope, deep draws or shallow gullies 7	Consistent slope, deep gullies 10
17 Landscape/ Topographic Limitations to Wildfire Spread	<5 ha isolated forest land 1	North and/or east aspects dominate, wildfire spread restricted from South and/or West 2	Mountainous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread 5	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread 10	Continuous, consistent topography No restriction to wildfire spread 15
Sub Total					92 /155 /240**

FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE	A	B	C	D	E
18 Position of Structures/ Community on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 5	Mid-slope benchland, elevated valley, <16% slope 10	Mid-slope continuous, >16% slope 15	Upper 1/3 of Slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter Interface, no industries 3	Perimeter Interface, with industries 5	Intermix > 1 structure/ha 8	Intermix < 1 structure/ha Infrastructure 10
20 Position of Assessment Area Relative to Values	No Structures Values within 2 km 0	Above >500 200-500 <200 m 1 10 20	Sidehill >500 200-500 <200 m 1 12 25	Flat/Rolling >500 200-500 <200 m 1 12 25	Below >500 200-500 <200 m 1 15 30
Sub Total					41 /55

* Proceed only if Fuel sub total is > 39.

** Proceed to Structural component only if Wildfire Threat Behaviour Score is > 95 for untreated polygons.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE 41 /55

TOTAL WILDFIRE THREAT SCORE 139 /295

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 41-95

High 96-149

Extreme >149

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13

Moderate 14-26

High 27-39

Extreme >39

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 53



Photo 53-1 @ 225 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 54

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: **54** Comments: **City of Kamloops**
 Address: **B. Macaul** Geographic Location (Street Name): **Rose Hill**
 Date: **Aug 18/16** GPS UTM: **N50 39' 28" W 128 15' 39.3"**
 Photos: **1** N **4** Land Ownership: Crown Private FR Other (specify):

Item	A	B	C	D	E
1. Soil Depth and Moisture Regime (cm)	1-3 3	4-5 Dry DM Wet 5	6-10 Dry DM Wet 10 6 2	11-20 Dry DM Wet 12 8 4	>20 Dry DM Wet 15 10 5
2. Surface Fuel Continuity (% cover)	<20 4	20-40 2	41-60 3	61-80 4	>80 5
3. Vegetative Fuel Composition	MOSS, Herbs, Injuncted Cops, Low Flammability Needs 1	Herbs, Deciduous Shrubs 2	Lichens, Conifer Shrubs 3	Prostrate 4	Sagebrush, Berchemia, Arid Slope Grass, Sparse Shrub 5
4. Fine Woody Debris Continuity (<2cm) (% cover)	<1 coverage 1	Scattered 2	10-25 coverage 3	>25 coverage <10 cm deep 4	>25 coverage >10 cm deep 5
5. Large Woody Debris Continuity (>2cm) (% cover)	<1 coverage 1	Scattered 2	10-25 coverage 3	>25 coverage not elevated 4	>25 coverage partially elevated 5
6. Live and Dead Conditions Crown Closure (%)	<20 2	20-40 3	41-60 4	61-80 5	>80 6
7. Live Deadness Crown Closure (%)	>80 or <40% continuous crown closure 0	61-80 1	41-60 2	20-40 3	<20 4
8. Live and Dead Canopy Crown Base Height (m)	5+ or <20% under crown closure 0	3-5 1	2-3 2	1-2 3	<1 4
9. Live and Dead Suppressed and Defoliated Canopy (% cover)	0-500 2	501-1000 3	1001-2000 4	2001-4000 5	>4000 6
10. Fuel Stacks (% of dominant and co-dominant species)	Standing Dead and Partially Dead 0	Standing Dead and Partially Dead 1	Standing Dead and Partially Dead 2	Standing Dead and Partially Dead 3	Standing Dead and Partially Dead 4
11. Continuous Forest/Stand Cover within 2km (m)	0-20 0	21-40 1	41-60 2	61-80 3	>80 4
Sub Total 75					
12. Aspect	A1, Injuncted 1	CRN, DR, MH Dry DM Wet 2	HN, SN, ESSE Dry DM Wet 3	NE, NS, SW, NW, N, S, SE, SW, W, W, Dry DM Wet 4	PP, PS 5
13. Aspect Wind Exposure (by NWB File Alert)	G5, R1, R2, G6, Y5, R6, Y6, X3, X5, R8, Y7 1	G5, G6, R3, R4, Y5, G3, G9, W4 2	G7, L5, G4, C4, V1, C1, W4 3	R1, R5, R1, C2, C1, R1, R4, R4, E2, R2 4	R7, R2, R1 5
Sub Total 25					
14. Aspect (>15% slope)	North 1	East 2	<10% slope all aspects 3	West 4	South 5
15. Slope (%)	<10 1	11-20 and less than 100% slopes 2	21-44 3	45-54 4	>55 5
16. Terrain	Flat 1	Rolling 2	Sloped terrain, intact forest 3	Complex slope, steep descent or shallow gullies 4	Complex slope, deep gullies 5
17. Landscape/Topographic Influences to Wildfire Spread	<5% isolated forest 1	North and/or east aspects, moderate, within 200m and/or West 2	Mountainous terrain, broken topography, regular aspect and slope changes, multiple aspects in wildfire spread large in gullies 3	North (NW), North West (NW), minimal aspect and slope changes, major restrictions to wildfire spread 4	Complex, consistent topography, no restrictions to wildfire spread 5
Sub Total 75					
FUEL, WEATHER AND TOPOGRAPHY WILDLAND URBAN INTERFACE THREAT SCORE					
18. Position of Structures/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 1	Mid-slope terrain, elevated valley, <10% slope 2	Mid-slope conditions, 15% slope 3	Upper 1/3 of slope 4
19. Type of Development	No Structures Values within 2 km 0	Permanent structures, no structures 1	Permanent structures, with structures 2	Temporary structures 3	Transient structures 4
20. Position of Access Road Relative to Values	No Structures Values within 2 km 0	Above >500 200-500 <200 m 1 2 3	Below >500 200-500 <200 m 4 5 6	Flat/rolling >500 200-500 <200 m 7 8 9	Below >500 200-500 <200 m 10 11 12
Sub Total 75					
* Proceed only if fuel wet loads > 25.					
** Proceed to Structural component only if Wildfire Threat Behaviour Score is > 55 (for untreated polygons).					
Wildfire Behaviour Threat Class (check applicable class)			Wildland Urban Interface Threat Class (check applicable class)		
Low	0-40	<input type="checkbox"/>	Low	0-15	<input type="checkbox"/>
Moderate	41-55	<input type="checkbox"/>	Moderate	16-26	<input checked="" type="checkbox"/>
High	56-70	<input checked="" type="checkbox"/>	High	27-36	<input type="checkbox"/>
Extreme	>70	<input type="checkbox"/>	Extreme	>36	<input type="checkbox"/>

Total Wildfire Threat Score: **42** / 75

Total Wildland Urban Interface Threat Score: **42** / 75

Last Updated: January 24, 2017

54

City of Kamloops – Wildfire Threat Assessment Picture – Plot 54



Photo 54-1 @ 180 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 55

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 55 Community: City of Kamloops
 Address: B. Brown Geographic Location/Street Name: Rose Hill
 Date: Apr 18/16 GPS/UTM: N50 39° 10.5' W120° 16' 44.5"
 Photos: 1, 2, 3, 4 Land Ownership: Crown Private I.L. (Other (specify))

55

Factor	A	B	C	D	E
1 Fuel Depth and Above-ground Fuel Load (kg)	1-12 1	13-24 Dry Fuel Wet 5 1	25-36 Dry Fuel Wet 10 0 2	37-48 Dry Fuel Wet 12 4 4	>49 Dry Fuel Wet 15 10 5
2 Surface Fuel Continuity (% cover)	<20 b	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Moist Herbs, Irrigated Crops, Low Flammability Herbs 1	20% Dry Grasses, 2	Lichens, Greater Shrubs 3	Fire-prone 4	Sagebrush, Berberis, Amelanchier, Scotch Broom 5
4 Fine Woody Debris Continuity (<4cm) (% cover)	<20 a	21-40 5	41-60 6	>61 coverage, not elevated 7	>61 coverage, partially elevated 8
5 Large Woody Debris Continuity (>7cm) (% cover)	<20 a	21-40 5	41-60 6	>61 coverage, not elevated 7	>61 coverage, partially elevated 8
6 Live and Dead Coniferous Crown Classes (%)	<20 a	21-40 5	41-60 6	61-80 7	>80 8
7 Live Deciduous Crown Classes (%)	>20 or <40% understorey canopy b	41-60 2	61-80 3	81-100 4	>100 5
8 Live and Dead Coniferous Base Height (m)	1.5 or <10% understorey canopy a	1-5 5	6-10 3	11-15 4	>15 5
9 Live and Dead Deciduous and Shrubbery Canopies (Structure)	0-5 a	6-10 5	11-15 6	16-20 7	>20 8
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Partly Down <5 a	Standing Dead and Partly Down 6-10 b	Standing Dead and Partly Down 11-15 c	Standing Dead and Partly Down 16-20 d	Standing Dead and Partly Down >20 e
11 Continuous Forest/Brush Cover within 20m (m)	0-20 4	21-40 3	41-60 2	61-80 1	>80 0
Sub Total 75/82					
Wildfire					
12 Dependence Zone	A, Irrigated 1	CWH, CDE, MH Dry Zone 5 3 1	H, H, ESS, ESS Dry Zone 10 7 3	EE, MS, SWS, CWH, H, B-402, BWS, Dry Zone 15 10 5	PS, PS 15
13 Structural Intensity Character (by Wild Fire Zone)	G1, H1, K2, G4, V5, K5, V4, Y1, R5, R6, V7 1	G1, G4, K3, H4, V5, G1, G4, V8 5	G7, G5, G4, C4, V1, C1, M4 6	K1, K5, K3, C2, C4, H5, K6, K4, K7, K2 10	H7, G4, K2, H1 9
Sub Total 75/79					
Topography					
14 Aspect (>15% slope)	North 0	East 5	<10% slope all aspects 10	West 12	South 15
15 Slope (%)	<10 1	10-25 and main slope for North aspects 5	10-25 10	26-54 12	>55 15
16 Terrain	Flat 1	Rolling 3	Sloped terrain, minor undulations 5	Conspicuous slope, deep draws or shallow gulches 7	Conspicuous slope, deep gulches 10
17 Landscape/Topographic Variability to Wildfire Spread	<5 ha isolated forest 1	North and/or east aspects normally, wildfire spread restricted from South and/or West 2	Increased terrain, topographic variability, north aspect and slope changes, north of structures in wildfire spread range 5	Sloping terrain, minor undulations, minimal aspect and slope changes, minor restrictions to wildfire spread 10	Cardinal, consistent topography, unrestricted to wildfire spread 15
Sub Total 75/75					
FUEL, WEATHER AND TOPOGRAPHY					
Sub Total 175/240					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
175/240					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
45/75					
TOTAL WILDFIRE THREAT SCORE					
115/245					

City of Kamloops – Wildfire Threat Assessment Picture – Plot 55



Photo 55-1 @ 90 degrees

City of Kamloops – Wildfire Threat Assessment Picture – Plot 56



Photo 56-1 @ 90 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 57

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 57 Location: City of Kamloops
 Address: B. Maroon Geographic Location/Street Name: Kinross Rd
 Date: Apr 10/16 GPS/UTM: N 50 37 51 W 120 20 44
 Photos: M F L Land Ownership: Crown Private LR Other (specify):

57

Item	A	B	C	D	E
1 Duff Depth and Moisture Regime (pts)	1-2 3	2-4 5 6-8 9	6-10 11-14 15-18 19-22	10-20 21-30 31-40 41-50	>20 21-30 31-40 41-50
2 Surface Fuel Continuity (Pt count)	<20 0	20-40 1	41-60 2	61-80 3	>80 4
3 Vegetation Fuel Composition	Moist. Herbs, Irrigated Crops, Low Flammability Weeds 1	Herbs, Deciduous Shrubs 2	Lichens, Conifer Shrub 3	Prognosis 4	Sagebrush, Backgrass, Tall Sage Brush, Scotch Broom 5
4 Fine Woody Debris Continuity (<7cm) (Pt count)	<1 coverage 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, <10 on deep 4	>25 coverage, >10 on deep 5
5 Large Woody Debris Continuity (>7cm) (Pt count)	<1 coverage 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, not elevated 4	>25 coverage, partially elevated 5
6 Live and Dead Coniferous Crown Closure (%)	<10 1	10-40 2	41-60 3	61-80 4	>80 5
7 Live Deciduous Crown Closure (%)	>75 1	61-80 2	41-60 3	20-40 4	<20 5
8 Live and Dead Coniferous Base Height (m)	5 or < 5 1	6-5 2	6-13 3	1-2 4	<1 5
9 Live and Dead Spruce and Fir (Pt count)	<50 1	50-100 2	100-200 3	200-400 4	>400 5
10 Forest Health (% of deadwood and up-remnant stems)	Standing Dead and Partly Down <5 1	Standing Dead and Partly Down 5-25 2	Standing Dead and Partly Down >25-50 3	Standing Dead and Partly Down >50-75 4	Standing Dead and Partly Down >75 5
11 Coniferous Forest/Stand Cover within 1km (Pt)	0-20 0	21-40 1	41-60 2	>60 3	>80 4
Sub Total 25 /150*					

Item	A	B	C	D	E
12 Windbreak Zone	All isolated 1	CWH, OR, WA Dry Zonal Wet 2	KH, SB, FST Dry Zonal Wet 3	DE, MS, SPS, TWH, L, B, L, D, FWS, WAB - Dry Zonal Wet 4	Other 5
13 Historical Wildfire Occurrence (by Wild Fire Zone)	G5, R1, R2, G6, W5, W6, W7, W8, W9, W10, W11, W12 1	G6, G8, G1, R4, W6, G1, G9, W8 2	G7, G5, G4, L4, W1, C1, M6 3	K1, K2, K3, C2, L1, M5, W6, M4, W7, W1 4	W1, W2, W3, W4, W5 5
Sub Total 20 /70					

Item	A	B	C	D	E
14 Aspect (>15% slope)	North 0	East 1	<15% slope, all aspects 2	West 3	South 4
15 Slope (%)	<10 1	10-20 and max. slope for North slopes 2	20-40 3	40-50 4	>50 5
16 Terrain	Flat 1	Rolling 2	Sloped terrain, minor low end of dunes 3	Level terrain, deep dunes or shallow valleys 4	Concentric slope, deep gulches 5
17 Landowner/Topographic Limitations to Wildfire Spread	<5 ha rolling forest land 1	Rolling and/or east aspects dominant, wildfire spread restricted from South and/or West 2	More/rolling forest, broken (topography) by regular aspect and slope changes, multiple aspect (100-500 m) rolling upland large north dunes 3	Rolling terrain, minor north dunes, material aspect and slope changes, minor restrictions to wildfire spread 4	Concentric, consistent topography, no restrictions to wildfire spread 5
Sub Total 19 /150**					

Item	A	B	C	D	E
18 Position of Structures/Community on Slope	No Structures, Values within 2 km 0	Bottom of slope, values bottom 1	Mid slope, backland, elevated valley, 10-15% slope 2	Mid slope, coniform, >15% slope 3	Upper 1/3 of Slope 4
19 Type of Development	No Structures, Values within 2 km 0	Perimeter interface, no structures 1	Perimeter interface, with structures 2	Interface > 1 structure/ha 3	Interface < 1 structure/ha 4
20 Proximity of Development Area Relative to Values	No Structures, Values within 2 km 0	Above >500 200-500 100-200 1 2 3	Below >500 200-500 <200 m 1 2 3	Flat/rolling >500 200-500 <200 m 1 2 3	Below >500 200-500 <200 m 1 2 3
Sub Total 15 /150					

* Proceed only if Fuel sub-total is > 95.
 ** Proceed to Structural component only if Wildfire Threat Behaviour Score is > 95 for untreated polygons.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE **250** /295

TOTAL WILDLAND THREAT SCORE **295**

Wildfire Behaviour Threat Class (check applicable class)	Wildland Urban Interface Threat Class (check applicable class)
Low 0-40 <input type="checkbox"/>	Low 0-33 <input type="checkbox"/>
Moderate 41-95 <input checked="" type="checkbox"/>	Moderate 34-76 <input checked="" type="checkbox"/>
High 96-140 <input type="checkbox"/>	High 77-120 <input type="checkbox"/>
Extreme >140 <input type="checkbox"/>	Extreme >120 <input type="checkbox"/>

(Last Updated: January 24, 2013)

City of Kamloops – Wildfire Threat Assessment Picture – Plot 57



Photo 57-1 @ 360 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 58

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot: **58** Community: **City of Kamloops**

Address: **Birchdown** Geographic Location/Street Name: **Juni to West**

Date: **Apr 18/16** GPS/UTM: **N55 39' 49.5" W120° 16' 40.1"**

Phone: **0 H # 41** Land Ownership: Crown Private I.L. (Other Specify)

58

Item	A	B	C	D	E
1 Fuel Load and Moisture Regime (pt)	0	1	2	3	4
2 Surface Fuel Continuity (% cover)	<20	20-40	41-60	61-80	>80
3 Vegetative Fuel Composition	Non. Herb. Arched (resp. low flammability) species	Herb. Deciduous Shrubs	Lign. Coarse Shrubs	Progress. Junger	Softwood, Broadleaf, Arched (resp. high flammability) species
4 Fine Woody Debris Continuity (<1cm) (% cover)	<1 coverage	Scattered, <10 coverage	10-25 coverage	>25 coverage, not windblown	>25 coverage, partially elevated
5 Large Woody Debris Continuity (>1cm) (% cover)	<5 coverage	Scattered, <18 coverage	10-25 coverage	>25 coverage, not windblown	>25 coverage, partially elevated
6 Live and Dead Conifers Crown Closure (%)	0	10-40	41-60	61-80	>80
7 Live Deciduous Crown Closure (%)	>10 or 80% cover (resp. crown closure)	61-80	41-60	20-40	<10
8 Live and Dead Conifer Crown Base Height (m)	5-10	3-5	2-3	1-2	<1
9 Live and Dead Suppressed and Understorey Canopy (Stems/Ac)	0	501-1000	1001-1800	1801-3000	>3000
10 Forest Health (% of stand and/or individual trees)	Standing Dead and Parly Down <5 or <20 stems/ha	Standing Dead and Parly Down	Standing Dead and Parly Down >25-50	Standing Dead and Parly Down >50-75	Standing Dead and Parly Down >75
11 Contiguous Forest/Slash Cover within 20m (m)	0-20	21-40	41-60	61-80	>80
Sub Total					35 /150*
12 Macroclimate (Wind)	A1, Arched	(W, W, S, NE) Dry Zonal Wet	(W, S, SE, E) Dry Zonal Wet	(E, NE, S, S, E) Mild 1.6 m2, (W, S, S, W) Dry Zonal Wet	(E, S, S, E) Mild 1.6 m2
13 Microclimate (Temperature by Windy Time Zone)	65, 41, 42, 66, 95, 99, 99, 99, 95, 94, 97	63, 66, 83, 84, 94, 91, 91, 94	67, 65, 64, 64, 91, 91, 94	81, 83, 82, 82, 85, 86, 84, 87, 82	97, 94, 92, 91
Sub Total					30 /80
14 Aspect (> 25% slope)	None	East	<10% slope all aspects	West	South
15 Slope (%)	<10	10-20	20-44	45-54	>54
16 Soils	Flm	Bedrock	Sloped terrain, eroded low relief dunes	Conformed slope, steep slopes, eroded dunes	Conformable slope, deep dunes
17 Landforms/Topographic Conditions for Wildfire Spread	<5 ha natural forest land	North and/or east aspects dominant, wildfire spread expected from South and/or West	Mountainous terrain, broken topography, regular aspect and slope changes, multiple orientations and wind spread large firefootprints	Rolling terrain, warm water bodies, minimal aspect and slope changes, fire spread from South and West	Conformable, continuous topography, no significant fire spread from North and/or West
Sub Total					17 /58
FUEL, WEATHER AND TOPOGRAPHY					82 /240**
18 Presence of Structures/Continuity on Slope	No Structures Values within 2 km	Bottom of slope, valley bottom	Mid-slope backland, elevated valley, <15% slope	Mid-slope, continuous, >15% slope	Upper 1/3 of Slope
19 Type of Development	No Structures Values within 2 km	Perimeter Interface no enclosures	Permeable interface with structures	Interface >1 structures	Interface <1 structures
20 Position of Assessment Area Relative to Values	No Structures Values within 2 km	Above >500 200-500 <200 m	Sloped >500 200-500 <200 m	Flat/rolling >500 200-500 <200 m	Below >500 200-500 <200 m
Sub Total					47 /78
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					129 /295

* Proceed only if fuel sub total is > 29.

** Proceed to Structural component only if Wildfire Behaviour Score is > 75 for untreated polygons.

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 41-65

High 66-140

Extreme >140

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13

Moderate 14-26

High 27-39

Extreme >39

City Updated: January 24, 2017

City of Kamloops – Wildfire Threat Assessment Picture – Plot 58



Photo 58-1 @ 35 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 59

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot # 59 Community City of Kamloops

Assessor B. Marlow Geographical Location/Sheet Name: Plot 59

Date Apr 19/16 GPS/UTM N50 30 31.3 UTM 16 13.2

Photos: 4 Land Ownership: Crown Private I.L. Other (specify):

59

Point	A	B	C	D	E
1 Root Depth and Moisture Potential (cm)	1-2 1	2-5 Dry Zonal Wet 5 3 1	5-10 Dry Zonal Wet 10 6 2	10-20 Dry Zonal Wet 22 4 4	>20 Dry Zonal Wet 15 10 5
2 Surface Fuel Continuity (% cover)	<20 0	20-40 2	41-60 1	61-80 4	>80 5
3 Vegetation Fuel Composition	Moss, Herbs, Moistured Grass, Low Flammability Woods	Herbs, Deciduous Shrubs 3	Elfin, Conifer Shrubs 3	Firegrass, Juniper 4	Sagebrush, Agropyron, Alnus, Birch, Spruce 5
4 Fine Woody Debris Continuity (<7mm) (% cover)	<5 1	Scattered, <10 coverage 5	10-25 coverage 7	>25 coverage, <10 m 4-6p 10	>25 coverage, >10 m 4-6p 15
5 Large Woody Debris Continuity (>7mm) (% cover)	<5 1	Scattered, <10 coverage 2	10-25 coverage 5	>25 coverage, not elevated 7	>25 coverage, partially elevated 10
6 Live and Dead Canoeover Crown Closure (%)	<20 1	20-40 5	41-60 10	61-80 15	>80 10
7 Live Debris Crown Closure (%)	>50 or 40% canopy crown closure 1	41-60 2	41-60 3	20-40 4	<20 5
8 Live and Dead Canoeover Base Height (m)	1+ or 20m canopy crown closure 1	2-5 5	2-3 7	1-2 10	<1 15
9 Live and Dead Suppressed and Unburned Canopy (m)	<2 1	501-1000 5	1001-2000 10	2001-4000 20	>4000 30
10 Forest Health (% of dominant and co-dominant species)	Standing Dead and Partially Dead <5 or >70 P&D 1	Standing Dead and Partially Dead 5-15 5	Standing Dead and Partially Dead >15-30 10	Standing Dead and Partially Dead >30-75 20	Standing Dead and Partially Dead >75 30
11 Continuity Forest/Grass Cover within 2km (m)	0-20 0	21-40 3	41-60 5	61-80 7	>80 10
Sub Total 2155*					
12 Woodstock Zone	A1, Impreg	CW4, CDE, A61 Dry Zonal Wet 3 3 3	KW, SWS, ESSF Dry Zonal Wet 12 7 3	RE, MS, SPS, CEM, A1 & 6.2, BWS, SWS - Dry Zonal Wet 15 10 5	10
13 Historical Wildfire Occurrences (by 100m Fire Zone)	05, R1, R2, G4, Y1, R3, Y5, Y3, R5, R6, R7 3	03, 06, R1, R4, Y6, G1, G2, Y8 5	G7, G3, G4, G4, Y1, Y1, Y6 1	K1, R5, K2, G2, G3, M5, F4, R4, R7, R2, R8 10	M7, R4, R3, M1 10
Sub Total 30					
14 Aspect (>15% slope)	100 1	East 5	<10% slope all aspects 10	West 17	South 15
15 Slope (%)	<10 1	10-20 gradual slope 10	20-40 10	40-54 17	>55 15
16 Slope	Flat 1	Rolling 3	Steep, rolling, minor fire risk 5	Consistent slope, steep curves or shallow gullies 7	Consistent slope, deep gullies 10
17 Elevation/Topographic Obstacles to Wildfire Spread	<5 m no isolated forest land 1	North westerly aspect, generally, wildfire spread restricted from South westerly 2	Mountainous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread 5	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread 10	Continuous, consistent topography, no restrictions to wildfire spread 15
Sub Total 255					
FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					
2155 + 30 + 255 = 2440					
18 Position of Structures/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottoms 5	Mid-slope benches, elevated valleys, <10% slope 10	Mid-slope summits, >10% slope 17	Upper 1/3 of Slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter Interface, no structures 3	Perimeter Interface, with structures 5	Interface >1 structure 10	Interface <2 structures/infrastructure 10
20 Position of Accessional Area relative to Values	No Structures Values within 2 km 0	Above >500 200-500 <100 m 1 10 20	Scrub >500 200-500 <100 m 1 12 25	Flat/Rolling >500 200-500 <100 m 1 12 25	Steep >500 200-500 <100 m 1 15 30
Sub Total 47					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
2440 + 47 = 2487					

City of Kamloops – Wildfire Threat Assessment Picture – Plot 59



Photo 59-1 @ 360 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 60

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-burnt Post-burnt

Plot # **60** Community **City of Kamloops**

Assessor **B. Maxwell** Geographic Location/Street Name **Juniper West**

Date **Apr 19/16** GPS UTM: **N 50 37 35.8 W 120 16 13.8**

Photos: N E S W Land Ownership: Crown Private I.R. Other (specify)

Factor	A	B	C	D	E
1 Fuel Depth and Moisture Regain Rate	1-1 1	2-5 2 Dry Fuel Wet 3	6-10 Dry Fuel Wet 10 6 2	11-20 Dry Fuel Wet 12 3 4	>20 Dry Fuel Wet 15 4 5
2 Fuel Fuel Continuity (F-Cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Herb. Herbs, Pruned Crops, Low Flammability Needs 1	Herbs, Deciduous Shrubs 2	Lichen, Conifer Shrubs 3	Managers, Juniper 4	Superior, Berberis, Malva, Redwood, Tamarix 5
4 Fine Woody Debris Continuity (<75mm F-Cover)	<1 coverage 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, <10cm deep 4	>25 coverage, >10cm deep 5
5 Large Woody Debris Continuity (>75mm F-Cover)	<1 coverage 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, not elevated 4	>25 coverage, partially elevated 5
6 Litter and Dead Coniferous Green Cover (F-Cover)	<50 1	51-60 2	61-70 3	71-80 4	>80 5
7 Live Coniferous Green Cover (F-Cover)	>80 or <40% continuous crown (F-Cover) 1	61-80 2	81-90 3	91-100 4	>100 5
8 Live and Dead Coniferous Green Matter (F-Cover)	5- or <20% conifer crown (F-Cover) 1	21-50 2	51-100 3	101-200 4	>200 5
9 Live and Dead Suppressed and Understorey Conifer (F-Cover)	0-50 1	51-100 2	101-200 3	201-400 4	>400 5
10 Fuel Moisture (% of available and in-situ water)	Moisture level and Fuel Moisture < 5 or <10 stems of 10 1	Standard Deviation Fuel Moisture 2	Standard Deviation Fuel Moisture 3	Standard Deviation Fuel Moisture 4	Standard Deviation Fuel Moisture 5
11 Continuous Fuels/Slash Cover Within 20m (F-Cover)	0-20 1	21-40 2	41-60 3	61-80 4	>80 5
Sub Total 7150*					
12 Meteorological Zone	A1 Brought 1	CWA, CDE, NH Dry Fuel Wet 2	CW, SWS, SST Dry Fuel Wet 3	FE, NS, SWS, CWA, SWS, DWS, SWS Dry Fuel Wet 4	PE, SW 5
13 Historical Weather Data (F-Cover)	05, R1, R2, G6, Y5, R9, R9, R9, R9, R9, R9 1	05, G6, R3, R4, Y5, G1, G9, Y6 2	07, G5, G4, G4, Y1, G1, M6 3	R1, R3, R3, G2, G3, M5, R6, R4, R7, R2 4	R7, R4, R2, R1 5
Sub Total 30/30					
14 Aspects (>15% slope)	North 1	East 2	<10% slope all aspects 3	West 4	South 5
15 Slope (F-Cover)	<10 1	11-20 and less steep 2	21-40 3	41-60 4	>60 5
16 Permeability	Flat 1	Rolling 2	Slopes variable, when low relief areas 3	Complex slopes, steep change in elevation 4	Complex slopes, steep change in elevation 5
17 Landcover/Topographic Characteristics in Interface Area	< 5ha isolated forest 1	North and/or east aspects, moderate, within 100m restricted from South and/or West 2	Mountainous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread 3	Rolling terrain, minor water bodies, irregular aspect and slope changes, some restrictions to wildfire spread 4	Complex, irregular topography, no restrictions to wildfire spread 5
Sub Total 17/25					
FUEL, WEATHER AND TOPOGRAPHY					
Sub Total 100/240**					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
18 Position of Structure Continuity on Slope	No Structure Values within 2 km 1	Bottom of slope, valley bottom 2	Mid-slope level, elevated valley, <10% slope 3	Mid-slope level, steep slope 4	Upper 1/3 of Slope 5
19 Type of Development	No Structures Values within 2 km 1	Perimeter structure, no enclosures 2	Perimeter structure, with enclosures 3	Interior > 1 structure 4	Interior < 1 structure 5
20 Position of Development Area Relative to Values	No Structures Values within 2 km 1	Above >500 200-500 <200 m 2	Sideline >500 200-500 <200 m 3	Flat/Rolling >500 200-500 <200 m 4	Below >500 200-500 <200 m 5
Sub Total 17/25					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
Sub Total 100/240**					
TOTAL WILDLAND THREAT SCORE					
Sub Total 17/25					

* Proceed only if Fuel sub total is >24.
** Proceed to Structural component only if Wildfire Threat Behaviour Score is >95 for examined polygons.

Wildfire Behaviour Threat Class (when applicable):
 Low 0-40
 Moderate 41-65
 High 66-149
 Extreme >149

Wildland Urban Interface Threat Class (when applicable):
 Low 0-23
 Moderate 24-26
 High 27-33
 Extreme >33

Last Update: January 24, 2013

60

City of Kamloops – Wildfire Threat Assessment Picture – Plot 60



Photo 60-1 @ 180 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 61

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-1947/88 Post-1947/88

Plot # 61 Community City of Kamloops

Assessor B. Marrow Geographic Location/Street Name Juniper West

Date Apr 13/16 GPS UTM N50 391 20.7 11205 16 16

Photos 20 Land Ownership Crown Private I.R. Other (specify)

Factor	A	B	C	D	E
1 Fuel Build and Moisture Regime (cm)	1-2 3	Less Dry 5	5-10 Dry 10 5 2	15-20 Dry 12 8 4	>20 Dry 15 10 5
2 Surface Fuel Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Population Fuel Composition	Woods, Herbs, Irrigated Crops, Low Flammability Woods 1	Herbs, Deciduous Shrubs 2	Lichens, Conifer Shrubs 3	Deciduous, Larch 4	Signetree, Larch, Spruce, Fir, Deciduous 5
4 Fine Woody Debris Continuity (<=7cm) (% cover)	<1 coverage 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, <10 cm deep 4	>25 coverage, >10 cm deep 5
5 Large Woody Debris Continuity (>7cm) (% cover)	<5 coverage 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, not elevated 4	>25 coverage, partially elevated 5
6 Live and Dead Conifers Crown Closure (%)	<20 1	21-40 2	41-60 3	61-80 4	>80 5
7 Live Deciduous Crown Closure (%)	>40 or <40% canopy crown closure 1	41-60 2	61-80 3	81-100 4	>100 5
8 Live and Dead Conifer Crown Base Height (m)	5m or <20% canopy crown closure 1	5-5 2	2-3 3	4-2 4	15 5
9 Live and Dead Suppressed and Intermediate Canopy (storeys)	<500 1	501-1000 2	1001-1800 3	2001-4000 4	>4000 5
10 Forest Health (% of standing and co-dominant canopy)	Standing Dead and Patchy Down <5 or <20 stems/ha 1	Standing Dead and Patchy Down 5-20 2	Standing Dead and Patchy Down >25-50 3	Standing Dead and Patchy Down >50-75 4	Standing Dead and Patchy Down >75 5
11 Continuous Forest/Slash Cover within 20m (m)	0-20 1	21-40 2	41-60 3	61-80 4	>80 5
Sub Total <u>64</u> /155*					
12 Microclimate Zone	AL卑詩	CWA, CDE, AH Dry Zonal Wet 3	KW, WS, ESSF Dry Zonal Wet 4	ME, MS, SPS, CWD&S, DCZ, PWS, SWS Dry Zonal Wet 5	PE, EG 15
13 Historical Wildfire Disturbance Dry (W&F Fire Zone)	65, N1, R2, G5, V5, R5, V5, V5, R5, N1, T7 1	61, G6, R2, R4, W4, G1, G2, W4 2	67, G5, G6, G6, V1, L1, M4 3	81, K5, L2, C2, C3, M5, M1, M4, M7, M2 4	M7, G2, M7 5
Sub Total <u>25</u> /210					
14 Topography	A	B	C	D	E
14 Aspect (>15% slope)	East 1	East 2	<10% slope all aspects 3	West 4	South 5
15 Slope (%)	<14 1	14-29 equian slope for 100% slope 2	30-44 3	45-64 4	>65 5
16 Terrain	Flat 1	Rolling 2	Slope terrain, minor fuel breaks 3	Consistent slope, deep draws or shallow gullies 4	Consistent slope, deep gullies 5
17 Landscape Topographic Continuity to Wildfire Spread	<5 the isolated forest land 1	Rolling and/or 10m aspects dominant, relative spread restricted from South and/or West 2	Mid-slopes to high, broken topography, regular aspect and slope changes, multiple restrictions, rolling terrain 3	Rolling terrain, minor water bodies, minimal aspect and slope changes, no or few breaks to wildfire spread 4	Continuous, consistent topography, no restrictions to wildfire spread 5
Sub Total <u>17</u> /255					
FUEL, WEATHER AND TOPOGRAPHY WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
Sub Total <u>106</u> /740**					
18 Position of Structures/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 1	Mid-slope to enclosed, isolated valley, <10% slope 2	Mid-slope to exposed, >10% slope 3	Upper 1/3 of slope 4
19 Type of Development	No Structures Values within 2 km 0	Perimeter interface, no enclosures 1	Perimeter interface with fences 2	Interior > 1 structure/ha 3	Interior <1 structure/ha 4
20 Position of Accession Area Relative to Values	No Structures Values within 2 km 0	Above >500 200-500 <500 m 1 10 20	Subsidiary >500 200-500 <500 m 1 12 23	Flanking >500 200-500 <500 m 1 12 25	Below >500 200-500 <500 m 1 15 30
Sub Total <u>153</u> /753					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
Sub Total <u>259</u>					

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Medium 41-65

High 66-149

Extreme >149

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13

Medium 14-26

High 27-39

Extreme >39

Last updated: November 24, 2013

61

City of Kamloops – Wildfire Threat Assessment Picture – Plot 61



Photo 61-1 @ 360 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 62

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot: 62 Community: City of Kamloops

Assessor: B. Morrison Geographic Location/Street Name: Juniper West

Date: Apr 19/16 GIS/ID: N50 39' 29.2" W120° 15' 41.8"

Photos: 4 Land Ownership: Crown Private I.R. Other (Specify):

62

Item	A	B	C	D	E
1 Fuel Moisture and Structure Fuel (ft)	1-2 3	3-5 Dry Dead Wet 3 3 3	5-10 Dry Dead Wet 10 4 2	10-20 Dry Dead Wet 12 8 4	>20 Dry Dead Wet 15 10 5
2 Surface Fuel Continuity (ft cover)	<20 0	20-40 2	40-60 3	60-80 4	>80 5
3 Reproductive Fuel Composition	Herb. Herb. Trilled Craps, Low Flammability Needs 1	Herb. Deciduous Shrubs 2	Lichen, Coiler Shrubs 3	Pinus, Juniper 4	Sapwood, Resinous, Knapweed Birch, Salix, Willow 5
4 Fine Woody Debris Continuity (<4" diam) (% cover)	<1 coverage 0	Scattered, <10 coverage 1	10-25 coverage 2	>25 coverage, <80cm deep 3	>25 coverage, >10cm deep 4
5 Large Woody Debris Continuity (>4" diam) (% cover)	<1 coverage 0	Scattered, <10 coverage 1	10-25 coverage 2	>25 coverage, not stacked 3	>25 coverage, partially stacked 4
6 Live and Dead Lushness Crown Closure (%)	<20 0	20-40 1	40-60 2	60-80 3	>80 4
7 Live Deadness Crown Closure (%)	>80% <40% Low live crown closure 0	40-60 1	40-60 2	20-40 3	<20 4
8 Live and Dead Canopy Crown Base Height (m)	5+ or <20% canopy down canopy 4	3-5 5	2-3 7	1-2 10	<1 15
9 Live and Dead Suppressed and Unproductive Canopies (Stems/ha)	<500 0	501-1000 1	1001-3000 2	3001-6000 3	>6000 4
10 Fuel Health (% of dominant and co-dominant species)	Standing Dead and Partly Dead or >50% decay 0	Standing Dead and Partly Dead 5-25 1	Standing Dead and Partly Dead 25-50 2	Standing Dead and Partly Dead >50-75 3	Standing Dead and Partly Dead >75 4
11 Greenness Forest/Stand Cover within 20m (m)	0-20 0	21-40 1	41-60 2	61-80 3	>80 4
Sub Total					219 / 158*

Microclimate	A	B	C	D	E
12 Exposure/Aspect	All exposed 1	Low, SW, NW Dry Dead Wet 5 3 1	Low SW, SE Dry Dead Wet 10 7 2	High, SW, SE, Fenced & m2. Sheltered - Dry Dead Wet 10 10 5	High SW 15
13 Historical Wildfire Disturbance by Wild Fire Agent	65, 81, 82, 84, 95, 96, 98, 99, 102, 103, 107 1	66, 68, 83, 86, 94, 61, 60, 98 5	67, 65, 64, 66, 91, 61, 86 4	71, 85, 83, 82, 83, 85, 86, 84, 87, 82 10	87, 86, 82, 81 15
Sub Total					30 / 210

Topography	A	B	C	D	E
14 Aspect (>15% slope)	North 0	East 5	<10% slope All aspects 10	West 12	South 15
15 Slope (%)	<10 0	10-20 1	20-40 2	40-60 3	>60 4
16 Slope	Flat 0	Rolling 1	Sloped terrain, minor topographic relief 2	Consistent slope, deep draws or shallow gullies 3	Consistent slope, deep gullies 4
17 Landscape Topographic Heterogeneity or Wildfire Spread	< 5 ha isolated forest land 1	North and/or east aspects dominant, wildfire spread restricted from South and/or West 2	Heterogeneous terrain, broken topography, regular aspect and slope changes, multiple size classes and large trees 3	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor size class to wildfire spread 4	Continuous, consistent topography, no restrictions to wildfire spread 5
Sub Total					158 / 120**

FUEL, WEATHER AND TOPOGRAPHY	A	B	C	D	E
18 Proximity of Structures/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 5	Mid-slope benches, elevated valley, <15% slope 10	Mid-slope continues, >15% slope 15	Water 1/3 of Slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter interface, no inaccess 5	Perimeter interface, with inaccess 10	Interface > 5 structures 15	Interface < 1 structure/ha interface 20
20 Position of Assessment Area Relative to Values	No Structures Values within 2 km 0	Above >500 200-500 <200 m 1 10 20	Below >500 200-500 <200 m 1 10 20	Below >500 200-500 <200 m 1 10 20	Below >500 200-500 <200 m 1 10 20
Sub Total					158 / 120**

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 41-95

High 96-149

Extreme >149

Wildland Urban Interface Threat Class (check applicable class)

Low 0-11

Moderate 12-20

High 21-30

Extreme >30

Wildfire Behaviour Threat Score: 219

Wildland Urban Interface Threat Score: 136

Final Wildfire Threat Score: 219

Legend Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 62

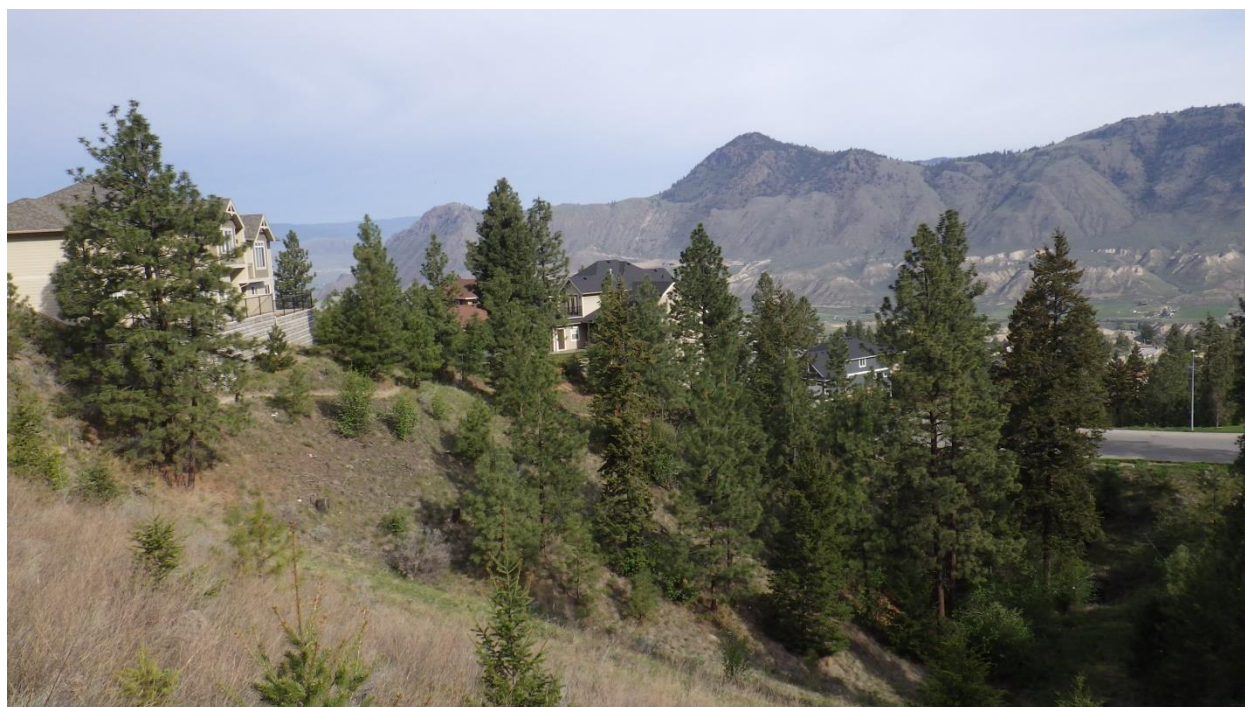


Photo 62-1 @ 330 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 63

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: **63** Community: **City of Kamloops**

Assessor: **B. Marlow** Geographic Location/Street Name: **501-2000 West**

Date: **Apr 19/16** GPS UTM: **N50 391 28.6 W124 15 41.4**

Photos: **8** Land Ownership: Public Private I.R. Other (specify):

Panel	A	B	C	D	E
1 Duff Depth and Moisture Regime (m)	1-2 3	3-5 Dry (Total Wet) 5 3	5-20 Dry (Total Wet) 10 6 2	16-20 Dry (Total Wet) 12 8 4	>20 Dry (Total Wet) 15 10 5
2 Soil/Plant Community (FR cover)	<20 4	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Moist. Herbs, Irrigated Crops, Low Flammability Weeds 1	Herbs, Deciduous Shrubs 2	Lichens, Conifer Shrubs 3	Shrubs, Mallee 4	Sagebrush, Deciduous, Herbaceous Areas, Softly Brown 5
4 Site Windy (Urban Continuity) (<=70m) (FR cover)	<1 coverage 1	Scattered, <10 coverage 2	30-25 coverage 3	>25 coverage, <10m deep 4	>25 coverage, >10m deep 5
5 Large Windy (Urban Continuity) (>70m) (FR cover)	<1 coverage 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, not adjacent 4	>25 coverage, partially adjacent 5
6 Live and Dead Conditions (FR cover)	<20 2	21-40 3	41-60 4	61-80 5	>80 6
7 Live and Dead Conditions (FR cover)	>80m <40% continuous crown closure 1	61-80 2	81-100 3	20-40 4	>20 5
8 Live and Dead Conditions (FR cover)	5+ or <20% continuous crown closure 1	3-5 2	3-13 3	1-12 4	>15 5
9 Live and Dead Suppressed and Standstagnant Conditions (FR cover)	0-200 1	501-1000 2	1001-2000 3	2001-4000 4	>4000 5
10 Forest Health (% of dominant and co-dominant species)	Standing Dead and Fully Down <5 or <20 (10/100) 1	Standing Dead and Fully Down 2-25 2	Standing Dead and Fully Down >25-50 3	Standing Dead and Fully Down >50-75 4	Standing Dead and Fully Down >75 5
11 Continuous Forest/Stand Cover within 200m (FR)	0-20 1	21-40 2	41-60 3	61-80 4	>80 5
Sub Total 753					
12 Proportional Zone	M, R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100	CW, DR, MH, Dry (Total Wet) 1	NC, SRS, SSF, Dry (Total Wet) 2	SE, MS, SRS, CW, DR, R2, DWS, SW, Dry (Total Wet) 3	PR, R6 4
13 Adjacent Proximity (Distance by Wildfire Zone)	G6, B1, R2, G6, V5, R9, V9, V5, R5, R9, V7 1	G3, G4, R3, G4, V6, G1, G9, V4 2	G7, G5, G4, G4, V1, G1, R6 3	R1, R3, R3, G2, G3, R5, R6, R4, R7, R2 4	R4, R2, R1 5
Sub Total 25					
14 Aspects (>15% slope)	North 1	East 2	<10% slope all aspects 3	West 4	South 5
15 Slope (FR)	<10 1	10-20 average slope for North Slopes 2	20-40 3	41-54 4	>55 5
16 Soils	Flat 1	Rolling 2	Sloped terrain, minor low relief areas 3	Complex slope, deep ditches or shallow gullies 4	Consistent slope, deep gullies 5
17 Landmark/Topographic Continuity to Wildfire Spread	<5 ha isolated forest 1	North and/or east aspects dominant, wildfire spread restricted from South and/or West 2	Multiple barriers, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread 3	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread 4	Continuous, consistent topography, no restrictions to wildfire spread 5
Sub Total 755					
FUEL, WEATHER AND TOPOGRAPHY WILDLAND URBAN INTERFACE THREAT SCORE					
18 Position of Structures/Community on Slope	No Structures 1	Bottom of slope, valley bottom 2	Mid-slope benchland, elevated valley, <10% slope 3	Mid-slope, continuous, >10% slope 4	Upper 1/2 of slope 5
19 Type of Development	No Structures 1	Perimeter interface, no structures 2	Perimeter interface with structures 3	Interior > 3 structures/ha 4	Interior < 1 structure/ha with structures 5
20 Proximity of Assessment Area Relative to Wetlands	No low lying values within 200m 1	Above >500 200-500 <200 m 2	Sideline >500 200-500 <200 m 3	Flat/following >500 200-500 <200 m 4	Below >500 200-500 <200 m 5
Sub Total 190					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE 729					
TOTAL WILDFIRE THREAT SCORE 729					

* Proceed only if fuel sub total is >= 25.
** Proceed to structural component only if Wildfire Threat Behavior Score is >= 65 for untreated polygons.

Wildfire Behavior Threat Class (check applicable class)

Low 0-40
 Moderate 41-65
 High 66-100
 Extreme >100

Wildland-Urban Interface Threat Class (check applicable class)

Low 0-15
 Moderate 16-26
 High 27-38
 Extreme >38

Last updated: January 24, 2013

63

City of Kamloops – Wildfire Threat Assessment Picture – Plot 63



Photo 63-1 @ 200 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 64

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot # **64** Community: **City of Kamloops**

Assessor: **B Morrow** Geographic Location/Street Name: **Juniper Ridge**

Date: **Apr 19/16** GPS/UTM: **WSD 39 30 WNA 141 58 2 E**

Photos: **1** N **2** F **4** Land Ownership: Crown Private I.R. Other (specify)

64

Fuel	A	B	C	D	E
1 Buff Depth and Moisture Regime (cm)	1-2 3	2-5 Dry Zonal Wet 5 1	5-10 Dry Zonal Wet 10 6 2	10-20 Dry Zonal Wet 12 8 4	>20 Dry Zonal Wet 15 10 5
2 Surface Fuels Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Moss, Herbs, Irrigated Grass, Low Flammability Weeds 1	Herbs, Deciduous Shrubs 2	Lichen, Conifer Strubs 3	Pinegrass 4	Sagebrush, Puncturegrass, Antelope Grass, Scotch Broom 5
4 Fine Woody Debris Continuity (<=7cm) (% cover)	<1 coverage 1	Scattered, <10 coverage 5	10-25 coverage 7	>25 coverage, <10 cm deep 10	>25 coverage, >10 cm deep 15
5 Large Woody Debris Continuity (>7cm) (% cover)	<1 coverage 1	Scattered, <10 coverage 2	10-25 coverage 5	>25 coverage, not elevated 7	>25 coverage, partially elevated 10
6 Live and Dead Coniferous Crown Closure (%)	<20 2	21-40 5	41-60 10	61-80 15	>80 10
7 Live Deciduous Crown Closure (%)	>80 or <40% coniferous crown closure 0	61-80 2	41-60 3	20-40 4	>80 5
8 Live and Dead Conifer Crown Base Height (m)	5+ or <20% conifer crown closure 0	3-5 5	<2-3 7	1-2 10	<1 15
9 Live and Dead Suppressed and Understorey Litter (stems/ha)	0-20 2	501-1000 5	1001-2000 10	2001-4000 20	>4000 30
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Partly Down <5 or <20 stems/ha 0	Standing Dead and Partly Down 5-25 5	Standing Dead and Partly Down >25-50 10	Standing Dead and Partly Down >50-75 20	Standing Dead and Partly Down >75 30
11 Continuous Forest/Slash Cover within 2km (%)	0-20 0	21-40 3	41-60 5	61-80 7	>80 10
Sub Total 41 /155*					

Weather	A	B	C	D	E
12 Biogeoclimatic Zone	AI, Irrigated 1	CWH, CDF, MH Dry Zonal Wet 3 1	ICH, SBS, ESSF Dry Zonal Wet 10 7 3	IDE, MS, SBPS, CWH dt1 & dt2, BWS, SWP Dry Zonal Wet 15 10 5	PP, BG 15
13 Historical Wildfire Occurrence (by WMB Fire Zone)	G5, R1, R2, G6, V5, R9, V9, V3, R5, R8, V7 1	G3, G8, R3, R4, V6, G1, G9, V8 5	G7, C5, G4, C4, V1, C1, N6 8	K1, K5, K3, C2, C3, N5, R6, N4, K7, N2 10	N7, K2, N1 15
Sub Total 25 /30					

Topography	A	B	C	D	E
14 Aspects (>15% slope)	North 0	East 5	<16% slope all aspects 10	West 12	South 15
15 Slope (%)	<16 1	16-29 and max score for north slopes 5	30-44 10	45-54 12	>55 15
16 Terrain	Flat 1	Rolling 3	Sloped terrain, minor low relief draws 5	Consistent slope, deep draws or shallow gullies 7	Consistent slope, deep gullies 10
17 Landscape/Topographic Limitations to Wildfire Spread	<5 ha isolated forest land 1	North and/or east aspects dominate, wildfire spread restricted from South and/or West 2	Mountainous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread and large water bodies 5	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread 10	Continuous, consistent topography, No restriction to wildfire spread 15
Sub Total 17 /55					

FUEL, WEATHER AND TOPOGRAPHY	WILDFIRE BEHAVIOUR THREAT SCORE				
Structural	A	B	C	D	E
18 Position of Structures/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 5	Mid-slope benchland, elevated valley, <16% slope 10	Mid-slope continuous, >16% slope 12	Upper 1/3 of Slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter Interface, no inclusions 3	Perimeter Interface, with inclusions 5	Intermix >1 structure/ha 8	Intermix <1 structure/ha Infrastructure 10
20 Position of Assessment Area Relative to Values	No Structures Values within 2 km 0	Above >500 200-500 200-100 1 10 20	Sideline >500 200-500 <200 m 1 12 25	Flat/Rolling >500 200-500 <200 m 1 12 25	Below >500 200-500 <200 m 1 1 30
Sub Total 39 /55					

*Proceed only if Fuel sub total is >29.

** Proceed to Structural component only if Wildfire Threat Behaviour Score is >95 for untreated polygons.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE **75**

TOTAL WILDFIRE THREAT SCORE **1295**

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 41-95

High 96-149

Extreme >149

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13

Moderate 14-26

High 27-39

Extreme >39

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 64



Photo 64-1 @ 45 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 65

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 65 Community: City of Kamloops

Assessor: B. Mayr, A.W. Geographic Location/Street Name: Juniper Ridge

Date: April 16 GPS UTM: N50 39' 21.1" W120 40' 59.5"

Photos: H V L Land Ownership: Crown Private I.R. Other (specify)

#	A	B	C	D	E
1	1-2 3	2-5 Dry-Zonal Wet 3	5-10 Dry-Zonal Wet 16 6 2	14-20 Dry-Zonal Wet 17 8 4	>20 Dry-Zonal Wet 15 10 5
2	<20 0	20-40 2	41-60 3	61-80 4	81-100 5
3	Moist, Alkaline, Highly Fertile, Low Flammability Needs 1	Wet, Perennial Shrubs 2	Lichen, Grass Shrubs 3	Arboreal, Shrubs 4	Scrubland, Bunchgrass, Knapweed Barren, South-facing 5
4	<1 coverage 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, < 80 cm deep 18	>25 coverage, > 10 cm deep 15
5	<1 coverage 1	Scattered, < 10 coverage 2	10-25 coverage 3	>25 coverage, not elevated 4	>25 coverage, partially elevated 10
6	<20 1	21-40 2	41-60 3	61-80 4	81-100 5
7	>90 or <40% coniferous crown closure 5	61-80 2	41-60 3	20-40 4	10-20 5
8	54 or <20% (after crown closure) 1	21-40 2	41-60 3	61-80 4	81-100 5
9	0-500 2	501-1000 3	1001-2000 4	2001-4000 5	>4000 6
10	Standing Dead and Partly Down < 5 or <20 stems/ha 1	Standing Dead and Partly Down 5-25 2	Standing Dead and Partly Down >25-50 3	Standing Dead and Partly Down >50-75 4	Standing Dead and Partly Down >75 5
11	0-20 1	21-40 2	41-60 3	61-80 4	81-100 5
Sub Total 255					
12	A1, Irrigated 1	CW1, CDE, MH Dry-Zonal Wet 5 3 1	RC1, SRS, ESSF Dry-Zonal Wet 10 7 3	DE, MS, SPS, SW1, SW2, SW3 Dry-Zonal Wet 15 12 5	ME, BE 15
13	G5, H1, H2, G6, P5, P6, P7, P8, R1, R2, R3, R7 1	G1, G4, R1, R4, V6, G1, G6, V8 5	G7, C5, G4, C4, V1, C1, M4 6	H1, H5, H3, C2, C3, H5, H4, H4, R7, R2 10	H7, H2, H1 15
Sub Total 70					
14	North 1	East 5	<15% slope, all aspects 10	West 12	South 15
15	<16 1	16-25 2	26-40 3	41-54 4	>55 5
16	Flat 1	Hilly 5	Sloped terrain, minor level of crown 5	Complex terrain, deep draws or small pools 10	Considerable slope, deep draws 10
17	< 5 has isolated trees level 1	North and/or east aspects, north-facing, suitable ground restricted flow South and/or West 2	Mountainous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread 3	Hilly terrain, minor water features, moderate aspect and slope changes, minor restrictions to wildfire spread 4	Level areas, flat plain topography Minimal to wildfire spread 5
Sub Total 255					
FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					
18	No Structures Values within 2 km 0	Bottom of slope, valley bottom 5	Mid-slope benchland, elevated valley, <10% slope 10	Mid-slope (coniferous), >10% slope 15	Upper 1/3 of slope 15
19	No Structures Values within 2 km 0	Perimeter interface, no inclusions 5	Perimeter interface, inclusions 10	Interface > 1 structure/ha 15	Interface < 1 structure/ha infrastucture 10
20	No Structures Values within 2 km 0	Below >500 100-500 10 10	Below >500 200-500 <200 m 1 12 25	Below >500 200-500 <200 m 1 12 25	Below >500 200-500 <200 m 1 15 30
Sub Total 255					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
TOTAL WILDFIRE THREAT SCORE 294					

Wildfire Behaviour Threats Class (check applicable class)

Low 0-40

Moderate 41-60

High 61-80

Extreme >100

Wildland Urban Interface Threats Class (check applicable class)

Low 0-11

Moderate 12-24

High 25-50

Extreme >50

LAST (Revised: January 24, 2013)

65

City of Kamloops – Wildfire Threat Assessment Picture – Plot 65



Photo 65-1 @ 200 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 66

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot # 66 Comments City of Kamloops

Assessor B. Brown Geographic Location/Street Name Juniper Ridge

Date Apr 19/16 Elevation 150° 39' 20.7" W 120° 14' 03.1" N

Parcel # 0 H 4 Land Ownership: Public Private Other (Specify)

66

Field	A	B	C	D	E
1 Fuel Type and Moisture Regime (cat)	1-2 3	2-5 Dry Fuel Wet 5 3 1	5-10 Dry Fuel Wet 10 5 2	10-20 Dry Fuel Wet 12 8 4	>20 Dry Fuel Wet 15 10 5
2 Surface Fuel Continuity (0-100%)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Moss, Herb, Irrigated Crops, Low Flammability Woods 1	Herbs, Buckwheat Shrubs 2	Lichen, Conifer Shrubs 3	Prostrate 4	Sagebrush, Bushgrass, Forb (Dry), Scotch Broom 5
4 Fine Woody Debris Continuity (<7mm) (0-100%)	<10% 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, < 80 cm deep 4	>25 coverage, > 80 cm deep 5
5 Large Woody Debris Continuity (>7mm) (0-100%)	<10% 1	Scattered, < 80 coverage 2	10-25 coverage 3	>25 coverage, not stacked 4	>25 coverage, partially stacked 5
6 Live and Dead Canopies Crown Closure (%)	<20 1	21-40 2	41-60 3	61-80 4	>80 5
7 Live Canopies Crown Closure (%)	>80 or <20% 0	41-60 2	41-60 3	41-60 4	>80 5
8 Live and Dead Canopies Crown Height (m)	5+ or <20% 0	2-5 1	2-5 2	5-12 3	>12 4
9 Live and Dead Suppressed and Unsuppressing Canopies (0-100%)	0-20 1	21-40 2	41-60 3	61-80 4	>80 5
10 Forest Health (% of dead and/or partially dead stems)	Standing Dead and Partially Dead < 5 or <10 stems/ha 1	Standing Dead and Partially Dead 2	Standing Dead and Partially Dead 3	Standing Dead and Partially Dead 4	Standing Dead and Partially Dead 5
11 Crown Cover/Dead Cover Visible Area (%)	0-20 1	21-40 2	41-60 3	61-80 4	>80 5
Sub Total					46 / 155*

Wildfire	A	B	C	D	E
12 Dispersive Zone	Highly dispersed 1	CMH, LDR, NH Dry Fuel Wet 5 3 1	CMH, LDR, ECF Dry Fuel Wet 10 7 3	CMH, LDR, CMH, LDR, ECF, NW, SW, SE, NE Dry Fuel Wet 15 10 5	PP, EC 35
13 Potential Wildfire Occurrence by Wildfire Zone	G6, H1, H2, G6, H5, H3, H4, H5, H6, H7 1	G3, G4, H3, H4, H5, G1, G2, H4 2	G7, G5, G4, G1, V1, G1, H4 3	H1, H5, H3, G2, G1, H5, H4, H4, H2 4	H7, H4, H2, H1 5
Sub Total					25 / 100
14 Aspect (>15% slope)	North 1	East 2	<10% slope all aspects 3	West 4	South 5
15 Slope (%)	<16 1	16-29 2	30-44 3	45-64 4	>65 5
16 Perme	Flat 1	Rolling 2	Draped terrain, low relief of dunes 3	Caricatured, deep drainage of dunes 4	Caricatured slope, deep gullies 5
17 Landscape Topographic Linkages to Wildfire Spread	< 5 ha isolated forest 1	North and/or east aspects dominate, with spread restricted from South and/or West 2	Alternative terrain, broken topography, regular aspect and slope changes, results in restricted wildfire spread 3	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread 4	Convergent, conical topography, no restriction to wildfire spread 5
Sub Total					17 / 65**

FUEL, WEATHER AND TOPOGRAPHY	A	B	C	D	E
18 Position of Structures/Continuity on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 1	Mid-slope broadland, elevated ridges, < 80% slope 2	Mid-slope top land, > 80% slope 3	Upper 1/3 of Slope 4
19 Type of Development	No Structures Values within 2 km 0	Primitive buildings, wood sheds 1	Primitive buildings, wood sheds 2	Structures > 1 structure/ha 3	Structures < 1 structure/ha 4
20 Proximity of Structures Relative to Values	No Structures Values within 2 km 0	Above >500 200-500 100-200 1 2 3	Sub B >500 200-500 < 100 m 1 12 25	Sub C >500 200-500 < 200 m 1 12 25	Below >500 200-500 < 200 m 1 15 30
Sub Total					13 / 55

* Discounted only if Fuel sub total is > 20
 ** Discounted in Size based component only if Wildfire Threat between scores 4 > 35 for untreated polygons.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE
 TOTAL WILDFIRE THREAT SCORE: 123 / 295

Wildfire Behaviour Threat Class (check applicable ones)

Low 0-20

Moderate 21-35

High 36-100

Extreme >101

Wildland Urban Interface Threat Class (check applicable ones)

Low 0-13

Moderate 14-24

High 25-39

Extreme > 40

Last Updated: January 26, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 66



Photo 66-1 @ 200 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 67

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 67 COMMENTS: City of Kamloops
 Accessor: B. Morrow Geographic Location/Street Name: Blind Bay Ridge
 Date: April 19, 2016 GPS UTM: N50° 39' 23.1" W 125° 14' 5.9"
 Photos: 0 # 1 Land Ownership: Crown Private IR Other (specify):

Fuel	A	B	C	D	E
1 Fuel Depth and Moisture Regime (cm)	0-2 1	3-5 Dry 2	5-10 Dry Total Wet 3 4	10-20 Dry Total Wet 4 5	>20 Dry Total Wet 5 6
2 Surface Fuel Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Characteristics	Alfalfa, Berseem, Impaired Grass, Low Flammability Weeds 1	Herbs, Deciduous Shrubs 2	Lichens, Conifer Shrubs 3	Pinus, Picea 4	Engelmann, Hardwoods, Arctostaphylos, Scotch Broom 5
4 Fine Woody Debris Continuity (<=7mm) (% cover)	<10% 1	Scattered <10 coverage 2	10-25 coverage 3	>25 coverage <10 cm deep 4	>25 coverage >10 cm deep 5
5 Large Woody Debris Continuity (>7mm) (% cover)	<10% 1	Scattered <10 coverage 2	10-25 coverage 3	>25 coverage not elevated 4	>25 coverage partially elevated 5
6 Live and Dead Coniferous Crown Closure (%)	<10 1	10-40 2	41-60 3	61-80 4	>80 5
7 Live Deciduous Crown Closure (%)	>60 or <40% 1	61-80 2	41-60 3	20-40 4	<20 5
8 Live and Dead Coniferous Crown Height (m)	5+ or <20% cover 0	3-5 1	7-13 2	15-20 3	>20 4
9 Live and Dead Suppressed and Shading Canopy Interstitial (%)	<10 1	10-40 2	41-60 3	61-80 4	>80 5
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Partly Dead <5 0	Standing Dead and Partly Dead 5-20 1	Standing Dead and Partly Dead 21-50 2	Standing Dead and Partly Dead 51-75 3	Standing Dead and Partly Dead >75 4
11 Continuous Forest/Brush Cover within 20m (%)	0-10 1	11-40 2	41-60 3	61-80 4	>80 5
Sub Total 38 / 155*					
Weather	A	B	C	D	E
12 Depositional Rate	W, W/SW	W, W, NW, W/SW Dry Total Wet 5 3 1	W, W, W/SW Dry Total Wet 10 7 3	W, W, W/SW, W/NW, W/N Dry Total Wet 15 10 5	W, W 15
13 Directional Wind Exposure (by Wind Rose Zone)	66, 81, 82, 85, 86, 87, 89, 92, 93, 94, 97 1	63, 68, 82, 84, 86, 87, 89, 92 5	42, 43, 64, 64, 67, 67, 68 8	41, 45, 47, 47, 47, 47, 47 10	47, 47, 47 10
Sub Total 25 / 130					
Topography	A	B	C	D	E
14 Aspects (>15% slope)	North 1	East 5	<15% slope all aspects 10	West 12	South 15
15 Slope (%)	<10 1	10-29 2	30-40 3	41-54 4	>55 5
16 Terrain	Flat 1	Rolling 5	Sloped terrain more than 20% 5	Complex slope deep draws or other gulches 10	Complex slope deep draws 10
17 Landcover Topographic Limitation to Wildfire Spread	<5 ha isolated forest 1	North and/or east aspect downward, wildfire spread restricted from South and to West 2	Shaded areas, broken topography, rapid aspect and slope changes, multiple restrictions to wildfire spread 3	Rolling terrain, narrow draws, narrow aspect and slope changes, minor restrictions to wildfire spread 4	Complex, contoured topography No restriction to wildfire spread 5
Sub Total 11 / 55					
FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					
Sub Total 74 / 240**					
Structural	A	B	C	D	E
18 Position of Structures/Community on Slope	No structures Values within 2 km 0	Bottom of slope, valley bottom 5	Mid-slope benches, elevated valley, <16% slope 10	Mid-slope continuous, >16% slope 15	Upper 1/3 of Slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter interface, no enclosures 3	Perimeter interface, with enclosures 5	Interface 1	Interior <1 structure 15
20 Position of development along interface to values	No Structures Values within 2 km 0	Above >500-200-500-200 m 1 16 20	Below >500-200-500-200 m 1 12 25	Flat/rolling >500-200-500-200 m 1 12 25	Below >500-200-500-200 m 1 15 28
Sub Total 37 / 75					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
TOTAL WILDFIRE THREAT SCORE 7295					

* Proceed only if fuel sub total is > 25.
 ** Based on structural component only if Wildfire Threat Behaviour Score is > 25 (unshaded polygons)

Wildfire Behaviour Threat Class (select applicable class)

Low 0-40
 Moderate 41-95
 High 96-149
 Extreme > 149

Wildland Urban Interface Threat Class (select applicable class)

Low 0-13
 Moderate 14-26
 High 27-39
 Extreme > 39

Last Updated: January 24, 2017

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City of Kamloops – Wildfire Threat Assessment Picture – Plot 67



Photo 67-1 @ 210 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 68

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot # 68 Community City of Kamloops

Address 3 Maxwell Geographic Location/Street Name East of Juniper Ridge

Date Apr 17/16 GPS/UTM: N50° 39' 18.6" W120° 13' 7"

Photos: 1: 4 Land Ownership: Crown Private I.E. Other (specify):

68

Field	A	B	C	D	E
1 Fuel Depth and Moisture Regime (Fu)	F < 2 3	2-5 10-20 Wet 5	5-10 Dry Dead Wet 10 0 2	10-20 Dry Dead Wet 12 8 4	>20 Dry Dead Wet 15 10 5
2 Fuelbed Fuel Continuity (Fu cont)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Compartment	Moist, Herbic, Impinged Chap, Low Flammability Woods 1	Herbic, Deciduous Shrub 2	Lichen, Grasses Shrubs 3	Fireweed, Pines 4	Lignicolous, Pseudotsuga, Pseudotsuga-Bush, Scotch Broom 5
4 Fine Woody Debris Continuity (<7cm) (Fu cov)	<10% 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, <10 cm deep 4	>25 coverage, >10 cm deep 5
5 Large Woody Debris Continuity (>7cm) (Fu cov)	<10% 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, not elevated 4	>25 coverage, partially elevated 5
6 Live and Dead Continuum Crown Closure (Fu)	<20 1	20-40 2	41-60 3	61-80 4	>80 5
7 Live Biomass Crown Closure (Fu)	>80% <40% 1	61-80 2	41-60 3	20-40 4	<20 5
8 Live and Dead Crown Closure Bare Height (Fu)	5-10 <20% cover 1	10-20 2	2-4 3	4-6 4	<1 5
9 Live and Dead Standover and Standover Continuum (Fu)	<10 1	10-20 2	20-40 3	40-60 4	>60 5
10 Fuelbed Height (Fu) (all deadwood and standing stems)	Standing Dead and Fuelbed <1 1	Standing Dead and Fuelbed 1-5 2	Standing Dead and Fuelbed 5-10 3	Standing Dead and Fuelbed 10-20 4	Standing Dead and Fuelbed >20 5
11 Continuum Forest/Stand Comp within 20m (Fu)	>20 1	21-40 2	41-60 3	61-80 4	>80 5
Sub Total					37 /155*

Weather	A	B	C	D	E
12 Atmospheric Zone	A1, Integrated 1	B1, B2, B3, B4, B5, B6, B7, B8, B9, B10 2	C1, C2, C3, C4, C5, C6, C7, C8, C9, C10 3	D1, D2, D3, D4, D5, D6, D7, D8, D9, D10 4	E1, E2, E3, E4, E5, E6, E7, E8, E9, E10 5
13 Atmospheric Wildfire Occurrence by 100M Fire Zone	G5, H1, G2, G3, H5, H6, H7, H8, H9, H10, H11 1	G1, G2, G3, G4, G5, G6, G7, G8, G9, G10 2	G1, G2, G3, G4, G5, G6, G7, G8, G9, G10 3	H1, H2, H3, H4, H5, H6, H7, H8, H9, H10 4	H1, H2, H3, H4, H5, H6, H7, H8, H9, H10 5
Sub Total					30 /120

Topography	A	B	C	D	E
14 Aspect (>10% slope)	North 0	East 5	<10% slope, all aspects 10	10-20 12	South 15
15 Slope (Fu)	<15 1	16-25 2	26-40 3	41-54 4	>55 5
16 Terrain	Flat 1	Rolling 2	Sloped (single, no horizontal breaks) 3	Complex slope, deep draws or shallow gullies 4	Complex slope, deep gulches 5
17 Landscape Topographic Continuity to Wildfire Spread	<5 ha isolated forest 1	North and/or east aspects dominant, wildfire spread restricted from South and/or West 2	Discontinuous terrain, breaks topography, road or aspect and slope changes, small patches of forest in wildfire spread 3	Rolling terrain, small slope breaks, minimal aspect and slope changes, these restrictions to wildfire spread 4	Complex, irregular topography, no restrictions to wildfire spread 5
Sub Total					27 /95

FUEL, WEATHER AND TOPOGRAPHY	A	B	C	D	E
18 Position of Structure Community on Slope	No Structures Values within 2m 0	Form of slope, valley bottom 1	Mid-slope downhill, elevated valley, <10% slope 2	Mid-slope ridge, crest 3	Upper 1/3 of slope 4
19 Type of Development	No Structures Values within 2m 0	Perimeter fence, no structures 1	Perimeter fence, structures 2	Interior >1 structure 3	Interior <1 structure/no structures 4
20 Position of Development Area Relative to Terrain	No Structures Values within 2m 0	Above >540 240-540 <200 m 1 10 20	Below >100 200-100 <200 m 1 10 20	Below >500 200-500 <200 m 1 12 25	Below >100 200-500 <200 m 1 15 30
Sub Total					27 /95

Processed only if fuel sub total > 25.

Processed to Structural component only if WUIWE Threat Behaviour Score > 95 for untreated polygons.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE 27 /95

TOTAL WILDFIRE THREAT SCORE 64 /240**

Wildfire Behaviour Threat Class (check applicable)

Low 0-40

Moderate 41-65

High 66-140

Extreme >140

Wildland Urban Interface Threat Class (check applicable)

Low 0-13

Moderate 14-26

High 27-39

Extreme >39

10/4 (Updated: August 24, 2013)

City of Kamloops – Wildfire Threat Assessment Picture – Plot 68



Photo 68-1 @ 315 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 69

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 69 Community: City of Kamloops

Assessor: B. Morrison Geographic Location (Street Name): East of Juniper Ridge

Date: April 11/16 GSN/WH: N50 39' 23.1" W128 13' 11.2"

Photos: 1-4 Land Ownership: Crown Private I.R. Other (specify):

Point	A	B	C	D	E
1 Fuel Depth and Moisture Regime (cm)	1-2 1	2-5 Dry Fuel Wet 5 3 1	5-10 Dry Fuel Wet 10 0 2	10-20 Dry Fuel Wet 12 4 4	>20 Dry Fuel Wet 15 10 5
2 Surface Fuel Continuity (% cover)	<10 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Moist, Herb, Integrated Crown, Low Flammability Wet 1	Herb, Deciduous Shrubs 2	Light, Conifer Shrubs 3	Flammable, Conifer 4	Significant, Barberry, Antelope Bush, South Driven 5
4 Fine Woody Debris Continuity (<7mm) (% cover)	<1 coverage 1	Scattered <10 coverage 2	10-25 coverage 3	>25 coverage, >10 cm deep 4	>25 coverage, >10 cm deep 5
5 Large Woody Debris Continuity (>7mm) (% cover)	<1 coverage 1	Scattered <10 coverage 2	10-25 coverage 3	>25 coverage, not elevated 4	>25 coverage, partially elevated 5
6 Live and Dead Conifer Crown Closure (%)	<20 1	21-40 2	41-60 3	61-80 4	>80 5
7 Live Deciduous Crown Closure (%)	>30 or <30% condensed crown closure 1	61-80 2	41-60 3	20-40 4	>20 5
8 Live and Dead Conifer Crown Base Height (m)	5+ or <20% canopy canopy density 1	3-5 2	2-1 3	1-2 4	15 5
9 Live and Dead Suppression and Exclusionary Canopy (domer/hat)	0-50 1	51-70 2	100-2000 3	2001-4000 4	>4000 5
10 Stand Health (% of dominant and co-dominant stems)	Standing Dead and Partly Down <5 or <10 stems/ha 1	Standing Dead and Partly Down 5-10 2	Standing Dead and Partly Down >10-15 3	Standing Dead and Partly Down >15-20 4	Standing Dead and Partly Down >20-30 5
11 Continuous Forest/Stand Cover within 2km (ha)	0-20 1	21-40 2	41-60 3	61-80 4	>80 5
Sub Total: 100					
Weather					
12 Hydroclimatic Zone	All Integrated 1	CH, CR, WH Dry Fuel Wet 5 3 1	WH, VS, ESF Dry Fuel Wet 10 7 3	WH, VS, ESF, WH, VS, ESF, ESF Dry Fuel Wet 10 7 5	WH, VS 15
13 Potential Wildfire Directionality (Wind Fire Zone)	65, 81, 82, 85, 95, 99, 90, 93, 95, 98, 97 1	63, 68, 71, 84, 76, 71, 89, 98 1	67, 65, 64, 64, 71, 71, 84 1	67, 65, 62, 62, 63, 65, 65, 64, 62 1	67, 65, 61 15
Sub Total: 30					
Topography					
14 Aspects (>15% slope)	North 4	East 5	<10% slope all aspects 10	15 12	South 15
15 Slope (%)	<10 1	10-20 and not near to north slopes 5	20-40 10	40-60 12	>50 15
16 Terrain	Flat 1	Rolling 2	Sloped terrain, no low elevation drains 3	Equivalent slope, deep drain for 200m or greater 4	Continuous slope, deep drain 5
17 Continuity/Discontinuity of Fuelbed to Wildfire Spread	<1 ha adjacent down wind 1	North and/or east aspects dominant, wildfire spread restricted from south and/or west 2	Adjacent to north, south, and/or east aspects, regular aspect and slope changes, multiple restrictions to wildfire spread 3	Rolling terrain, some water bodies, normal aspect and slope changes, runoff restricted to wildfire spread 4	Continuous, corridor exposed by the road to wildfire spread 5
Sub Total: 30					
FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					
Sub Total: 160					
STRUCTURE					
18 Position of Structure/Continuity on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 1	Mid-slope to hillside, elevated valley, <10% slope 10	Mid-slope to hillside, >10% slope 15	Upper 1/3 of Slope 15
19 Type of Development	No Structures Values within 2 km 0	Primitive interface, no structures 1	Primitive interface, with structures 10	Interface >1 structures 15	Interface >1 structures 20
20 Position of Accessional Area Relative to Fuelbed	No Structures Values within 2 km 0	Above >500-200-500 <200 m 1 10 20	Below >500-200-500 <200 m 1 10 20	Flat/Rolling >500-200-500 <200 m 1 12 25	Below >500-200-500 <200 m 1 15 30
Sub Total: 75					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
Sub Total: 235					
TOTAL WILDFIRE THREAT SCORE					
Sub Total: 795					

* Proceed only if fuel risk total is >25.
** Proceed to Structural component only if Wildfire Threat Behaviour Score is >95 for untreated properties.

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 61-95

High 96-149

Extreme >149

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13

Moderate 14-26

High 27-39

Extreme >39

Last updated: January 24, 2013

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City of Kamloops – Wildfire Threat Assessment Picture – Plot 69



Photo 69-1 @ 90 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 70

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 70 Community: City of Kamloops

Address: Brimrow Geographical Location/Street Name: Janine East

Date: Apr 19/16 GPS/UTM: NSD 391 24.90 W 120 13 22.1

Photos: 3 R 144 Land Ownership: Crown Private I.R. Other (specify):

Point	A	B	C	D	E
1 Soil Depth and Moisture Regime (cm)	<u>1</u>	2-5 Dry Zonal Wet 2 1	5-10 Dry Zonal Wet 10 6 2	15-20 Dry Zonal Wet 12 8 4	>20 Dry Zonal Wet 15 10 5
2 Surface Fuel Continuity (% cover)	<10 4	20-40 2	41-60 3	61-80 4	<u>5</u>
3 Vegetative Fuel Composition	Mass Herb, Impreg Corp, Low Flammability Woods 1	Herb, Dense/Scrub 2	Grass, Canebrake 3	Shrub, Juniper 4	Sage brush, Birchwood, Arbutus Bush, Gambel's 5
4 Fine Woody Debris Continuity (<7mm) (% cover)	<10 1	Scattered, <10 coverage 5	10-25 coverage 2	>25 coverage, <10 cm deep 10	>25 coverage, >10 cm deep 15
5 Large Woody Debris Continuity (>7mm) (% cover)	<10 1	Scattered, <10 coverage 5	10-25 coverage 5	>25 coverage, not elevated 7	>25 coverage, partially elevated 10
6 Live and Dead Continuous Crown Closure (%)	<20 2	<u>20</u> 3	61-80 10	61-80 15	>80 18
7 Live Deciduous Crown Closure (%)	>60 or <40% undergrowth canopy 4	61-80 2	61-80 3	20-60 4	<20 5
8 Live and Dead Conifer Crown Base Height (m)	5+ or <10% conifer crown closure 6	<u>7</u> 3	2-13 7	1-12 10	<1 15
9 Live and Dead Suppressed and Intermediate Canopy (meters)	0-500 7	500-1000 10	1001-2000 10	2001-3000 10	>3000 10
10 Forest Health (% of dominant and co-dominant class)	Standing Dead and Partly Down <5 or <10 opening 4	Standing Dead and Partly Down 5	Standing Dead and Partly Down >25-50 10	Standing Dead and Partly Down >50-75 20	Standing Dead and Partly Down >75 35
11 Condition Forest/Slash Cover within 2km (%)	0-20 3	21-40 5	41-60 5	<u>61-80</u> 7	>80 10
Sub Total <u>47</u> /150*					
12 Woodchuck Zone	All Integrated 3	EW, (C, M) Dry Zonal Wet 2 1	W, SW, ESW Dry Zonal Wet 10 7 3	SE, NE, SW, NW Dry Zonal Wet 10 5 5	PP, BG 15
13 Historical Wildfire Occurrence per Wildfire Area	60, 81, 82, 86, 93, 99 10, 11, 15, 16, 17 1	61, 64, 65, 66 16, 17, 18, 19 1	62, 63, 64, 65, 66, 67, 68 10 7 3	61, 65, 66, 67, 68, 69, 70, 71, 72 10	61, 62, 63, 64 15
Sub Total <u>30</u> /30					
14 Topography	A	B	C	D	E
14 Aspect (>70% slope)	North 0	<u>East</u> 1	<10% slope, all aspects 10	West 15	South 15
15 Slope (%)	<10 1	10-20 and Max. slope for 10% slope 5	<u>30-60</u> 10	60-74 12	>75 15
16 Slope	Flat 1	Rolling 5	Sloped terrain, minor low relief areas 5	Undulating slope, deep narrow drainage gullies 7	Concave slope, steep gullies 10
17 Landform/Topographic Contribution to Wildfire Spread	<5 ha undisturbed land 1	North and/or east aspects dominate, weather exposed, isolated from South and/or West 2	Multi-sloped terrain, broken topography, regular aspect and slope changes, multiple ridges (some to wildfire spread), large open fields 5	Rolling terrain, all the water bodies, physical aspect and slope changes, minor restrictions to wildfire spread 10	Concave, continuous topography, no restriction to wildfire spread 15
Sub Total <u>75</u> /200**					
FIRE, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					
18 Structure	A	B	C	D	E
18 Position of Structure/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, Valley Bottom 5	Mid-slope benchland, Elevated valley, <10% slope 10	Mid-slope, hilltop, crest, 15% slope 15	Upper 1/3 of slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter interface, no structures 5	Perimeter interface, with structures 5	Interior > 1 structure/ha 10	Interior < 1 structure/ha 10
20 Position of Development Area Relative to Values	No Structures Values within 2 km 0	Above >500 100-500 <200 m 1 10 10	Below >500 100-500 <200 m 1 15 25	Flat/Rolling >500 200-500 <200 m 4 15 25	Below >500 200-500 <200 m 1 15 20
Sub Total <u>47</u> /200**					
TOTAL WILDFIRE THREAT SCORE					
TOTAL WILDFIRE THREAT SCORE <u>117</u> /350					

Placed within 1 km sub-total (x.25)

** Placed in structural component only if Wildfire Area between scores > 25 for untreated polygons.

Wildfire Behaviour Threat Class (check applicable class):
 Low 0-40
 Moderate 41-60
 High 61-80
 Extreme >100

Wildland Urban Interface Threat Class (check applicable class):
 Low 0-10
 Moderate 11-25
 High 26-35
 Extreme >36

Last Update: January 24, 2013

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City of Kamloops – Wildfire Threat Assessment Picture – Plot 70



Photo 70-1 @ 180 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 71

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-incident Post-incident

Plot # 71 Community City of Kamloops

Assessor B. Morrison Geographic Location/Street Name Timber East

Date: Apr 19/16 GPS/UTM: N50 39' 35.8" W120° 13' 28.4"

Photo: 4 Land Ownership Crown Private I.R. Other (specify)

Final	A	B	C	D	E
1 Fuel Moisture and Moisture Equivalency (mm)	1-15	1-15 Dry Leaf Wet 5 3 1	1-15 Dry Leaf Wet 10 6 2	10-20 Dry Leaf Wet 12 8 4	>20 Dry Leaf Wet 15 10 5
2 Fuelbed Fuel Continuity (W value)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Non. Herb. Impure Grass, Low Flammability Herbs 1	Herb. Deciduous Shrubs 2	Urban Conifer Shrub 3	Paragon 4	Sagebrush, Birchgrass, Arroyo Bush, Scotch Broom 5
4 Fine Woody Debris Continuity (<7cm) (W cover)	<10 coverage 1	Scattered, <10 coverage 2	10-15 coverage 3	>25 coverage, <10 cm deep 4	>25 coverage, >10 cm deep 5
5 Large Woody Debris Continuity (>7cm) (W cover)	<10 coverage 1	Scattered, <10 coverage 2	10-15 coverage 3	>25 coverage, not elevated 4	>25 coverage, partially elevated 5
6 Live and Dead Continuity Crown Closure (%)	<20 1	21-40 2	41-60 3	61-80 4	>80 5
7 Live and Dead Continuity Crown Closure (%)	>80 or <40% conifer crown closure 0	41-60 2	61-80 3	81-100 4	>80 5
8 Live and Dead Continuity Crown Closure (%)	5% or <20% conifer crown closure 1	21-40 2	41-60 3	61-80 4	>80 5
9 Live and Dead Vegetation and Understorey Continuity (W cover)	<10 coverage 1	10-20 coverage 2	21-40 coverage 3	41-60 coverage 4	>60 coverage 5
10 Forest Health (% of dominant and co-dominant dead)	Standing Dead and Early Dead < 5 or < 25% of total 1	Standing Dead and Early Dead 5-25 2	Standing Dead and Early Dead 26-50 3	Standing Dead and Early Dead 51-75 4	Standing Dead and Early Dead > 75 5
11 Continuous Forest/Shrub Cover within Area (%)	0-20 1	21-40 2	41-60 3	61-80 4	>80 5
Sub Total					58 / 150*
12 Dispersal Zone	4, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100 1	CMU, ECE, NH, Dry Leaf Wet 5 3 1	CMU, SCS, ESEF, Dry Leaf Wet 10 7 3	CMU, SCS, ECE, ESEF, Dry Leaf Wet 15 10 5	CMU, SCS, ECE, ESEF, Dry Leaf Wet 20 15 10
13 Historical Wildfire Distance by Wind (W Zone)	05, 01, 02, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 1	05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 2	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 3	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 4	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 5
Sub Total					20 / 20
14 Aspects (>15% slope)	North D	North 5	<10% slope all aspects 16	West 12	South 15
15 Slope (%)	<10 1	10-20 and less slope on North slopes 5	20-40 10	40-60 15	>60 20
16 Terrain	Flat 1	Hilly 3	Sloped terrain, minor low relief dunes 5	Complex slope, deep draws, shallow gulches 7	Complex slope, deep draws, steep gullies 10
17 Landcover/Topographic Obstruction to Wildfire Spread	< 5 ha natural forest land 1	North and/or east aspects dominate, shallow gulches restricted from South and/or West 2	Mountainous terrain, broken topography, regular aspect and slope changes, multiple orientations to winds, steep large water bodies 5	Hilly terrain, minor water bodies, minimal aspect and slope changes, minor orientations to wildfire spread 10	Complex, consistent topography, no restrictions to wildfire spread 15
Sub Total					75 / 100**
FUEL, WEATHER AND TOPOGRAPHY WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORES					
18 Position of Structures/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 5	Mid-slope hillside, shaded valley, < 4% slope 10	Mid-slope continuous, all aspects 15	Upper 1/3 of Slope 20
19 Type of Development	No Structures Values within 2 km 0	Perimeter interface, no structures 3	Perimeter interface with structures 5	Interior > 1 structure/ha 10	Interior < 1 structure/ha 15
20 Position of Access Road Relative to Values	No Structures Values within 2 km 0	Along >500 200-500 <100 m 1 10 20	Subsidy >500 200-500 <100 m 1 12 25	At/Behind >500 200-500 <100 m 1 12 25	Before >500 200-500 <100 m 1 15 30
TOTAL WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					75
TOTAL WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					75

* Proceed only if Fuel sub total >= 25
** Proceed to Structural component only if Wildfire Inland Behaviour Score is >= 95 for all 11 C&D and E's

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 41-95

High 96-149

Extreme >149

Wildland Urban Interface Threat Class (check applicable class)

Low 0-33

Moderate 34-36

High 37-99

Extreme >99

Last updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 71



Photo 71-1 @ 360 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 72

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 72 Community: City of Kamloops

Assessor: S. Magowan Geographic Location/Street Name: Donkey

Date: April 19/16 GPS/UTM: N50 391 452 W 151 457

Photos: 1 N #: 4 Land Ownership: Crown Private I.R. Other (specify):

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Forest	A	B	C	D	E
1 Duff Depth and Moisture Regime (cm)	0-5 3	2-5 Dry Zonal Wet 5 3 1	5-10 Dry Zonal Wet 10 6 2	10-20 Dry Zonal Wet 12 8 4	>20 Dry Zonal Wet 15 10 5
2 Surface Fuels Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	81-100 5
3 Vegetation Fuel Composition	Moss, Herbs, Irrigated Crops, Low Flammability Weeds 1	Herbs, Deciduous Shrubs 2	Lichen, Conifer Shrubs 3	Pinewoods, Juniper 4	Sagebrush, Baccharis, Antelope Brush, Scotch Broom 5
4 Fine Woody Debris Continuity (<=7cm) (% cover)	<10 coverage 1	Scattered, <10 coverage 5	10-25 coverage 7	>25 coverage, <10 cm deep 10	>25 coverage, >10 cm deep 15
5 Large Woody Debris Continuity (>7cm) (% cover)	<10 coverage 1	Scattered, <10 coverage 2	10-25 coverage 5	>25 coverage, not elevated 10	>25 coverage, partially elevated 15
6 Live and Dead Coniferous Crown Closure (%)	<20 2	20-40 5	41-60 10	61-80 15	>80 10
7 Live Deciduous Crown Closure (%)	>80 = 40% coniferous crown closure 5	61-80 2	41-60 3	20-40 4	<20 5
8 Live and Dead Conifer Crown Base Height (m)	5+ or <20% conifer crown closure 0	3-5 5	2-3 7	1-2 10	<1 15
9 Live and Dead Suppressed and Understorey Canifers (stems/ha)	>2 2	501-1000 5	1001-2000 10	2001-4000 20	>4000 30
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Partly Down <5 or <20 stems/ha 0	Standing Dead and Partly Down 5-25 5	Standing Dead and Partly Down >25-50 10	Standing Dead and Partly Down >50-75 20	Standing Dead and Partly Down >75 30
11 Continuous Forest/Slash Cover within 2km (%)	0-20 0	21-40 3	41-60 5	61-80 7	>80 10
Sub Total					153
Weather					
12 Biogeoclimatic Zone	A7, Irrigated 1	CWA, CDE, MH Dry Zonal Wet 5 3 1	KH, SBS, ESSF Dry Zonal Wet 10 7 3	DDE, MS, SPS, CNH-d1 & d2, BWS-SWA - Dry Zonal Wet 15 10 5	PP, BG 15
13 Historical Wildfire Occurrence (by Wild Fire Zone)	G5, R1, R2, G6, Y5, B9, Y9, V3, R5, B8, V7 1	G3, G8, R3, R4, V6, G1, G9, V8 5	G7, G5, G4, C4, V1, C1, N6 8	K1, K5, K3, C2, C3, N5, K6, N4, K7, N2 10	H7, H4, H2, N1 15
Sub Total					30/30
Topography					
14 Aspects (>15% slope)	North 1	East 5	<16% slope all aspects 10	West 12	South 15
15 Slope (%)	<16 1	16-29 and maximum for north slopes 5	30-44 10	45-54 12	>55 15
16 Terrain	Flat 1	Rolling 3	Shaded terrain, minor rim rock draws 5	Consistent slope, deep draws or shallow gullies 7	Consistent slope, deep gullies 10
17 Landscape/Topographic Limitations to Wildfire Spread	<5 ha isolated forest land 1	North and/or east aspects dominate, wildfire spread restricted from South and/or West 2	Mountainous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread large water bodies 5	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread 10	Continuous, consistent topography No restriction to wildfire spread 15
Sub Total					55
FUEL, WEATHER AND TOPOGRAPHY					
Sub Total					158
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
Structural					
18 Position of Structure/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 5	Mid-slope benchland, elevated valley, <16% slope 10	Mid-slope continuous, <15% slope 12	Upper 1/3 of Slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter Interface, no inclusions 3	Perimeter Interface, with inclusions 5	Intermix > 1 structure/ha 8	Intermix < 1 structure/ha Infrastructure 10
20 Position of Assessment Area Relative to Values	No Structures Values within 2 km 0	Above >500 200-500 <200 m 1 10 20	Sideline >500 200-500 <200 m 1 12 25	Flat/Rolling >500 200-500 <200 m 1 12 25	Below >500 200-500 <200 m 1 15 30
Sub Total					47
Sub Total					295

* Proceed only if fuel sub total is >29
 ** Proceed to Structural component only if Wildfire Threat Behaviour Score is >95 for untreated polygons.

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 41-95

High 96-149

Extreme >149

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13

Moderate 14-26

High 27-39

Extreme >39

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 72

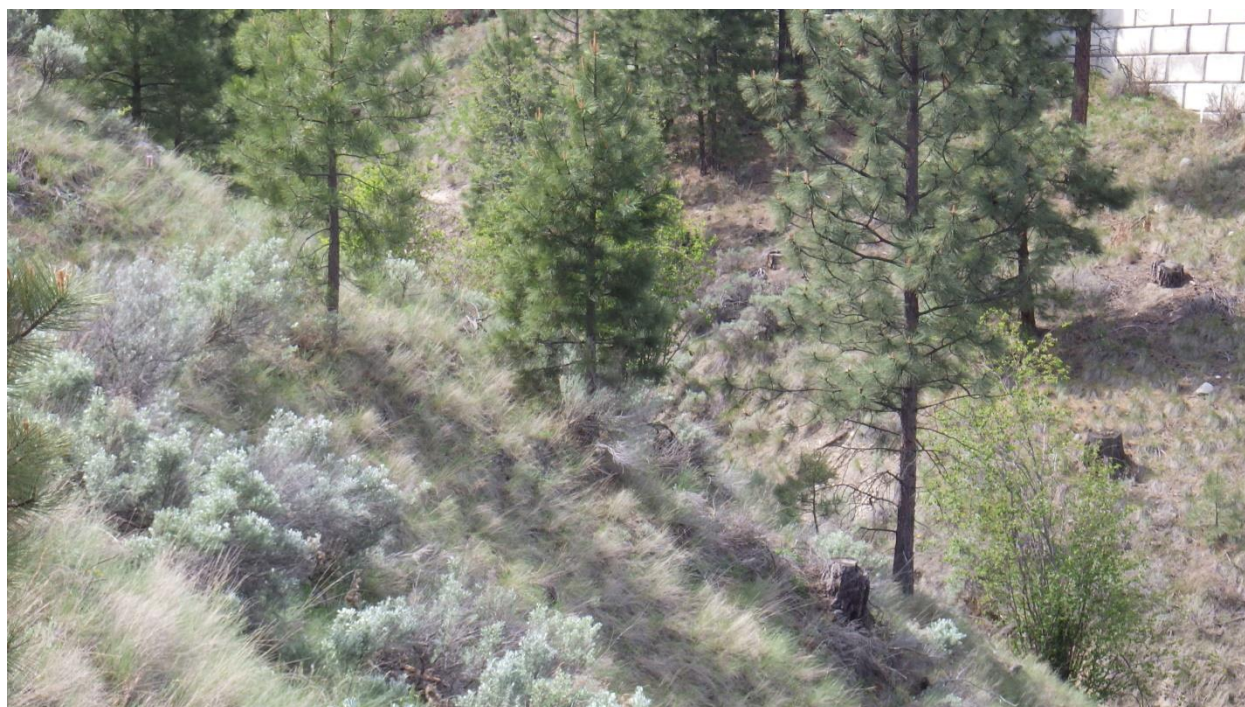


Photo 72-1 @ 225 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 73

73

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot #: 73 Community: City of Kamloops

Assessor: B.M. Brown Geographic Location/Street Name: Peterborough

Date: Dec 19/16 GPS File: NSU 39 19 00 W120 20 0.2

Photos: 2, 3, 4 Land Ownership: Crown Private IR Other (specify):

Plot	A	B	C	D	E
1. Fuel Depth and Moisture Regime (m)	1-2 3	2-4.5 Dry Fuel Wet 2 1	5-10 Dry Fuel Wet M 4 2	10-20 Dry Fuel Wet L 4 4	>20 Dry Fuel Wet L 10 5
2. Surface Fuel Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3. Vegetation Fuel Compaction	Moist, Hard; Impacted Crops, Low Flammability Weeds 1	Wet; Deciduous Shrubs 2	Wet; Conifer Stems 3	Prognosis; Juniper 4	Superior; Berries, Aspen, Larch, Birch 5
4. Fine Woody Debris Continuity (<5cm) (% cover)	<10 1	Scattered; <20 coverage 2	10-25 coverage 3	>25 coverage; <10 cm deep 4	>25 coverage; >10 cm deep 5
5. Large Woody Debris Continuity (>5cm) (% cover)	<10 1	Scattered; <20 coverage 2	10-25 coverage 3	>25 coverage; not elevated 4	>25 coverage; partially elevated 5
6. Live and Dead Continuous Crown Closure (%)	<70 1	70-80 2	81-90 3	91-95 4	>95 5
7. Live Deciduous Crown Closure (%)	>80 or >40% continuous crown closure 1	61-80 2	41-60 3	20-40 4	<20 5
8. Live and Dead Greater Crown Base Height (m)	5.4 or <20% of live crown height 1	3-5 2	2-3 3	1-2 4	<1 5
9. Live and Dead Suspended and Undersized Crown Closure (%)	1-50 1	51-100 2	100-200 3	200-400 4	>400 5
10. Forest Health (% of dead and or damaged stems)	Scattered Dead and Partially Down 1-2 5	Scattered Dead and Partially Down 2-3 5	Scattered Dead and Partially Down >25-50 3-4 5	Standing Dead and Partially Down >50-75 4 5	Standing Dead and Partially Down >75 5 5
11. Continuous Forest/Slash Cover within 20m (%)	0-20 1	21-40 2	41-60 3	61-80 4	>80 5
Sub Total					21 / 158*

Weather	A	B	C	D	E
12. Microclimate Zone	AT, Inlet 1	CW, SW, SE, Dry Fuel Wet 2 1	KL, SE, SE, Dry Fuel Wet 3 1	RE, NE, SW, NW, Dry Fuel Wet 4 5	5
13. Microclimate Occurrence (by 100m Fire Zone)	G5, R1, R2, G4, R3, R4, R5, R2, R3, R4, R5 1	G3, G4, R1, R4, R5, G1, G2, G3 2	G2, G3, G4, G5, R1, R2, R3 3	R1, R2, R3, R4, R5, R6, R7, R8 4	R9, R10, R11 5
Sub Total					20 / 10

Topography	A	B	C	D	E
14. Aspect (> 5% slope)	North 1	East 2	<10% slope all aspects 3	West 4	South 5
15. Slope (%)	<14 1	15-20 2	20-40 3	41-54 4	>55 5
16. Terrain	Flat 1	Rolling 2	Sloped terrain, minor low relief 3	Consistent slope, steep change of slope 4	Consistent slope, steep gullies 5
17. Landscape Topographic Conditions to Wildfire Spread	< 5 ha isolated forest 1	North and/or east aspects dominate, wildfire spread restricted from south and/or west 2	West and/or east aspects, regular aspect and slope changes, multiple restrictions to wildfire spread 3	Rolling terrain, major water bodies, irregular aspect and slope changes, minor restrictions to wildfire spread 4	Continuous, consistent topography, no restrictions to wildfire spread 5
Sub Total					17 / 55

FUEL, WEATHER AND TOPOGRAPHY	A	B	C	D	E
18. Position of Structures/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 1	40-60 slope benchland, elevated valley, <10% slope 2	Mid-slope continuous 3	Upper 1/3 of slope 4
19. Type of Development	No Structures Values within 2 km 0	Perimeter interface, no structures 1	Perimeter interface, structures 2	Interior > 1 structure 3	Interior < 1 structure/ha perimeter 4
20. Position of Encroachment Area Relative to Values	No Structures Values within 2 km 0	Below >500 200-500 <200 m 1 10 20	Below >500 200-500 <200 m 1 12 25	Full-Facing >500 200-500 <200 m 1 13 25	Below >500 200-500 <200 m 1 15 30
Sub Total					21 / 295

*Proced only if Fuel sub total is >25.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE: **41 / 295**

TOTAL WILDFIRE THREAT SCORE: **125 / 295**

Wildfire Behaviour Threat Class (check applicable class)

Low 1-40

Moderate 41-95

High 96-169

Extreme > 180

Wildland Urban Interface Threat Class (check applicable class)

Low 0-12

Moderate 14-25

High 26-39

Extreme > 39

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 73



Photo 73-1 @ 200 degrees

City of Kamloops – Wildfire Threat Assessment Picture – Plot 74



Photo 74-1 @ 230 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 75

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot # 75 Community City of Kamloops

Assessor P. Morrow Geographic Location/Street Name Redmond Cr

Date Apr 19, 16 District N3339 114 01700 201.89

Photo: 4 Land Ownership: Crown Private I.L. Other (Specify)

Plot	A	B	C	D	E
1 Buff Birch and Western Red Spruce (%)	0	7-15 Dry local Wet 5 2 1	5-10 Dry local Wet 10 4 2	10-20 Dry local Wet 12 8 4	>20 Dry local Wet 15 10 5
2 Surface Fuel Continuity (W cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Moist, Herbic, Irrigated Crops, Low Flammability Weeds 1	Herbic, Deciduous Shrubs 2	Herbic, Conifer Shrubs 3	Perennial, Juniper 4	Evergreen, Conifers, Arbutus, Rust, Spruce Trees 5
4 Fine Woody Debris Continuity (<7cm) (%) cover)	<10 0	Scattered, <10 coverage 1	10-25 coverage 2	>25 coverage, <10 cm deep 3	>25 coverage, >50 cm deep 4
5 Large Woody Debris Continuity (>7cm) (%) cover)	<10 0	Scattered, <10 coverage 1	10-25 coverage 2	>25 coverage, not elevated 3	>25 coverage, partially elevated 4
6 Live and Dead Coniferous Crown Closure (%)	<10 0	20-40 1	41-60 2	61-80 3	>80 4
7 Live Deciduous Crown Closure (%)	>90 or <10% open/closed upper canopy 0	41-60 2	41-60 3	20-40 1	>25 4
8 Live and Dead Coniferous Crown Closure (%)	3+ or <20% conifer crown closure 0	3-5 1	2-5 2	1-1 0	>10 3
9 Live and Dead Deciduous and Shrubbery Crown Closure (%)	30+ 0	101-1000 5	1001-2000 10	2001-4000 20	>4000 50
10 Forest Health (% of dominant and co-dominant trees)	Standing Dead and Partly Down <1 or <10 stems/ha 0	Standing Dead and Partly Down 1	Standing Dead and Partly Down >25-50 10	Standing Dead and Partly Down >50-75 20	Standing Dead and Partly Down >75 30
11 Coniferous Forest/Conifer within 2km (%)	0-25 0	26-40 1	41-60 2	61-80 3	>80 4
Sub Total 59 / 755*					
12 Vegetation Fuel	All Irrigated 1	EM, CG, MH Dry local Wet 5 5 1	KA, SB, SS3 Dry local Wet 10 7 3	BE, MS, SPS, CMB, GS1 & 2, BWS, SM - Dry local Wet 15 10 5	60-80 15
13 Historical Wildfire Exposure (by 2002 Pre-fire)	G1, F1, R1, G4, Y5, P9, V9, V1, P2, R3, V7 1	G3, G4, R3, P4, R5, G1, G3, V8 1	G2, G5, G4, G4, V1, G1, M4 1	R1, R5, R3, G1, G3, R5, R6, M4, R7, R3 1	60-80 15
Sub Total 30 / 30					
14 Aspect (>15% slope)	North 4	East 1	<10% slope all aspects 10	West 12	South 15
15 Slope (%)	<10 1	10-29 address here to North aspect 5	30-39 10	40-54 12	>55 15
16 Runoff	Flat 1	Rolling 1	Sloped terrain, runoff towards street 5	Steep terrain, runoff towards street 7	Concentrated slope, deep gulches 10
17 Landcover/Topographic Continuity to Wildfire Spread	<5 ha isolated forest land 1	North and/or East streets dominant, wildfire spread restricted from South and/or West 2	Sheltered terrain, broken topography, regular aspect and slope changes, multiple access points to wildfire spread 5	Rolling terrain, some water bodies, irregular aspect and slope changes, rather level terrain to wildfire spread 10	Concentrated, continuous topography No restriction to wildfire spread 15
Sub Total 27 / 293 / 7260**					
FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					
18 Position of Structure/Continuity on Slope	No Structures Values within 7 km 0	Bottom of slope, valley bottom 5	All-slope backland, elevated valley, <10% slope 10	Mid-slope continuous, >15% slope 15	Upper slope 20
19 Type of Development	No Structures Values within 7 km 0	Formosa interface, no interface 5	Perennial interface, with interface 10	Intermedia > 1 Structure/ha 15	Intermedia < 1 structure/ha with interface 20
20 Position of Accessment Area Relative to Values	No Structures Values within 7 km 0	Above >500-200-500 < 200 m 1 10 20	Below >500-200-500 < 200 m 1 10 25	Roll-rolling >500-200-500 < 200 m 1 12 35	Below >500-200-500 < 200 m 1 15 40
TOTAL WILDFIRE THREAT SCORE 80 / 785					

*Procted only if Fuel sub total > 25.
**Procted on structural exposure only if Wildfire Threat Behaviour score is > 45 for selected polygons

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 41-60

High 61-74

Critical > 75

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13

Moderate 14-26

High 27-37

Extreme > 38

Last Updated: January 24, 2013

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City of Kamloops – Wildfire Threat Assessment Picture – Plot 75



Photo 75-1 @ 225 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 76

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 76 Community: City of Kamloops

Address: B Morrow Geographic Location (Street Name): Parkway

Date: April 19, 16 GPS/UTM: N5D 391 32 W 1240 20 7.6

Photos: 0, 1, 2 Land Ownership: Crown Private IR Other (specify):

76

Fuel	A	B	C	D	E
1 Fuel Depth and Moisture Regime (cm)	1-27 3	2-45 Dry Dead Fuel 5 1	5-18 Dry Dead Fuel 10 2	10-30 Dry Dead Fuel 12 4	> 24 Dry Dead Fuel 15 3
2 Surface Fuel Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	> 80 5
3 Vegetative Fuel Characteristics	Moss, Ferns, Irrigated crops, Low Flammability Needs 1	Herb, Deciduous Shrubs 2	Lichen, Goshawk Shrubs 3	Fireweed, Juniper 4	Leguminosae, Buckgrass, Artemisia, not within 10m 5
4 Fine Woody Debris Continuity (<7cm) (% cover)	<1 coverage 1	Scattered, <40 coverage 2	10-25 coverage 3	> 25 coverage, < 10 cm deep 4	> 25 coverage, > 10 cm deep 5
5 Large Woody Debris Continuity (>7cm) (% cover)	<1 coverage 1	Scattered, <40 coverage 2	10-25 coverage 3	> 25 coverage, not elevated 4	> 25 coverage, partially elevated 5
6 Live and Dead Continuous Crown Closure (%)	< 20 1	20-40 2	41-60 3	61-80 4	> 80 5
7 Live Deciduous Crown Closure (%)	> 80 and 20% continuous canopy closure 1	61-80 2	41-60 3	20-60 4	< 20 5
8 Live and Dead Canopy Crown Base Height (m)	5+ or < 20% canopy crown closure 1	3-5 2	2-4 3	1-2 4	< 1 5
9 Live and Dead Suppressed and Understorey Canopy (storeys)	< 2 1	3-5 2	6-10 3	10-15 4	> 15 5
10 Fuel Load (kg of aboveground and in-dominant stems)	Standing Dead and Partly Dead < 5 at < 20 canopy closure 1	Standing Dead and Partly Dead 5-25 2	Standing Dead and Partly Dead > 25-50 3	Standing Dead and Partly Dead > 50-75 4	Standing Dead and Partly Dead > 75 5
11 Continuous Forest/Deck Cover within 20m (%)	0-20 1	21-40 2	41-60 3	61-80 4	> 80 5
Sub Total					332 / 755*

Weather	A	B	C	D	E
12 Windbreak Ratio	A1, Insulated 1	EW, CW, SW Dry Dead Fuel 5 3 1	KW, SW, ESW Dry Dead Fuel 10 7 3	HW, SW, SWS, CW, SW, SW, SW, SW Dry Dead Fuel 25 10 5	> 25 5
13 Historical Wildfire Occurrence by DSMZ (No. Inc)	G1, A1, R2, G4, V1, R3, V4, R5, V5, R6, V6 1	G3, G4, R3, R4, V4, G5, G6, V6 2	G7, G8, G4, G4, V1, C1, R4 3	H1, R5, R2, G2, G2, H5, H6, H4, E7, R2 4	H7, H2, R1 5
Sub Total					30 / 110

Topography	A	B	C	D	E
14 Aspect (> 15% slope)	North 1	East 2	< 10% slope all aspects 3	West 4	South 5
15 Slope (%)	< 10 1	10-20 and 20% slope by 20m 2	30-40 3	45-54 4	> 55 5
16 Terrain	Flat 1	Rolling 2	Sloped terrain, minor low cut of draws 3	Continuous slope, deep draws or 20m gulches 4	Continuous slope, deep gulches 5
17 Landcover/Topographic Limitations to Wildfire Spread	< 5 ha natural forest land 1	North and/or east aspects dominant, wildfire spread restricted from south and/or west 2	Mixed terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread, large rocky bodies 3	Rolling terrain, snow water bodies, natural aspect and slope changes, some restrictions to wildfire spread 4	Continuous, continuous topography, no restrictions to wildfire spread 5
Sub Total					14 / 253

FUEL, WEATHER AND TOPOGRAPHY	A	B	C	D	E
18 Proximity of Structures/Community on Slope	No Structures within 2 km 0	Bottom of slope, valley bottom 1	Mid-slope benchmark, elevated valley, < 10% slope 2	Mid-slope continuous, > 15% slope 3	Upper 10% slope 4
19 Type of Development	No Structures within 2 km 0	Formal interface, no inclusions 1	Permeable interface, no inclusions 2	Interface > 1 structure/ha 3	Interface < 1 structure/ha with concrete 4
20 Number of Accessional Area Relative to Values	No Structures within 2 km 0	Above > 500 200-500 < 200 m 1 40 20	Scrub > 500 200-500 < 200 m 1 12 25	Road Building > 500 200-500 < 200 m 1 12 25	Active > 500 200-500 < 200 m 1 15 30
Sub Total					50 / 283

** Proceed only if Fuel sub total > 29.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE: **382** / 283

WILDLAND URBAN INTERFACE THREAT CLASS (check applicable class)

Low	0-4	<input type="checkbox"/>
Moderate	41-95	<input checked="" type="checkbox"/>
High	96-149	<input type="checkbox"/>
Extreme	> 149	<input type="checkbox"/>

WILDLAND URBAN INTERFACE THREAT CLASS (check applicable class)

Low	0-13	<input type="checkbox"/>
Moderate	14-26	<input type="checkbox"/>
High	27-39	<input type="checkbox"/>
Extreme	> 39	<input checked="" type="checkbox"/>

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 76



Photo 76-1 @ 90 degrees

City of Kamloops – Wildfire Threat Assessment Picture – Plot 77



Photo 77-1 @ 225 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 78

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 78 Community: City of Kamloops

Address: B. Maroon Geographic Location/Street Name: 4455 A. Ashdown Way

Date: Apr 19/16 GPS/UTM: N58 30' 9.8" W120 21' 00"

Photos: 0 Land Ownership: Crown Private I.R. Other (specify):

Field	A	B	C	D	E
1 Staff Density and Rooting Depth (cm)	1-2 3	3-5 Dry Fuel Wet 5 1	5-10 Dry Fuel Wet 10 0 2	10-20 Dry Fuel Wet 15 8 4	>20 Dry Fuel Wet 15 10 3
2 Surface Fuel Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Herb. Herb. Trifloral spp. Low flammability weeds 1	Herb. Brooding Strubs 2	Lichen. Greedy Strubs 3	Progress. Turpene 4	Superbark. Invasive. Arctostaph. Squawbush 5
4 Fine Woody Debris Continuity (<7cm) (% cover)	<10 1	Scattered <10 coverage 2	10-25 coverage 3	>25 coverage <10 cm deep 4	>25 coverage >10 cm deep 5
5 Large Woody Debris Continuity (>7cm) (% cover)	<10 1	Scattered <10 coverage 2	10-25 coverage 3	>25 coverage not identified 4	>25 coverage partially identified 5
6 Live and Dead Conifer Crown Closure (%)	<20 1	20-40 2	41-60 3	61-80 4	>80 5
7 Live Deciduous Crown Closure (%)	>40 of 40% can't see crown 0	41-60 2	41-60 3	20-40 4	<20 5
8 Live and Dead Conifer Crown Height (m)	5+ or <20% crown closure 0	3-5 5	2-3 2	1-2 1	>1 15
9 Live and Dead Suppressed and Disturbance Fuel Load (kg/m²)	>100 1	>100 2	1001-2000 3	2001-4000 4	>4000 5
10 Fuel Health (% of dominant and co-dominant species)	Standing Dead and Partly Down <5 0-10 1	Standing Dead and Partly Down 5-15 2	Standing Dead and Partly Down >20-50 3	Standing Dead and Partly Down >50-75 4	Standing Dead and Partly Down >75 5
11 Coniferous Forest/Stand Cover within 2km (m²)	>20 0	21-40 1	41-60 2	61-80 3	>80 4
Sub Total <u>46</u> /150*					
Weather	A	B	C	D	E
12 Hydroclimatic Index	A1, A2, A3 1	A4, B1, B2, B3, B4 2	B5, B6, B7, B8, B9, B10 3	B11, B12, B13, B14, B15, B16, B17, B18, B19, B20 4	B21, B22, B23, B24, B25, B26, B27, B28, B29, B30 5
13 Potential Ignition Frequency by Wild Fire Zone	60, 81, 82, 86, 93, 99, 101, 102, 103, 104, 107 1	63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80 2	67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80 3	81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 4	101, 102, 103, 104, 105, 106, 107, 108, 109, 110 5
Sub Total <u>30</u> /50					
Topography	A	B	C	D	E
14 Aspects (>15% slope)	East 1	East 2	<4% slope all aspects 3	West 4	South 5
15 Slope (%)	<16 1	16-25 and over more for steep slopes 2	10-44 3	45-54 4	>55 5
16 Terrain	Flat 1	Rolling 2	Steep slopes, never above 10% crown 3	Complex slope, steep descent or shallow gulches 4	Complex slope, steep gulches 5
17 Landform/Topographic Continuity to Wildfire Spread	<5 ha isolated forest land 1	North-south east aspects dominant, wildfire spread restricted from South and/or West 2	Mountainous terrain, broken topography, complex aspect and slope changes, multiple restrictions to wildfire spread 3	Rolling terrain, minor water bodies, minimal aspect and slope changes, fewer restrictions to wildfire spread 4	Continuous, consistent topography, No restrictions to wildfire spread 5
Sub Total <u>15</u> /55					
FUEL WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE <u>91</u> /155 (2.40)**					
Structural	A	B	C	D	E
18 Position of Structures/Community vs Slope	No Structures Within 2 km 0	Bottom of slope, valley bottom 1	Mid-slope Sloped, created valley <10% slope 2	Mid-slope crestline, >15% slope 3	Upper 1/3 of slope 4
19 Type of Development	No Structures Within 2 km 0	Perimeter with fences 1	Perimeter with fences 2	Interior >1 structure 3	Interior <1 structure 4
20 Position of Assessment Area Relative to Ridge	No Structures Within 2 km 0	Above >500-1000-200 m 1 10 20	5-60m >500-1000-200 m 1 10 20	70-100m >500-1000-200 m 1 10 20	Below >500-1000-200 m 1 10 20
Sub Total <u>43</u> /205					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE <u>134</u> /255					

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City of Kamloops – Wildfire Threat Assessment Picture – Plot 78



Photo 78-1 @ 60 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 79

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot # 79 Community City of Kamloops
 Address: B3 Marcus Geographic Location/Street Name 51st Avenue
 Date: Apr 19/16 GPS/UTM: N50° 38' 26.6" W120° 21' 3.9"
 Photos: 14 Land Ownership: Crown Private I.R. Other (specify)

Panel	A	B	C	D	E
1 Fuel Depth and Moisture Regime (m)	1-2 3	2-5 Dry Fuelbeds 5 3	5-10 Dry Fuelbed 10 6 2	10-20 Dry Fuelbed 12 8 4	>20 Dry Fuelbed 15 10 5
2 Surface Fuel Continuity (% cover)	<10 0	20-40 2	41-60 3	61-80 4	81-100 5
3 Vegetation Fuel Characteristics	Moss, Herbs, Integrated Crown, Low Flammability Items 1	Herbs, Deciduous Shrubs 2	Lichen, Conifer Shrubs 3	Prunus, Juniper 4	Scruboak, Handgren, Intertight Wood, Conifer 5
4 Fine Woody Debris Continuity (<7mm) (% cover)	<5 coverage 1	Scattered, <10 coverage 5	10-25 coverage 7	>25 coverage, <10 cm deep 10	>25 coverage, >10 cm deep 15
5 Large Woody Debris Continuity (>7mm) (% cover)	<1 coverage 1	Scattered, <20 coverage 5	10-25 coverage 5	>25 coverage, not elevated 7	>25 coverage, partially elevated 10
6 Live and Dead Continuous Crown Closure (%)	<20 2	20-40 5	41-60 10	61-80 15	>80 20
7 Live Deciduous Crown Closure (%)	>80 or <80% continuous canopy closure 4	61-80 2	41-60 3	20-40 4	<20 5
8 Live and Dead Canopy Crown Base Height (m)	5 or <20% canopy coverage 1	3-5 5	7-11 7	1-2 10	<1 15
9 Live and Dead Suppressed and Understorey Canopy (m)	<20 1	301-1000 5	1000-2000 10	2001-4000 20	>4000 30
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Partly Dead < 5 or <20% stems 1	Standing Dead and Partly Dead 5-25 5	Standing Dead and Partly Dead >25-50 10	Standing Dead and Partly Dead >50-75 20	Standing Dead and Partly Dead >75 30
11 Continuous Forest/Tree Cover within 2km (m)	0-20 0	21-40 3	41-60 5	61-80 7	81-100 10
Sub Total <u>24</u> /55*					
12 Microclimate Zone	AT, Uprairie 1	CH, CR, MH Dry/Dead Wet 2 1	TC, SB, ESF Dry/Dead Wet 10 7 1	DC, NS, SP, CH, DR & DS, DBS, SW, CRY, Dry/Wet 15 7 10	PF, BG 15
13 Historical Wildfire Occurrence (by 100m x 100m Zone)	65, 81, R2, 66, 95, B0, 99, 10, 10, B1, 17 1	03, 04, R3, B4, 10, 01, 03, 10 5	07, 05, 04, 04, 11, 01, 05 8	01, 05, 03, 02, 03, 05, 16, 04, 07, 12 10	R2, 00, 01 15
Sub Total <u>25</u> /30					
14 Aspect (>15% slope)	North 0	East 5	<15% slope (steep) 10	West 15	South 15
15 Slope (%)	<10 1	10-20 and max slope for heavy slopes 5	30-44 10	45-54 12	>55 15
16 Terrain	Rolling 1	Rolling 5	Slight terrain, slight low relief areas 5	Consistent slope, steep slopes or shallow gullies 7	Consistent slope, steep gullies 10
17 Landscape/Topographic Limitation to Wildfire Spread	<5 ha isolated forest block 1	North and/or east aspects down-slope, wildfire spread restricted from South and/or West 2	Mountainous terrain, 8 when appropriate, moderate aspect and slope changes, tall grasses (>10m) to inhibit spread 5	Rolling terrain, no low water basins, minimal aspect and slope changes, no major restrictions to wildfire spread 10	Consistent, consistent topography, no restrictions to wildfire spread 15
Sub Total <u>17</u> /55					
FUEL, WEATHER AND TOPOGRAPHY			WILDFIRE BEHAVIOUR THREAT SCORE		
18 Position of Structure/Continuity on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 5	Mid-slope, highland elevated sites, steep slope 10	Mid-slope continuous, >15% slope 12	Slope 1/3 of Slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter interface, no buildings 5	Perimeter interface with buildings 5	Interior > 1 structure/ha 8	Interior < 1 structure/ha 10
20 Position of Assessment Area Relative to Values	No Structures Values within 2 km 0	All else >500 200-500 <100 m 1 10 20	Interior >500 200-500 <100 m 12 12 22	Interior >500 200-500 <200 m 1 12 25	Interior >500 200-500 <200 m 1 15 30
TOTAL WILDFIRE THREAT SCORE <u>104</u> /210					

Wildfire Behaviour Threat Class (check applicable class):
 Low 0-40
 Moderate 41-95
 High 96-149
 Extreme >149

Wildland Urban Interface Threat Class (check applicable class):
 Low 0-13
 Moderate 14-26
 High 27-39
 Extreme >39

(Last updated: January 24, 2013)

79

City of Kamloops – Wildfire Threat Assessment Picture – Plot 79



Photo 79-1 @ 340 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 80

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: **80** Community: **City of Kamloops**

Assessor: **B. Maxwell** Geographic Location/Street Name: **1500th Ave**

Date: **Apr 19 16** GPS/UTM: **N50 30' 27.0" W120° 21' 13.5"**

Photos: **4** Land Ownership: Crown Private I.R. Other (specify)

80

Fuel	A	B	C	D	E
1 Duff Depth and Moisture Regime (cm)	0	2-45 Dry Zonal Wet 5 3 1	5-10 Dry Zonal Wet 10 6 2	10-20 Dry Zonal Wet 12 8 4	>20 Dry Zonal Wet 15 10 5
2 Surface Fuel Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	81-100 5
3 Vegetation Fuel Composition	Moss, Herbs, Irrigated Crops, Low Flammability Weeds 1	Herbs, Deciduous Shrubs 2	Lichen, Conifer Shrubs 3	Pinegrass, Juniper 4	Sagebrush, bunchgrass, Any shrubs, Scotch Broom 5
4 Fine Woody Debris Continuity (<=7cm) (% cover)	<10 coverage 1	Scattered, <10 coverage 5	10-25 coverage 7	>25 coverage, <10 cm deep 10	>25 coverage, >10 cm deep 15
5 Large Woody Debris Continuity (>7cm) (% cover)	<10 coverage 1	Scattered, <10 coverage 5	10-25 coverage 5	>25 coverage, not elevated 7	>25 coverage, partially elevated 10
6 Live and Dead Coniferous Crown Closure (%)	<20 0	20-40 5	41-60 10	61-80 15	>80 20
7 Live Deciduous Crown Closure (%)	>80 or <40% coniferous with pressure 0	61-80 2	41-60 3	20-40 4	<20 5
8 Live and Dead Conifer Crown Base Height (m)	5+ or <10m per crown 0	3-5 5	2-3 7	1-2 10	<1 15
9 Live and Dead Suppressed and Understory Conifers (stems/ha)	0-500 2	501-1000 5	1001-2000 10	2001-4000 20	>4000 30
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Partly Down <5 or <25 stems/ha 0	Standing Dead and Partly Down 5-25 5	Standing Dead and Partly Down >25-50 10	Standing Dead and Partly Down >50-75 20	Standing Dead and Partly Down >75 30
11 Continuous Forest/Slash Cover within 2km (%)	0-20 0	21-40 3	41-60 5	61-80 7	>80 10
Sub Total					27 /155*

Weather	A	B	C	D	E
12 Bioclimatic Zone	A1, Irrigated 1	CW1, CDF, MH Dry Zonal Wet 5 3 1	KE1, SB5, ESSF Dry Zonal Wet 10 7 3	DE1, MS, SB5, CW1 d1 & d2, BWS, SB0 - Dry Zonal Wet 15 10 5	PE1, B 15
13 Historical Wildfire Occurrence (by Wild Fire Zone)	G5, R1, R2, G6, V5, R9, V9, V3, RS, R8, V7 1	G3, G8, R3, R4, V6, G1, G9, V8 5	G7, G5, G4, C4, V1, C1, N6 8	K1, K5, K3, C2, C3, N5, N6, N4, K7, N2 10	N7, G4, R8, N1 15
Sub Total					30 /30

Topography	A	B	C	D	E
14 Aspects (>15% slope)	North 0	East 5	<16% slope all aspects 10	West 12	South 15
15 Slope (%)	<16 1	16-20 and fire score for North Slopes 5	20-44 10	45-54 12	>55 15
16 Terrain	Flat 1	Rolling 3	Sloped terrain, minor low ridges 5	Consistent slope, deep draws or shallow gullies 7	Consistent slope, deep gullies 10
17 Landscape/Topographic Limitations to Wildfire Spread	<5 ha isolated forest land 1	North and/or east aspects dominate, wildfire spread restricted from South and/or West 2	Mountainous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread large water bodies 5	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread 10	Continuous, consistent topography No restriction to wildfire spread 15
Sub Total					70 /155

FUEL, WEATHER AND TOPOGRAPHY	WILDFIRE BEHAVIOUR THREAT SCORE				
Structural	A	B	C	D	E
18 Position of Structures/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 5	Mid-slope benchland, elevated valley, <16% slope 10	Mid-slope continuous, >16% slope 12	Upper 1/3 of Slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter Interface, no inclusions 3	Perimeter Interface, with inclusions 5	Intermix > 1 structure/ha 8	Intermix < 1 structure/ha Infrastructure 10
20 Position of Assessment Area Relative to Values	No Structures Values within 2 km 0	Above >500 200-500 <200 m 1 10 20	Sideline >500 200-500 <200 m 1 12 25	Flat/Rolling >500 200-500 <200 m 1 12 25	Below >500 200-500 <200 m 1 15 30
Sub Total					71 /240**

* Proceed only if Fuel sub total is >= 25

** Proceed to Structural component only if Wildfire Threat Behaviour Score is >= 95 for untreated polygons.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE **45 /295**

TOTAL WILDFIRE THREAT SCORE **127 /295**

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 41-95

High 96-149

Extreme >149

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13

Moderate 14-26

High 27-39

Extreme >39

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 80



Photo 80-1 @ 45 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 81

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot # 81 Community City of Kamloops

Address B.M. Brown Geographic Location/Street Name Pacific Way

Date Apr 20/16 GPS/UTM: N50° 30' 56.3" W120° 20' 41.1"

Photos: 4 Land Ownership: Crown Private I.R. Other (specify)

91

Field	A	B	C	D	E
1 Fuel Depth and Moisture Regime (cm)	1-5 3	1-4.5 Dry Zonal Wet 5 2 1	5-10 Dry Zonal Wet 10 2 2	10-20 Dry Zonal Wet 12 2 4	>20 Dry Zonal Wet 15 2 5
2 Surface Fuels Continuity (% cover)	<20 4	20-40 7	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Alms, Herbs, Impaired Grass, Low Flammability Weeds 1	Herbs, DenRubs, Scrubs 2	Alms, Conifer Scrubs 3	Pinegrass, Juniper 4	Scruboak, Shruboak, Arbutus, Birch, Scotch Spruce 5
4 Fine Woody Debris Conductivity (<=7cm) (% cover)	<10 1	Scattered, <10 coverage 5	10-25 coverage 7	>25 coverage, <10 cm deep 10	>25 coverage, >10 cm deep 15
5 Large Woody Debris Conductivity (>7cm) (% cover)	<10 1	Scattered, <10 coverage 2	10-25 coverage 5	>25 coverage, not elevated 7	>25 coverage, partially elevated 10
6 Live and Dead Coniferous Crown Closure (%)	<10 1	20-40 5	41-60 7	61-80 10	>80 15
7 Live Deciduous Crown Closure (%)	>80 or <40% continuous canopy cover 1	61-80 2	41-60 5	20-40 4	<20 3
8 Live and Dead Canopy Crown Base Height (m)	5m or <20% center crown closure 1	10-20 2	2-4.5 7	1-4.2 10	<1 15
9 Live and Dead Suppressed and Unsuppressed Canopy Closure (%)	>50 1	51-100 5	100-200 10	201-400 20	>400 30
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Partly Down <5 or <10 stems/ha 1	Standing Dead and Partly Down 5-25 2	Standing Dead and Partly Down >25-50 10	Standing Dead and Partly Down >50-75 20	Standing Dead and Partly Down >75 30
11 Groundcover Forest/Slash Cover within 20m (m)	0-20 1	21-40 5	41-60 10	61-80 20	>80 30
Sub Total					32 / 133*

Observation	A	B	C	D	E
12 Microclimatic Zone	AT, Impaired 1	CH, CH, MH Dry Zonal Wet 5 2 1	KH, SB, ESSF Dry Zonal Wet 10 2 3	HW, HS, SWS, (WH) (W) (W) (W), (W) (W) Dry Zonal Wet 15 2 5	PP, BG 15
13 Potential Wildfire Intensity (kW/m²)	G6, H1, R2, G6, H5, H9, H3, H5, H8, H7 1	G3, G6, H5, H6, H4, H5, H6, H4 5	G7, C3, G4, C4, H1, E1, H6 8	H1, H5, H3, C2, E3, H5, H4, H6, H7, H2 10	H7, H6, H1 15
Sub Total					30 / 130

Topography	A	B	C	D	E
14 Aspect (% slope)	North 1	East 5	<8% slope all aspects 10	West 15	South 15
15 Slope (%)	<10 1	10-20 and max slope for North slopes 5	21-40 10	40-54 15	>55 15
16 Zone	Flat 1	Rolling 5	Sloped terrain, minor topographic drain 10	Conspicuous slope, deep drains or shallow gullies 15	Conspicuous slope, deep gullies 15
17 Landscape/Topographic Continuity to Wildfire Spread	<5 ha isolated forest land 1	North and/or east aspects dominant, wildfire spread restricted from South and/or West 2	Minor changes in terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread 5	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread 10	Continuous, consistent topography, no restriction to wildfire spread 15
Sub Total					25 / 95

FUEL, WEATHER AND TOPOGRAPHY	WILDFIRE BEHAVIOUR THREAT SCORE				
Structural	A	B	C	D	E
18 Position of Structures/Community on Slope	No Structures Values within 2 km 1	Bottom of slope, valley bottom 5	Mid-slope breakland, elevated valley, <10% slope 10	Mid-slope crevasses, >10% slope 15	Upper 1/3 of slope 15
19 Type of Development	No Structures Values within 2 km 1	Perimeter interface, semi-urban 5	Perimeter interface, with inclusions 10	Intensive >1 structure/ha 15	Intensive <1 structure/ha infrastructure 15
20 Position of Assessment Area Relative to Values	No Structures Values within 2 km 1	Above >500 250-500 <200 m 1 10 20	500-1000 >500 200-500 <200 m 1 10 25	Mid/Rolling >500 200-500 <200 m 1 12 25	Below >500 200-500 <200 m 1 15 30
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					40 / 95

* Proceed only if field sub total >= 25.
** Proceed on Structural component only of Wildfire Threat Behaviour Score >= 95 for untreated properties.

Wildfire Behaviour Threat Class (check applicable class)

Low	0-40	<input type="checkbox"/>
Moderate	41-95	<input checked="" type="checkbox"/>
High	96-140	<input type="checkbox"/>
Extreme	>140	<input type="checkbox"/>

Wildland Urban Interface Threat Class (check applicable class)

Low	0-15	<input type="checkbox"/>
Moderate	16-20	<input type="checkbox"/>
High	21-30	<input checked="" type="checkbox"/>
Extreme	>30	<input type="checkbox"/>

Local (Updated): January 14, 2012

Syo

City of Kamloops – Wildfire Threat Assessment Picture – Plot 81

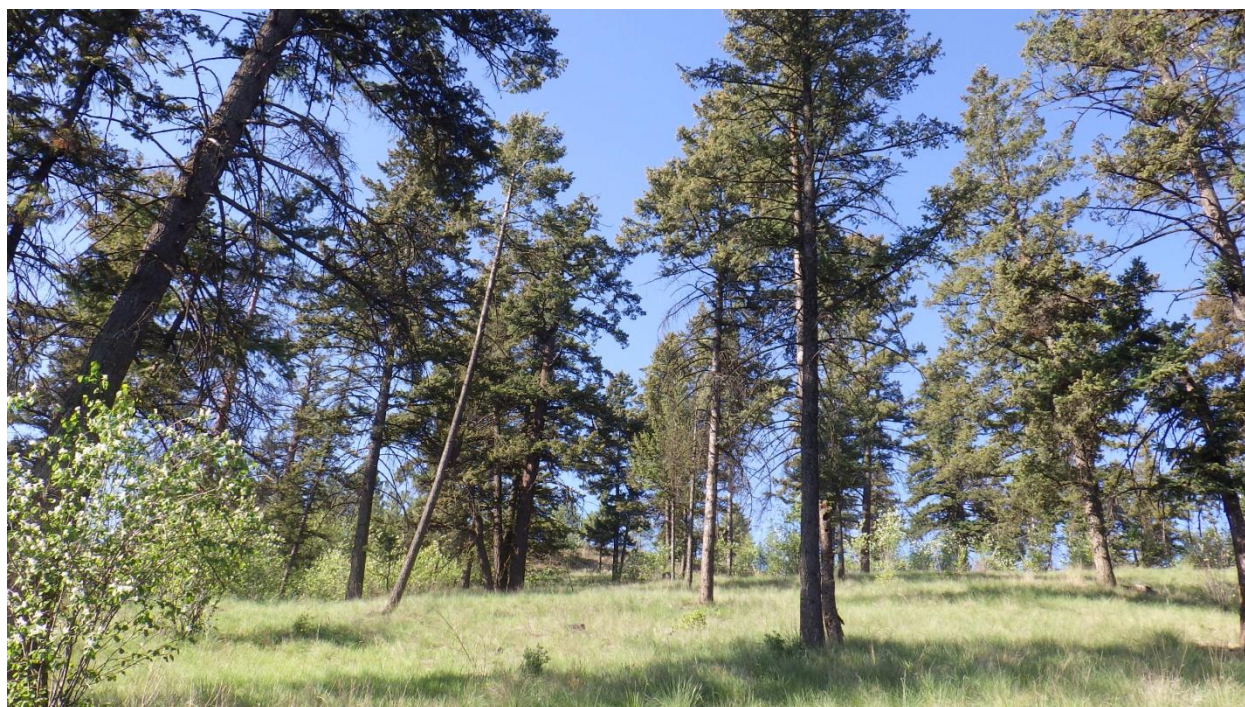


Photo 81-1 @ 190 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 82

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot # 82 Community City of Kamloops

Assessor B. Mayr Geographic Location/Street Name Roseville Way

Date: Apr 2016 GPS/UTM NSA 38 53.4 0 W120 12 51.1

Photos 0 Land Ownership Crown Private LR Other (specify)

82

Field	A	B	C	D	E
1 Fuel Depth and Moisture Regime (m)	1-2 3	3-5 Dry (0-10%) 3	6-10 Dry (0-10%) M 4 2	10-20 Dry (0-10%) 12 B 4	>20 Dry (0-10%) 15 10 5
2 Surface Fuel Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Moist Herbs, High Moist. Evergreen Shrubs	Herbs, Deciduous Shrubs	Timber, Conifer Shrubs	Perennials, Litter	Highly flammable, Standing Fuel, Shrub Layer
4 Fine Woody Debris Continuity (<7mm) (% cover)	<1 coverage 0	Scattered, <10 coverage 5	10-25 coverage 7	>25 coverage, <10 cm deep 10	>25 coverage, >10 cm deep 15
5 Large Woody Debris Continuity (>7mm) (% cover)	<1 coverage 1	Scattered, <10 coverage 5	10-25 coverage 5	>25 coverage, not detailed 10	>25 coverage, partially detailed 15
6 Live and Dead Continuum Crown Closure (%)	<20 2	20-40 4	41-60 10	61-80 15	>80 20
7 Live Deadwood Crown Closure (%)	>80 or <40% (under 10m)	61-80 2	41-60 1	20-40 4	<20 5
8 Live and Dead Greater Crown Room Height (m)	5+ or <20% canopy 0	3-5 5	2-3 7	1-2 10	<1 15
9 Live and Dead Suppressed and Intermediate Canopy (Stems/ha)	0-50 0	501-1000 5	1001-2000 10	2001-4000 20	>4000 30
10 Fuel Threat (% of dominant and co-dominant stems)	Standing Dead and Partly Dead < 1 m < 20 stems/ha 0	Standing Dead and Partly Dead 5	Standing Dead and Partly Dead > 25-50 10	Standing Dead and Partly Dead > 50-75 20	Standing Dead and Partly Dead > 75 30
11 Continuous Forest/Shrub Cover within 20m (m)	0-20 0	21-40 3	41-60 5	61-80 7	>80 10
Sub Total					30 /150*

Microclimate	A	B	C	D	E
12 Microclimate Zone	AT, temperate 1	CW, CW, M Dry (0-10%) 3 1	KU, SB, ESF Dry (0-10%) 10 / 3	BS, WS, SPS, WS (0-10%), WS (0-10%), WS (0-10%) 15 (10) 3	PS, SS 15
13 Humidity/Windiness Occurrence (by 1000 Hr Area)	65, 81, 82, 66, 83, 80, 79, 85, 84, 88, 87 1	63, 64, 85, 86, 90, 61, 62, 89 3	67, 69, 64, 64, 61, 61, 66 4	81, 85, 83, 82, 83, 85, 84, 84, 87, 82 10	87, 86, 82, 81 15
Sub Total					25 /125

Topography	A	B	C	D	E
14 Aspect (>15% slope)	North 0	East 5	<10% slope, 0-10 aspects 10	West 12	South 15
15 Slope (%)	<10 1	10-20 5	20-40 10	40-60 12	>60 15
16 Terrain	Flat 1	Hilly 3	Sloped terrain, minor levelled areas 5	Escarpment slope, deep draws or hollows 7	Concentric slope, gullies 10
17 Landcover/Slope/Aspect/Topography Interaction to Influence Spread	< 5 ha isolated forest 1	North and/or east aspects dominate, wildfire spread restricted from South 5	Microclimate, terrain, breaks topography, regular aspect and slope changes, multiple restrictions to wildfire spread 5	Hilly terrain, mixed water bodies, uneven aspect and slope changes, minor restrictions to wildfire spread 10	Continuous, consistent topography, no restrictions to wildfire spread 15
Sub Total					55 /275**

FUEL WEATHER AND TOPOGRAPHY	A	B	C	D	E
18 Position of Structures/Continuity on Slope	No Structures Values within 2 km 0	Bottom of slope, upper bottom 5	Mid-slope hillside, elevated valley, <10% slope 10	Mid-slope, continuous, >10% slope 12	Upper 1/3 of Slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter interface, no structures 5	Perimeter interface, with structures 10	Interior > 1 structure/ha 15	Interior < 1 structure/ha 20
20 Position of Access Road Relative to Subject	No Structures Values within 2 km 0	Above >500 200-500 <200 m 1 10 20	Below >500 200-500 <200 m 5 12 25	Flat/Rolling >500 200-500 <200 m 5 12 25	Steep >500 200-500 <200 m 5 12 25
TOTAL WILDFIRE THREAT SCORE					45 /225

* Proceed only if Fuel sub total is >20.

** Proceed to Structural component only if Wildfire Threat Behaviour Score is >95 for individual polygons.

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 41-95

High 96-140

Extreme >140

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13

Moderate 14-25

High 26-39

Extreme >39

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 82



Photo 82-1 @ 360 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 83

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 83 Community: City of Kamloops

Address: 8 Malibu Geographic Location/Street Name: Highway 91

Date: Apr 2014 GPS/UTM: N50 28 45.3 W 124 22 39.74

Photos: 0 # 4 Land Ownership: Crown Private I.R. Other (Specify)

Final	A	B	C	D	E
1 Fuel Type and Moisture Regime (Low)	1	2-5 Dry Zonal Wet 5 2 1	6-10 Dry Zonal Wet 10 6 2	10-20 Dry Zonal Wet 12 8 4	>20 Dry Zonal Wet 15 10 5
2 Surface Fuel Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Moss, Herbs, Irrigated Crops, Low Flammability Weeds	Herbs, Deciduous Shrubs	Lichen, Grasses, Shrubs	Pinetrees, Arbutus	Sagebrush, Madroño, Arbutus, Shrub, Shrub
4 Fine Woody Debris Continuity (<=7mm) (% cover)	<5 0	Scattered, <10 coverage 5	10-25 coverage 7	>25 coverage, <10 cm deep 10	>25 coverage, >10 cm deep 15
5 Large Woody Debris Continuity (>7mm) (% cover)	<5 0	Scattered, <10 coverage 2	10-25 coverage 5	>25 coverage, not elevated 7	>25 coverage, partially elevated 10
6 Live and Dead Conifers Crown Closure (%)	<20 0	21-40 2	41-60 3	61-80 4	>80 5
7 Live Deciduous Crown Closure (%)	>80 or <40% (with 100% crown closure) 0	41-60 2	41-60 3	20-40 4	<20 5
8 Live and Dead Conifer Crown Base Height (m)	5 or <20% crown base 0	2-5 0	2-3 2	1-2 1	<1 0
9 Live and Dead Suppressed and Intermediate Canopies (Stems/m²)	0-50 0	50-100 5	100-200 10	200-400 20	>400 30
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Partly Down < 5 or < 20 stems/m² 0	Standing Dead and Partly Down 0	Standing Dead and Partly Down > 25-50 10	Standing Dead and Partly Down > 50-75 20	Standing Dead and Partly Down > 75 30
11 Continuous Forest/Grass Cover within 2km (%)	0-24 0	25-40 5	41-60 10	61-80 20	>80 30
Sub Total 37 / 100*					
12 Microclimate Zone	M, Irrigated	UW, E, SW, NW Dry Zonal Wet 5 2 1	W, S, E, SW Dry Zonal Wet 10 7 3	UW, S, SW, NW, E, W, S, SW Dry Zonal Wet 10 7 3	W, E, S, SW 15
13 Historical Wildfire Recurrence (by 1000 Year Int.)	05, 11, 12, 06, 15, 19, 19, 13, 15, 18, 17 1	03, 08, 13, 14, 16, 01, 04, 18 5	07, 05, 04, 14, 17, 11, 16 1	11, 15, 13, 12, 11, 16, 16, 14, 17, 12 10	17, 12, 12, 11 15
Sub Total 20 / 50					
14 Topography	A	B	C	D	E
14 Aspect (> 15% slope)	North 0	East 5	<15% slope all aspects 10	West 15	South 15
15 Slope (%)	<10 1	10-25% max slope for street layout 5	30-44 10	45-54 12	>55 15
16 Runoff	Flat 1	Shallow 2	Shaped terrain, minor flow related drains 5	Consistent slope, deep drains, or 200m gullies 10	Consistent slope, deep gullies 15
17 Landowner Topographic Orientation to Wildfire Spread	< 5 ha isolated forest land 1	North and/or west aspects dominant, western aspect restricted from South and/or West 2	Mountainous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wind direction and fuel availability 5	Rolling terrain, minor water bodies, minor aspect and slope changes, minor restrictions to wind direction and fuel availability 10	Continuous, consistent topography, unrestricted to wind direction and fuel availability 15
Sub Total 41 / 100**					
FUEL, WEATHER AND TOPOGRAPHY			WILDFIRE BEHAVIOUR THREAT SCORE		
18 Structure and Position of Structures/Community on Slope	No Structures, Values within 2 km 0	Bottom of slope, valley bottom 5	Mid-slope bench and elevated valley, <15% slope 10	Mid-slope bench and elevated valley, >15% slope 12	Upper 1/2 of Slope 15
19 Type of Development	No Structures, Values within 2 km 0	Perimeter interface, no buildings 5	Perimeter interface, with buildings 10	Interface > 1 km 15	Interface > 3 km 20
20 Proximity of Assessment Area Relative to Urban	No Structures, Values within 2 km 0	Above > 500-200-500 < 100 m 1 10 20	Below > 500-200-500 < 100 m 1 12 25	Below > 500-200-500 < 100 m 1 12 25	Below > 500-200-500 < 100 m 1 15 30
Sub Total 47 / 101					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE			TOTAL WILDFIRE THREAT SCORE		
			47 / 101		

* Proceed only if fuel sub total > 25.
** Proceed to Structural component only if wildfire threat Behaviour Score is > 15 for structured polygons.

Wildfire Behaviour Threat Class (check applicable class)

Low 0-49
 Moderate 51-95
 High 96-149
 Extreme > 149

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13
 Moderate 14-26
 High 27-39
 Extreme > 39

Last Updated: January 24, 2013

83

City of Kamloops – Wildfire Threat Assessment Picture – Plot 83



Photo 83-1 @ 360 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 84

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-incident Post-incident

Plot #: 84 Community: City of Kamloops

Address: B Main road Geographic Location/Street Name: Rowley Rd

Date: Apr 20/16 GPS/UTM: N50° 38' 52.5" W124° 13' 24.7"

Photo: 11 Land Ownership: Crown Private IR Other (specify):

84

Fuel	A	B	C	D	E
1 Fuel Source and Moisture Regime (M)	1-2 1	2-5 Dry (2) 5	5-10 Dry (2) 6 2	10-24 Dry (2) 12 4	>24 Dry (2) 15 10 5
2 Surface Fuel Continuity (FC cover)	<20 4	20-40 2	41-60 1	61-80 4	>80 5
3 Vegetation Fuel Composition	Moss, Herbs, Irrigated Grass, Low Flammability Herbs 1	Herbs, Deciduous Shrubs 2	Mixed, Conifer Shrubs 3	Phlegmas, Lycopod 4	Sagebrush, Barkhills, Asterisks, Birch, Spruce 5
4 Fine Woody Debris Continuity (<7cm) (W cover)	<1 coverage 1	>1 coverage 5	10-25 coverage 7	>25 coverage >10 cm deep 10	>25 coverage >30 cm deep 15
5 Large Woody Debris Continuity (>7cm) (W cover)	<1 coverage 1	Scattered <10 coverage 2	10-25 coverage 5	>25 coverage not elevated 7	>25 coverage partially elevated 10
6 Live and Dead Continuity Crown Closure (CL)	<20 2	21-40 3	41-60 10	61-80 15	>80 10
7 Live Continuity Crown Closure (CL)	>80 or <40% crown closure 3	61-80 2	41-60 3	20-40 4	<20 3
8 Live and Dead Smaller Crown Closure (CL)	1-1 m <20% smaller crown closure 1	2-5 5	1-23 2	1-23 16	>23 15
9 Live and Dead Suppression and Inhibitory Canopy Closure (CL)	<20 2	21-40 5	100-1200 10	2011-4000 20	>4000 30
10 Fuel Depth (D) of dominant and co-dominant stems	Standing Dead and Partly Dead <5 0	Standing Dead and Partly Dead >5 5	Standing Dead and Partly Dead >15-50 10	Standing Dead and Partly Dead >50-75 20	Standing Dead and Partly Dead >75 30
11 Continuous Forest/Shrub Cover within 20m (FC)	0-20 0	21-40 3	>40 5	61-80 7	>80 10
Sub Total					51 / 250*

Weather	A	B	C	D	E
12 Meteorologic Fuel	All Required 1	CMH, EDE MH Dry (2) 5	CMH, SRS, ESS Dry (2) 10	CMH, SRS, ESS, C1 & C2 Dry (2) 15	PS, BK 15
13 Meteorologic Occurrence by 2000 (W cover)	G1, K1, M1, O4, T5, P6, V3, V3, P5, R6, W7 1	G5, G4, B3, B4 Y6, G1, G4, Y6 5	G7, G5, G4, G4, V1, C1, N6 6	K1, K5, K3, C2, C1, M5, P5, M4, K7, K2 10	M1, K2, M1 15
Sub Total					20 / 200

Topography	A	B	C	D	E
14 Aspect (>15% slope)	North 0	East 5	<10% slope all aspects 10	West 12	South 15
15 Slope (%)	<10 1	10-15 5	16-44 10	45-54 12	>55 15
16 Runoff	High 1	Medium 5	Sloped terrain, near level of drain 5	Levelled slope, steep drain or shallow gutter 7	Contoured slope, deep gutter 10
17 Landscape/Topographic Limitations to Fuel Spread	<5 ha isolated forest land 1	North and/or east aspects dominate, weather (spiral restricted from South and/or West) 2	Irregular terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread 5	Rolling terrain, minor water bodies, irregular aspect and slope changes, few restrictions to wildfire spread 10	Continuous, contoured topography, no restrictions to wildfire spread 15
Sub Total					55 / 240**

FUEL, WEATHER AND TOPOGRAPHY	WILDFIRE BEHAVIOUR THREAT SCORE				
Structural	A	B	C	D	E
18 Position of Structure/Continuity on Slope	No Structure Values within 2 km 0	Bottom of slope, valley bottom 5	Mid slope long/land, elevated sites, 10% slope 10	Alto slope, common, >10% slope 12	Upper 1/3 of slope 15
19 Type of Development	No Structures Values within 2 km 0	Residential (1) 5	Residential (2) with encroachment 5	Residential (3) structures 10	Industrial & structures 15
20 Position of Encroachment Area Relative to Wildfire	No Structures Values within 2 km 0	Above >500 200-500 <200 m 1 10 10	Subsill >500 200-500 <200 m 1 12 25	Flat/Rolling >500 200-500 <200 m 1 13 25	Below >500 200-500 <200 m 1 15 30
Sub Total					35 / 155

* Pruned only if Fuel sub total >= 20.
** Proceed to structural response only if Wildfire Threat Behaviour Score is >= 5 for unimproved properties.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE

WILDFIRE BEHAVIOUR THREAT CLASS (check applicable class)

Low 0-13

Moderate 14-24

High 25-39

Extreme > 40

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13

Moderate 14-24

High 25-39

Extreme > 40

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 84



Photo 84-1 @ 150 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 85

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: **85** (Community: **City of Kamloops**)
 Assessor: **B. Morrow** Geographic Location/Street Name: **Aberdeen Way**
 Date: **Apr 2016** GPS/UTM: **NS0 38 31 UTM 20 512**
 Photos: **4** Land Ownership: Crown Private I.L. Other (specify):

85

Fuel	A	B	C	D	E
1 Buff Shrub and Herbaceous (up to 2m)	1-3	4-5	6-10	11-20	>20
2 Surface Fuel Continuity (% cover)	<20	20-40	41-60	61-80	>80
3 Vegetation Fuel Composition	Herb. Herb. Integrated Grasses Low Flammability Weeds 1	Herb. Deciduous Shrubs 2	Shrub. Conifer Shrubs 3	Perennial Legume 4	Single-trunk Deciduous, Arborescent, Shrub, Scotch Spruce 5
4 Fine Woody Debris Continuity (<7cm) (% cover)	<1 coverage	Scattered <10 coverage	10-25 coverage	>25 coverage, <30 cm deep	>25 coverage, >10 cm deep
5 Large Woody Debris Continuity (>7cm) (% cover)	<1 coverage	Scattered <10 coverage	10-25 coverage	>25 coverage, not elevated	>25 coverage, partially elevated
6 Live and Dead Coniferous Crown Closure (%)	<20	21-40	41-60	61-80	>80
7 Live Deciduous Crown Closure (%)	>20 or <40% conifers crown down	41-60	41-60	61-80	>80
8 Live and Dead Coniferous Branch Height (m)	54 m or <20% conifer crown closure	3-5	2-4	5-10	<1
9 Live and Dead Suppression and Chokeberry (other, structure)	0-500	51-1000	1001-2000	2001-5000	>5000
10 Lateral Spread (% of dominant and co-dominant stems)	Standing Dead and Toppled <5	Standing Dead and Toppled 5-25	Standing Dead and Toppled 25-50	Standing Dead and Toppled >50-75	Standing Dead and Toppled >75
11 Continuous Forest/Shrub Cover within 2km (m)	0-20	21-40	41-60	61-80	>80
Sub Total					32/150*

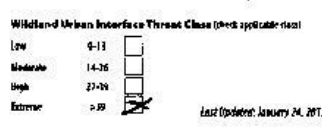
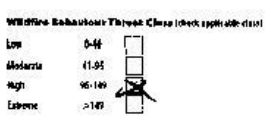
Weather	A	B	C	D	E
12 Dependable Data	All Integrated 1	CRN, LR, MH Any Zonal Met 5 3 1	HR, SR, ESSF Dry Zonal Met 10 7 3	RR, NS, SPS (with RR & SPS), ESSF Dry Zonal Met 15 10 5	RR, SR 15
13 Potential Weather Occurrence (by WMO Type Zone)	65, 81, R2, R4, R5, R6, R9, R3, R5, R6, R7	63, 64, R3, R4, R4, 61, 62, R4	62, 63, 64, 64, V1, V1, R4	81, R5, R5, R2, R3, R5, R6, R6, R7, R2	N/A
Sub Total					30/100

Topography	A	B	C	D	E
14 Aspects (>15% slope)	0	Face 5	<10% slope, all aspects 10	West 12	South 15
15 Slope (%)	<10	10-25 (max slope topography)	30-44	45-54	>55
16 Terrain	flat 1	rolling 5	Shallow rolling, uneven low relief (10%)	Consistent slope, steep drops or shallow ridges 7	Encouraged slope, steep gullies 10
17 Landcover Topography Orientation to wildfire spread	<5% no isolated forest land 1	North and/or east aspects dominant, wildfire spread restricted from south and/or west 5	Mixed/other terrain, broken topography, regular aspect and slope changes, multiple ridges down to width of road large forest blocks 10	Rolling terrain, shallow water bodies, regular aspect and slope changes, minor restrictions to wildfire spread 10	Continuous, consistent topography, no restrictions to wildfire spread 15
Sub Total					15/55

FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					
Structural	A	B	C	D	E
18 Position of Structures/Community on Slope	No Structures (over 2 km) 0	Bottom of slope, valley bottom 5	Mid-slope (steep, elevated valley, <10% slope) 10	Mid-slope (gentle, 15% slope) 15	Upper 1/3 of Slope 15
19 Type of Development	No Structures (over 2 km) 0	Perimeter interface, no structures 5	Perimeter interface, with structures 5	Intense > 1 structure/ha 10	Intense < 1 structure/ha 10
20 Position of Access Road Relative to Values	No Structures (over 2 km) 0	Above >500-200-500 <200 m 1 10 20	Below >500-200-500 <200 m 1 10 25	Flat/Rolling >500-200-500 <200 m 1 10 25	Below >500-200-500 <200 m 1 10 25
Sub Total					45/150

*Proceed only if Fuel sub total > 25.
 **Proceed to Structural component only if Wildfire Threat Behaviour Score is > 95 for unimpeded polygons.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE
142/205



City of Kamloops – Wildfire Threat Assessment Picture – Plot 85



Photo 85-1 @ 315 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 86

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot # **86** Community **City of Kamloops**
 Assessor **B. Morou** Geographic Location/Street Name **Gaymade - Aberdeen**
 Date **Apr 2016** GPS/VLM **N50 300**
 Photos 1 2 3 4 Land Ownership: Crown Private I.R. Other (specify)

Point	A	B	C	D	E
1 Duff Depth and Absolute Humidity (A0)	1-2 2	2-5 2 Dry Zonal Wet	5-10 10 Dry Zonal Wet	10-20 12 Dry Zonal Wet	>20 15 Dry Zonal Wet
2 Surface Fuel Continuity (A1 cont)	<20 4	20-40 2	40-60 3	60-80 4	80-100 5
3 Vegetation Fuel Composition	Non, Herb, Invasive Grass, Low Flammability Herbs 4	Herb, Deciduous Shrubs 2	Lichen, Conifer Shrubs 3	Forages, Juniper 4	Sagebrush, Buckbrush, Hawthorn, Birch, Sweetgum 5
4 Fine Woody Debris Continuity (<7mm) (A2 cont)	<1 coverage 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, <10 cm deep 4	>25 coverage, >10 cm deep 5
5 Large Woody Debris Continuity (>7mm) (A3 cont)	<1 coverage 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, not elevated 4	>25 coverage, partially elevated 5
6 Live and Dead Canopies Crown Closure (A4)	<50 1	50-60 2	60-70 3	70-80 4	80-100 5
7 Live Canopies Crown Closure (A5)	>80 or <40% conifer/deciduous crown closure 1	60-80 2	40-60 3	20-40 4	<20 5
8 Live and Dead Canopy Crown Base Height (A6)	5' or <20% conifer crown closure 1	2-5 2	5-10 3	10-15 4	>15 5
9 Live and Dead Suppressed and Interstitial Canopies (A7 cont)	2-500 2	500-1000 3	1000-2000 4	2000-4000 5	>4000 6
10 Forest Health (B1 of deadwood and re-vegetation status)	Standing Dead and Partially Dead 4-5 or <10% crown closure 1	Standing Dead and Partially Dead 6-25 2	Standing Dead and Partially Dead >25-50 3	Standing Dead and Partially Dead >50-75 4	Standing Dead and Partially Dead >75-100 5
11 Groundcover Forest/Slash Cover within 50m (B2)	0-20 1	20-40 2	40-60 3	60-80 4	>80 5
Sub Total 41 /155*					
12 Biogeographic Zone	A1, Inland 1	CWA, OCA, AM Dry Zonal Wet 2-3 2	KCN, SBS, ESE Dry Zonal Wet 4-5 3	SE, MS, SPS, WPA, S1, B, B2, B3, B4, B5, B6, B7, B8, B9, B10 5	PE, BC 15
13 Historical Wildfire Recurrence Dry (B3) (B4)	G5, R1, B2, G4, T5, M1, V5, V2, B6, R6, R7 1	G1, S6, M1, M6, V6, G1, G4, V6 2	G7, E5, G4, G4, V1, C1, M6 3	K1, K3, K2, C2, C1, M5, E6, M4, M7, M2 4	M7, M6, M2, M1 5
Sub Total 30 /70					
Topography					
14 Aspect (>15% slope)	North 1	East 2	<10% slope, all aspects 3	West 4	South 5
15 Slope (A8)	<10 1	10-25 and less severe for North slopes 2	25-40 3	40-54 4	>55 5
16 Terrain	Flat 1	Rolling 2	Slight terrain, all terrain with grass 3	Concentric slope, steep dunes or shallow gulches 4	Concentric slope, deep gulches 5
17 Landcover/Topographic Limitations to Wildfire Spread	<5 ha wooded forest 1	North and/or east aspects contribute wildfire spread restrictions. South and/or west 2	Non-forested terrain. Slope topography, regular aspect and slope changes. Multiple restrictions to wildfire spread. Large water bodies 3	Rolling terrain, minor water bodies, minimal aspect and slope changes. Minor restrictions to wildfire spread 4	Concentric, topographic topography. No restrictions to wildfire spread 5
Sub Total 25 /240**					
FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					
14 Directional Continuity on Slope	No Structures Values within 2 km 1	Bottom of slope, valley bottom 2	Mid-slope headland, elevated valley, <10% slope 3	Mid-slope headland, >10% slope 4	Upper 1/3 of Slope 5
15 Type of Development	No Structures Values within 2 km 1	Permeable/Impervious 2	Permeable interface with structures 3	Impervious >1 structure/ha 4	Impervious <1 structure/ha 5
16 Position of Assessment Area Relative to Values	No Structures Values within 2 km 1	Above >500-200-500 <200 m 1-10 2	Side/End >500-200-500 <200 m 1-12-25 3	End/Rolling >500-200-500 <200 m 1-12-25 4	Below >500-200-500 <200 m 1-15-20 5
Sub Total 15 /255					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
TOTAL WILDFIRE THREAT SCORE 145 /295					

86

City of Kamloops – Wildfire Threat Assessment Picture – Plot 86



Photo 86-1 @ 315 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 87

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot # 87 Community City of Kamloops

Address 1111111 Geographic Location/Street Name Abendean

Date Aug 20/16 GPS/UTM N50 38 31.5" W120 21' 47.7"

Photos 1, 2, 3, 4 Land Ownership: Crown Private I.R. Other (specify)

Fuel	A	B	C	D	E
1 Dead Depth and Moisture Regime (cm)	1-5 2	7-15 Dry Dead Wet 3 5 1	17-40 Dry Dead Wet 10 6 2	10-20 Dry Dead Wet 12 8 4	>20 Dry Dead Wet 25 16 5
2 Surface Fuel Continuity (PK cover)	<20 4	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetative Fuel Composition	Moist. Herbs, Propped Grass, Low Flammability Weeds 4	Herbs, Deciduous Shrubs 2	Lichens, Conifer Shrubs 3	Prognosis, Juniper 4	Lignitrich, Dry Grasses, Herbaceous, Wet Grasses 5
4 Fine Woody Debris Continuity (<7cm) (No cover)	<10 1	Scattered, <10 coverage 5	10-25 coverage 7	>25 coverage, <10cm deep 10	>25 coverage, >10cm deep 15
5 Large Woody Debris Continuity (>7cm) (No cover)	<1 1	Scattered, <10 coverage 2	10-25 coverage 5	>25 coverage, not clustered 7	>25 coverage, partially clustered 10
6 Live and Dead Coniferous Crown Closure (%)	<20 1	20-40 5	41-60 10	61-80 15	>80 20
7 Live Deciduous Crown Closure (%)	>20 or >40% canopy of 100% live 5	41-60 2	41-60 3	20-40 4	<20 5
8 Live and Dead Conifer Crown Base Height (m)	5 or <20% together 1	5-7 5	7-13 7	14-22 10	>23 15
9 Live and Dead Coniferous and Understorey Canopy (m)	<20 1	20-100 5	100-200 10	200-400 20	>400 30
10 Forest Health (% of deadwood and re-vegetated stems)	Standing Dead and Partly Dead <5 or <10% 1	Standing Dead and Partly Dead 5-25 5	Standing Dead and Partly Dead >25-50 10	Standing Dead and Partly Dead >50-75 20	Standing Dead and Partly Dead >75 30
11 Continuous Forest/Slash Cover within 50m (m)	0-20 0	20-40 5	41-60 5	61-80 7	>80 10
Sub Total <u>27/58*</u>					
12 Microclimate Zone	KL Inverted 1	CWA, CBE, ABE Dry Dead Wet 5 3 2	KH, SWS, ESSF Dry Dead Wet 10 7 5	ISE, MS, SRS, EWH, G1 & G2 Dry Dead Wet 10 10 5	PE, AG 15
13 Historical Wildfire Occurrence (by Wild Fire Zone)	G5, G1, G2, G4, Y5, Y6, Y9, Y1, Y5, Y6, Y7 1	G3, G8, H1, H4, H5, G1, G4, Y8 5	G7, G5, G4, G4, Y1, G1, G6 1	G1, H5, K1, G3, G1, G5, Y5, H4, G7, H2 10	H7, H8, H1 15
Sub Total <u>30/36</u>					
14 Aspect (>15% slope)	North 0	East 5	<15% slope, all aspects 10	West 12	South 15
15 Slope (%)	<10 1	10-20 and max slope on North slopes 5	20-40 10	40-60 12	>60 15
16 Barrels	<10 1	Rolling 3	Sloped terrain, no or low relief areas 5	Consistent slope, steep draws or shall low gullies 7	Consistent slope, deep draws 10
17 Continuity/Topography Limitation to Wildfire Spread	<5 ha isolated forest 1	North and/or east aspects, discontinuous, wildfire spread restricted from South aspect 2	Mountainous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread 5	Rolling terrain, minor water bodies, normal aspect and slope changes, no restrictions to wildfire spread 10	Continuous, consistent topography, no restrictions to wildfire spread 15
Sub Total <u>19/25</u>					
FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					
18 Position of Structures/Continuity on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 5	All slope (inclined, elevated, valley, slope) 10	Mid-slope continuance, >15% slope 12	Upper 1/3 of Slope 15
19 Type of Development	No Structures Values within 2 km 0	Residential to low risk structures 3	Residential interface, with reasons 5	Medium to high structure 8	Intensive <1 structure/ha 10
20 Position of Agricultural Area Relative to Values	No Structures Values within 2 km 0	Above >500 200-500 <200 m 5 10 20	Sideline >500 200-500 <200 m 1 2 25	Bay/rolling >500 200-500 <200 m 1 12 25	Below >500 200-500 <200 m 1 15 30
Sub Total <u>23/23</u>					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
TOTAL WILDFIRE THREAT SCORE <u>72/80</u>					

* Proceed only if Fuel sub total is >25.
** Proceed to Structural component only if Wildfire Behaviour Score is >95 for unretreated properties.

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 41-55

High 56-80

Extreme >80

Wildland Urban Interface Threat Class (check applicable class)

Low 0-15

Moderate 16-25

High 26-39

Extreme >39

Last Updated: February 24, 2017

87

City of Kamloops – Wildfire Threat Assessment Picture – Plot 87



Photo 87-1 @ 160 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 88

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot: **88** Community: **City of Kamloops**

Assessor: **B Morrison** Geographic Location/Zone Ref: **Abendson**

Date: **Apr 21/16** GPS/WK: **N50° 30' 38" W120° 21' 49.1"**

Parcel: **0 1 4** Land Ownership: Crown Private I.L. Other (specify)

Plot

	A	B	C	D	E
1 Fuel Depth and Moisture (dry)	1-2	2-4.5 Dry Total Wet 5 9 7	5-10 Dry Total Wet 10 8 7	10-20 Dry Total Wet 12 8 6	>20 Dry Total Wet 15 10 5
2 Surface Fuel Continuity (% cover)	<25 4	20-40 7	40-60 3	60-80 4	>80 5
3 Vegetation Fuel Composition	Moist, Herbic, Injured Crops, Low Flammability Herbic	Herbic, Detritus Strata	Urban, Conifer Strata	Progressive, herbic	Sagebrush, Berberis, Agave, Shrub, Patch Berberis
4 Fine Woody Debris Continuity (<10cm) (% cover)	<1 coverage	Scattered, <10 coverage	10-25 coverage	>25 coverage, <10cm deep	>25 coverage, >10cm deep
5 Large Woody Debris Continuity (>10cm) (% cover)	<1 coverage	Scattered, <10 coverage	10-25 coverage	>25 coverage, not elevated	>25 coverage, partially elevated
6 Live and Dead Conifer Crown Closure (%)	0-25	25-40 5	40-60 10	60-80 15	>80 20
7 Live Deciduous Crown Closure (%)	>20 or <40% conifers crown closure	60-80 5	40-60 3	20-40 4	<20 5
8 Live and Dead Conifer Crown Base Height (m)	1.4 or >2.0m for crown closure	3-5 5	2-3 7	1-2 10	<1 15
9 Live and Dead Suppressed and Disturbance Canopy (storeys)	0-500	500-1000 5	1000-2000 10	2000-4000 20	>4000 30
10 Forest Health (% of Apparent and condition) (score)	Standing Dead and Partly Dead < 5 or <20% crown	Standing Dead and Partly Dead 5-25 5	Standing Dead and Partly Dead 25-50 5	Standing Dead and Partly Dead >50-75 10	Standing Dead and Partly Dead >75 15
11 Continuous Fuel/Slash Cover within 2km (%)	0-20 4	20-40 7	40-60 10	60-80 15	>80 20
Sub Total 35 /133*					
Weather	A	B	C	D	E
12 Synoptic/Local Zone	All Injured	Low, High, Dry Total Wet 5 4 1	High, High, Dry Total Wet 10 7 5	High, High, Low, High, Dry Total Wet 15 10 5	High, High 15
13 Potential Weather Occurrence by WSB Fire Zone	65, 81, 82, 84, 85, 88, 89, 91, 92, 93, 94, 97	60, 64, 65, 66, 94, 95, 99, 94	67, 65, 64, 64, 91, 91, 94, 95	61, 95, 83, 82, 81, 95, 96, 94, 92, 92	97, 94, 92, 91
Sub Total 30 /70					
Topography	A	B	C	D	E
14 Aspect (>15% slope)	North 4	East 5	<16% slope all aspects 10	West 12	South 15
15 Slope (%)	<16 4	16-29 and max slope for North Slopes 5	30-41 10	42-59 12	>60 15
16 Terrain	Flat 1	Rolling 3	Stops (settles, narrow low relief) down 5	Considerable slope steep down or shallow gullies 5	Considerable slope steep 10
17 Landcover/Topographic Continuity to Wildfire Spread	< 5 ha relative forest land 1	North and/or East aspect dominant, wildfire spread restricted from South 5	Intermediate terrain, broken topography, regular aspect and slope changes, multiple microclimates in relative closed large water bodies 5	Rolling terrain, narrow water bodies, constant aspect and slope changes, major roads/towns to relative aspect 10	Continuous, continuous topography No roads/towns to relative aspect 15
Sub Total 19 /55					
FUEL, WEATHER AND TOPOGRAPHY			WILDFIRE BEHAVIOUR THREAT SCORE		
Structural	A	B	C	D	E
18 Position of Structures/Continuity on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 5	Shallow slope or plateau, elevated valley, <16% slope 10	Mid-slope conditions 15	Steep ES at Slope 15
19 Type of Development	No Structure Values within 2 km 0	Residential 1	Residential Interface with structures 5	Industrial > 1 structure/ha 10	Industrial < 1 structure/ha 15
20 Position of Accession Area Relative to Values	No Structures Values within 2 km 0	Close >500 200-500 <200 m 1 10 20	Subsidiary >500 200-500 <200 m 1 12 25	High/Rolling >500 200-500 <200 m 1 12 25	Below >500 200-500 <200 m 1 15 25
Sub Total 45 /225					
TOTAL WILDFIRE THREAT SCORE					
139 /295					

* Proceed only if Plot with total > 25.

** Proceed to Structural component only if Wildfire Threat Behaviour Score is > 93 for structural polygons.

Wildfire Behaviour Threat Class (select applicable class)

Low 0-40

Moderate 41-95

High 96-140

Extreme >140

Wildland Urban Interface Threat Class (select applicable class)

Low 0-15

Moderate 16-26

High 27-39

Extreme >39

Last updated: January 24, 2013

88

M

City of Kamloops – Wildfire Threat Assessment Picture – Plot 88



Photo 88-1 @ 290 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 89

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-Development Post-Development

Plot # 89 Community: City of Kamloops

Assessor: B. Manou Geographic Location/Street Name: Alouette

Date: Apr 20/16 GPS/UTM: N50 39 45.5 W120 21 44.4

Photos: 0 N + 4 Land Ownership: Crown Private I.R. Other (specify)

Field	A	B	C	D	E
1 Fuel Depth and Aboveground Fuel	1-5	2-5 Dry Fuel Wet	5-10 Dry Fuel Wet	10-20 Dry Fuel Wet	>20 Dry Fuel Wet
2 Surface Fuel Continuity (N sites)	<20	20-40	41-60	61-80	>80
3 Vegetation Fuel Composition	Moss, Herb, Impacted Crown, Low Flammability Weeds	Herb, Deciduous Shrub	Lichen, Deciduous Shrub	Paragon, Shrub	Sagebrush, Paragon, Herb, Deciduous Shrub
4 Fine Woody Debris Continuity (<10cm dia)	<10% coverage	Scattered <10 coverage	10-25 coverage	>25 coverage, <10 cm dia	>25 coverage, >10 cm dia
5 Large Woody Debris Continuity (>10cm dia)	<10% coverage	Scattered <10 coverage	10-25 coverage	>25 coverage, not stacked	>25 coverage, partially stacked
6 Live and Dead Canopies Crown Closure (%)	<20	20-40	41-60	61-80	>80
7 Live Canopies Crown Closure (%)	>80% - 100% (at least 10m crown)	61-80	41-60	20-40	<20
8 Live and Dead Canopy Crown Base Height (m)	5+ or <20% crown closure	3-5	7	4-12	<1
9 Live and Dead Vegetation and Understory Canopy Closure (%)	<20	50-100	100-2000	2001-4000	>4000
10 Forest Health (% of live and dead in dominant strata)	Standing Dead and Partly Dead <5 or <20 strata	Standing Dead and Partly Dead	Standing Dead and Partly Dead >25-50	Standing Dead and Partly Dead >50-75	Standing Dead and Partly Dead >75
11 Canopies Forest/Shrub Cover within slope (%)	0-20	21-40	41-60	61-80	>80
Sub Total <u>34</u> /135*					
Woodlot	A	B	C	D	E
12 Edge/Interior Zone	All Impacted	Clear 10E NH Dry Fuel Wet	RM, SB, ESJ Dry Fuel Wet	RM, SB, ESJ, CWS, S1 & S2, PWS, SWS - Dry Fuel Wet	PE, BG
13 Historical Wildfire Occurrence (R-100 Fire Zone)	65, 81, 82, 86, 95, 99, 94, 83, 84, 87	65, 68, 81, 84, 94, 61, 65, 74	67, 43, 64, 66, 91, 11, 84	81, 83, 85, 82, 81, 85, 46, 84, 87, 82	87, 86, 82, 81
Sub Total <u>30</u> /39					
Topography	A	B	C	D	E
14 Aspects (>15% slope)	North	East	<15% slope all aspects	West	South
15 Slope (%)	<10	10-20 mid slope for 100m	20-44	45-54	>55
16 Slope	Flat	Rolling	Steep terrain, minor level of dunes	Complex slope, steep areas of 20% or greater	Concentric slope, steep gulches
17 Landscape/Topographic Characteristics to Wildfire Spread	<5 ha isolated forest	North and/or west aspects dominate, wildlife spread restrictions, high fuel load	Mountainous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread, large water bodies	Rolling terrain, no low water bodies, minimal aspect and slope changes, some restrictions to wildfire spread	Concentric, consistent topography, no restriction to wildfire spread
Sub Total <u>19</u> /51					
FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE					
Sub Total <u>83</u> /246**					
Structure	A	B	C	D	E
18 Position of Structures' Community on Slope	No Structures Values within 7 km	Bottom of slope, valley bottom	Mid-slope benchland, elevated valley, <10% slope	Mid-slope continuous, >10% slope	Upper 1/3 of Slope
19 Type of Development	No Structures Values within 2 km	Permeable interface, any structure	Permeable interface, with structures	Impervious > 1 structure	Impervious < 1 structure/intra-class
20 Position of Access Road Relative to Public	No Structures Values within 7 km	Access >500 100-500 <200 m	Subtotal >500 200-500 <200 m	Flat/Rolling >500 200-500 <200 m	Below >500 200-500 <200 m
Sub Total <u>45</u> /251					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
TOTAL WILDFIRE THREAT SCORE <u>128</u> /293					

* Pruned only if fuel sub total >= 29
 ** Pruned to 5% (land composed only of Wildfire Threat Reduction Score is >= 45 for unpruned polygons)

Wildfire Behaviour Threat Class (whk applicable class)

Low	0-40	<input type="checkbox"/>
Modest	41-95	<input checked="" type="checkbox"/>
High	96-149	<input type="checkbox"/>
Extreme	>150	<input type="checkbox"/>

Wildland Urban Interface Threat Class (whk applicable class)

Low	0-13	<input type="checkbox"/>
Modest	14-25	<input type="checkbox"/>
High	26-39	<input type="checkbox"/>
Extreme	>40	<input checked="" type="checkbox"/>

Last Updated: January 24, 2013

89

M

City of Kamloops – Wildfire Threat Assessment Picture – Plot 89



Photo 89-1 @ 180 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 90

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 90 Comment: City of Kamloops

Assessor: B. Morrow Geographic Location/Street Name: Var. Home

Date: Apr 20 16 GPS/UTM: 450 38 46.7 W 128 22 2.7

Plots: 1, 2, 4 Land Ownership: Owner Private I.A. Other (Specify)

Plot#	A	B	C	D	E
1. Fuel Moisture and Relative Humidity (%)	1-2 3	2-5 Dry Fuel Wet 3 7	5-10 Dry Fuel Wet 10 4 2	10-70 Dry Fuel Wet 12 8 4	>70 Dry Fuel Wet 15 10 5
2. Surface Fuel Continuity (Fuel cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3. Vegetation Fuel Characteristics	Moist, Short, Intact CWD, Low Flammability Stress 1	Moist, Decaying Struts 2	Lichen, Gender Struts 3	Progress, Lignin 4	Stagnant, Lignin, Lignin, Dead 5
4. Fine Woody Debris Continuity (<10cm) (%) cover	<10 0	Scattered, <10 coverage 5	10-25 coverage 7	>25 coverage, <10 cm deep 10	>25 coverage, >10 cm deep 15
5. Large Woody Debris Continuity (>10cm) (%) cover	<10 0	Scattered, <10 coverage 7	10-25 coverage 5	>25 coverage, not elevated 7	>25 coverage, partially elevated 10
6. Live and Dead Grasses/Grass Clumps (%)	<10 0	20-40 5	41-60 10	61-80 15	>80 20
7. Live Deciduous Grass Clumps (%)	>60% <40% covered/decaying stress 4	61-80 2	81-90 3	20-40 4	<10 5
8. Live and Dead Conifer Green Base (Height) (%)	1- or <10% cover 0	1-5 5	7-13 7	1-12 10	<1 15
9. Live and Dead Suppressed and Understory Conifers (Stem) (%)	<10 0	501-1000 5	1001-2000 10	2001-4000 20	>4000 30
10. Forest Health (Disturbance and/or Inhabitable stress)	Standing Dead and Parity Dead <5 or <20 stems/ha 4	Standing Dead and Parity Dead 5-25 5	Standing Dead and Parity Dead 26-50 10	Standing Dead and Parity Dead >50-75 15	Standing Dead and Parity Dead >75 20
11. Continuous Forest/Grass Cover within 30m (%)	0-20 0	<10 3	41-60 5	61-80 7	>80 10
Sub Total					755*
12. Management Zone	A1, Integrated 1	CW, EBF, MH Dry Fuel Wet 3 5 1	KH, MS, EBF Dry Fuel Wet 10 1 3	ME, ML, SPS, LNH, M1, E-62 Dry Fuel Wet 10 1 3	PP, BC 15
13. Historical Wildfire Occurrence (by Wildfire Zone)	W1, R1, R2, G1, Y1, R1, R1, Y1, R1, R1, R1, R1 1	G1, G1, R1, R1, Y1, G1, G1, Y1 5	G1, G1, G1, G1, Y1, G1, R1 1	R1, R1, R1, R1, R1, R1, R1, R1 15	R1, R1, R1, R1 15
Sub Total					30/30
14. Aspect (>10% slope)	North 4	East 5	<10% slope aspects 10	West 12	South 15
15. Slope (%)	<10 1	10-20 and max score for North slopes 3	20-40 10	45-54 12	>54 15
16. Domain	Flat 1	Rolling 3	Upland/plateau, steep, low fire density 5	Lowland slope, deep dunes or shallow gullies 7	Continuum slope, deep gullies 10
17. Landscape/Topographic Limitations to Wildfire Spread	<5 ha isolated forest land 1	North and/or east aspects dominate, valley spread restricted by South aspect 2	Mountainous terrain, broken topography, regular aspect and slope changes, multiple north aspects to wildfire spread, large water bodies 5	Rolling terrain, some water bodies, minimal aspect and slope changes, major water course to wildfire spread 10	Continuum, consistent topography, no restriction to wildfire spread 15
Sub Total					90
FUEL, WEATHER AND TOPOGRAPHY					Sub Total
WILDFIRE BEHAVIOUR THREAT SCORE					755
18. Structure/Community on Slope	No Structure Values within 2 km 4	Bottom of slope, valley bottoms 5	Mid-slope highland, elevated valley, >15% slope 10	Mid-slope continuous, >15% slope 12	Open 1/3 of Slope 15
19. Type of Development	No Structures (Value within 2 km) 0	Perimeter interface, low density 3	Perimeter interface, mid density 5	Interface >1 km 10	Interface <1 km 15
20. Profile of Assessed Area Relative to Wildfire	No Structure Values within 2 km 0	Above >500 200-500 <100m 1 10 10	Below >500 200-500 <100m 1 12 25	Flat/rolling >500 200-500 <100 m 1 12 25	Below >500 200-500 <100 m 1 15 15
Sub Total					43
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					795

* Based only if Fuel wet (1) > 20.

** Based on structural components only, if Wildfire Threat at highest. Score is > 95 for unclassified polygons.

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 41-55

High 56-74

Extreme > 75

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13

Moderate 14-26

High 27-39

Extreme > 40

Last Updated: January 16, 2011

90

M

City of Kamloops – Wildfire Threat Assessment Picture – Plot 90



Photo 90-1 @ 180 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 91

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot # 91 Community City of Kamloops

Address: B. Marous Geographic Location/Street Address High Allen Dr

Date: Apr 20/16 GPS UTM N50 38 48.10 W 120 21 37.5

Photos: N 2 Land Ownership: Crown Private I.R. Other (specify)

Panel	A	B	C	D	E
1 Soil Depth and Moisture Regime (cm)	1-2	3-5	6-10	11-20	>20
2 Surface Fuel Continuity (% cover)	<20	20-40	41-60	61-80	>80
3 Vegetation Fuel Competition	Misc. Herbs, Impaired Crops, Low Rainfastness Needs	Misc. Deciduous Shrubs	Likely Conifer Shrubs	Populus, Purpurea	Sagebrush, Blackberry, Foreign Exotic, Sycamore
4 Fine Woody Debris Continuity (<7mm) (% cover)	<1 coverage	Scattered, no coverage	10-25 coverage	>25 coverage, <10 cm deep	>25 coverage, >10 cm deep
5 Large Woody Debris Continuity (>7mm) (% cover)	<1 coverage	Scattered, <10 coverage	10-25 coverage	>25 coverage, not elevated	>25 coverage, partially elevated
6 Live and Dead Continuous Grass Cover (%)	<10	10-20	21-40	41-80	>80
7 Live Discontinuous Grass Cover (%)	>60% with continuous cover	61-80	61-80	20-40	<20
8 Live and Dead Cattleman Grass Patch (cm)	5+ or <10 cm	3-5	2-1	3-2	<1
9 Live and Dead Suppressed and Unsuppressed Grasses (mm/yr)	<100	501-1000	1001-2000	2001-4000	>4000
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Partly Down <5 or <20 stems/ha	Standing Dead and Partly Down 5-20	Standing Dead and Partly Down >25-50	Standing Dead and Partly Down >50-75	Standing Dead and Partly Down >75-90
11 Continuous Forest/Grass Cover (M ² /ha) (%)	0-20	21-40	41-60	61-80	>80
Sub Total					34 / 135*
WINDWEATHER					
12 Atmospheric Dose	All Impacted	SW, NW, NE Dry Local Wind	NW, NE, SSE Dry Local Wind	SW, NE, SSW, NW NE S-SE, SW, NE, S Dry Local Wind	SE, SW
13 Historical Wildfire Occurrence by Wind Rose Zone	05, 01, 02, 04, 05, 06, 09, 03, 04, 06, 07	02, 04, 03, 04, 05, 01, 03, 05	02, 03, 04, 04, 01, 01, 06	01, 05, 03, 02, 03, 05, 04, 04, 03, 02	07, 06, 02, 01
Sub Total					30 / 110
TOPOGRAPHY					
14 Aspects (> 15% slope)	North	North	<10% slope all aspects	West	South
15 Slope (%)	<10	10-20 and steeper for North slopes	10-20	45-50	>55
16 Aspect	Flat	North	Sloped terrain, minor downward slopes	Consistent slope, steep > 45% (steep gullies)	Consistent slope, steep gullies
17 Landscape/Topographic (Proximity to V-shaped Gorge)	<5% hatched forest land	North and east aspects dominant, midline aspect restricted from South	Mountainous terrain, brown topography, regular aspect and slope changes, multiple restrictions to wildfire spread	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread	Continuous, consistent topography, no restriction to wildfire spread
Sub Total					24 / 76
FUEL, WEATHER AND TOPOGRAPHY					
Sub Total					88 / 240**
WILDFIRE BEHAVIOUR THREAT SCORE					
TOTAL WILDFIRE THREAT SCORE					
Sub Total					155 / 285
TOTAL WILDFIRE THREAT SCORE					285

*Proxied only if fuel risk total is > 20.
** Proceed to structural component only if Wildfire Threat Behaviour Score is >= 45 for unretreated properties.

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 61-90

High 91-140

Extreme >140

Wildland Urban Interface Threat Class (check applicable class)

Low 0-11

Moderate 14-20

High 21-30

Extreme >30

Last Updated: January 24, 2015

91

City of Kamloops – Wildfire Threat Assessment Picture – Plot 91



Photo 91-1 @ 40 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 92

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot #: **92** Community: **City of Kamloops**

Address: **Borrow** Geographic Location/Street Name: **W. Main Dr**

Date: **Apr 20/16** GPS/UTM: **N55 38' 53.7" W 120 21' 37.1"**

Phone: **811 x 4** Land Ownership: Crown Private I.R. Other (specify):

92

Fuel	A	B	C	D	E
1 Dead Log and Limb Snags (cm)	1-2 2	2-4 1	5-10 Dry Snags Wet 10 8 2	10-20 Dry Snags Wet 12 8 4	>20 Dry Snags Wet 15 10 5
2 Snags Fuel Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Continuity	Moss, Herb, Ringed Grass, Low Flammability Shrubs	Herb Deciduous Shrubs	Lichen, Conifer Shrubs	Peatmoss, Lichen	Sagebrush, Birchgrass, Any species with dead down
4 Fire Woody Debris Continuity (<1cm) (% cover)	<1 coverage 0	Scattered, <10 coverage 5	10-25 coverage 7	>25 coverage, <10 cm deep 10	>25 coverage, >10 cm deep 15
5 Large Woody Debris Continuity (>1cm) (% cover)	<1 coverage 0	Scattered, <10 coverage 5	10-25 coverage 5	>25 coverage, not elevated 7	>25 coverage, partially elevated 10
6 Live and Dead Canopies Crown Closure (%)	<20 0	20-40 5	41-60 10	61-80 15	>80 10
7 Live Canopies Crown Closure (%)	>10 canopy cover in crown closure	61-80 2	41-60 5	20-40 4	<20 5
8 Live and Dead Canopy Crown Base Height (m)	5+ or <20% canopy crown closure 0	3-5 5	0 0	0-2 10	<1 15
9 Live and Dead Suppressed and Decaying Canopy (% crown)	0-50 2	50-100 4	100-200 10	200-400 15	>400 20
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Partly Dead < 5 or <10 stems/ha 0	Standing Dead and Partly Dead 5-10 5	Standing Dead and Partly Dead 10-15 10	Standing Dead and Partly Dead 15-20 15	Standing Dead and Partly Dead >20 20
11 Continuous Forest/Grass Cover within 20m (%)	0-20 0	21-40 5	41-60 5	61-80 7	>80 10
Sub Total 44 /153*					
Weather					
12 Biopetiole Zone	A2, B1, B2	CW1, CW2, MW Dry Snags Wet	K1, S1, S2, S3, Dry Snags Wet	EV, M, S1, S2, S3, CW1, CW2, MW Dry Snags Wet	PP, B1, B2
13 Material Weather Resistance (for WUI Fuel Zone)	G1, A1, B1, G2, H1, H2, H3, H4, H5, H6, H7	G1, G2, G3, G4, G5, G6, G7, G8, G9, G10	G1, G2, G3, G4, G5, G6, G7, G8, G9, G10	H1, H2, H3, H4, H5, H6, H7, H8, H9, H10	H1, H2, H3, H4, H5, H6, H7, H8, H9, H10
Sub Total 30 /30					
Topography					
14 Aspect (>15% slope)	North 0	East 5	<15% slope, all aspects 10	West 15	South 15
15 Slope (%)	<10 1	10-20 and no more than 10% slopes 5	20-40 10	40-54 12	>55 15
16 Terrain	Flat 1	Rolling 1	Sloped terrain, major fire retard ditches 5	Complex slope, steep ditches, multiple gullies 7	Consistent slope, deep gullies 10
17 Landforms/Topographic Obstacles to Wildfire Spread	< 5% isolated forest 0	North-south aspect, forest, moderate slope, restricted from South 5	Mountainous terrain, broken topography, variable aspect and slope changes, multiple rock chutes to wildfire spread 5	Rolling terrain, major water bodies, minimal aspect and slope changes, some restrictions to wildfire spread 10	Consistent, consistent topography, no restriction to wildfire spread 15
Sub Total 30 /55					
FUEL, WEATHER AND TOPOGRAPHY					
Sub Total 96 /248**					
Structural					
18 Position of Structure/Community on Slope	No Structures Tables within 2 km 0	Bottom of slope, safety bench 5	Mid-slope, fire break, elevated valley, <15% slope 10	Mid-slope, steepness, >15% slope 15	Upper 1/3 of Slope 15
19 Type of Development	No Structures Tables within 2 km 0	No mixed interface, no buildings 5	No mixed interface, with buildings 5	Interface > 1 structure/ha 10	Interface < 1 structure/ha 10
20 Position of Assessment Area Relative to Tables	No Structures Tables within 2 km 0	Below >100-200-500 < 200 m 1 10 20	Below >500-1000-500 < 200 m 1 12 25	Flat/rolling >500-1000-500 < 200 m 12 25	Below >500-1000-500 < 200 m 1 15 30
* Pruned only if fuel load > 20.					
** Pruned to structural component only if WUI threat between score 5-10 for untreated polygons.					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
Sub Total 141 /295					
TOTAL WILDFIRE THREAT SCORE					
Sub Total 141					

Wildfire Behaviour Threat Class (check applicable box)

Low 0-40

Moderate 41-85

High 86-140

Extreme >140

Wildland Urban Interface Threat Class (check applicable class)

Low 0-33

Moderate 34-75

High 76-130

Extreme >130

(last updated January 24, 2017)

M

City of Kamloops – Wildfire Threat Assessment Picture – Plot 92



Photo 92-1 @ 315 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 93

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 93 Community: City of Kamloops

Assessor: B. Moscow Geographic Location/Street Name: Summer Drive

Date: Apr 20/16 GPS/UTM: N55 39 4.9 W120 12 236

Photos: 1 N 4 Land Ownership: Crown Private I.R. Other (specify)

93

Fuel	A	B	C	D	E
1 Duff Depth and Moisture Regime (cm)	1-2 3	2-4.5 Dry Zonal Wet 5 3 1	5-10 Dry Zonal Wet 10 6 2	10-20 Dry Zonal Wet 12 8 4	>20 Dry Zonal Wet 15 10 5
2 Surface Fuel Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	>80 5
3 Vegetation Fuel Composition	Moss, Herbs, Irrigated Crops, Low Flammability Weeds 1	Herbs, Deciduous Shrubs 2	Lichen, Conifer Shrubs 3	Pinegrass, Juniper 4	Sagebrush, Bunchgrass, Antelope Bush, Scotch Broom 5
4 Fine Woody Debris Continuity (<7cm) (% cover)	<10 coverage 0	Scattered, <10 coverage 2	10-25 coverage 7	>25 coverage, <10 cm deep 10	>25 coverage, >10 cm deep 15
5 Large Woody Debris Continuity (>7cm) (% cover)	<10 coverage 0	Scattered, <10 coverage 2	10-25 coverage 5	>25 coverage, not elevated 10	>25 coverage, partially elevated 10
6 Live and Dead Coniferous Crown Closure (%)	<20 0	20-40 5	41-60 10	61-80 15	>80 10
7 Live Deciduous Crown Closure (%)	>90% coniferous crown closure	61-80 2	41-60 3	20-40 4	<20 5
8 Live and Dead Conifer Crown Base Height (m)	5+ or >10m conifer	3-5 5	2-3 7	1-2 10	<1 15
9 Live and Dead Suppressed and Understorey Conifers (Stems/ha)	0-500 2	501-1000 5	1001-2000 10	2001-4000 20	>4000 30
10 Forest Health (% of dominant and co-dominant stems)	Standing Dead and Partly Down <5 or >20 stems/ha 0	Standing Dead and Partly Down 5-25 5	Standing Dead and Partly Down >25-50 10	Standing Dead and Partly Down >50-75 20	Standing Dead and Partly Down >75 10
11 Continuous Forest/Slash Cover within 2km (%)	0-20 0	20-40 3	41-60 5	61-80 7	>80 10

Weather	A	B	C	D	E
12 Biogeoclimatic Zone	A1, Irrigated 1	CW1, CB1, MH Dry Zonal Wet 5 3 1	NS, SRS, ESSF Dry Zonal Wet 10 7 3	DR, MS, SRS, CW1 d1 & d2, BWS, SWS - Dry Zonal Wet 15 10 5	PS, BG 15
13 Historical Wildfire Occurrence (by WMB Fire Zone)	G5, R1, R2, G6, V5, R9, V9, V3, R5, R8, V7 1	G3, G8, R3, R4, V6, G1, G9, V8 5	G7, G5, G4, G4, V1, C1, H6 8	K1, K5, K3, C2, C3, H5, H6, H4, H2 10	N1, H2, K1 15

Topography	A	B	C	D	E
14 Aspects (>15% slope)	North 0	East 5	<16% slope all aspects 10	West 12	South 15
15 Slope (%)	<16 1	16-29 and max score for North slopes 5	30-44 10	45-54 12	>55 15
16 Terrain	Flat 1	Rolling 3	Sloped terrain, minor low relief draws 5	Consistent slope, deep draws or shallow gullies 7	Consistent slope, deep gullies 10
17 Landscape/Topographic Limitations to Wildfire Spread	<5 ha isolated forest land 1	North and/or east aspects dominate, wildfire spread restricted from South 2	Mountainous terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread 5	Rolling terrain, minor water bodies, minimal aspect and slope changes, minor restrictions to wildfire spread 10	Continuous, consistent topography No restriction to wildfire spread 15

FUEL, WEATHER AND TOPOGRAPHY	A	B	C	D	E
18 Position of Structures/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 5	Mid-slope benchland, elevated valley, <16% slope 10	Mid-slope continuous, >15% slope 12	Upper 1/3 of Slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter Interface, no intrusions 5	Perimeter Interface, with intrusions 5	Intermix > 1 structure/ha 8	Intermix < 1 structure/ha Infrastructure 10
20 Position of Assessment Area Relative to Values	No Structures Values within 2 km 0	Above >500 200-500 <200 m 1 10 20	Sideline >500 200-500 <200 m 1 12 25	Flat/Rolling >500 200-500 <200 m 1 12 25	Below >500 200-500 <200 m 1 15 30

* Proceed only if Fuel sub total is >29.

** Proceed to Structural component only if Wildfire Threat Behaviour Score is >95 for untreated polygons.

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE 155

TOTAL WILDFIRE THREAT SCORE 295

Wildfire Behaviour Threat Class (check applicable class)

Low 0-40

Moderate 41-95

High 96-149

Extreme >149

Wildland Urban Interface Threat Class (check applicable class)

Low 0-13

Moderate 14-26

High 27-39

Extreme >39

Last Updated: January 24, 2013

M

City of Kamloops – Wildfire Threat Assessment Picture – Plot 93



Photo 93-1 @ 210 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 94

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET

Plot #: **94** Community: **City of Kamloops**

Assessor: **B. Brown** Geographic Location/Street Name: **Sahali**

Date: **Apr 2016** GPS: **N50 39' 6.4" W128 20' 47.5"**

Photos: **0** Land Ownership: Private Public Other (specify):

94

Factor	A	B	C	D	E
1 Fuel Type and Moisture Regime (%)	1-5 1	6-10 Dry Zone Wet 5 3 1	11-15 Dry Zone Wet 10 6 2	16-20 Dry Zone Wet 12 8 4	21-25 Dry Zone Wet 15 10 5
2 Surface Fuel Continuity (% cover)	< 20 0	21-40 2	41-60 3	61-80 4	81-100 5
3 Vegetation Fuel Composition	Moss, Herbs, 11 Upward Curves, Low Flammability Shrubs 1	Herbs, Deciduous Shrubs 2	11 Herb, Conifer Shrubs 3	Fire-prone, Lignifer 4	Sagebrush, Shrublands, Arborescent, Saprophytic 5
4 Fine Woody Debris Continuity (< 5cm) (% cover)	0-10 0	Scattered, < 10 coverage 5	10-25 coverage 7	> 25 coverage, < 10 cm deep 10	> 25 coverage, > 10 cm deep 15
5 Large Woody Debris Continuity (> 5cm) (% cover)	0-10 0	Scattered, < 10 coverage 2	10-25 coverage 5	> 25 coverage and elevated 7	> 25 coverage, partially elevated 10
6 Dry and Dead Conditions Crown Closure (%)	0-20 0	21-40 5	41-60 10	61-80 15	81-100 10
7 Live Branches Crown Closure (%)	> 50% or 20% or less 0	61-80 2	41-60 3	20-40 4	< 20 5
8 Live and Dead Crown Cover Base Diameter (cm)	5+ or < 20% coverage 0	3-5 5	2-3 7	1-1 10	< 1 15
9 Live and Dead Suppression and Productivity (Number of Stems/ha)	0-20 0	501-1000 5	1001-2000 10	2001-4000 15	> 4000 20
10 Forest Stand (% of Stand and or dominant trees)	Standing Dead and Fully Down < 5 or < 20% live 0	Standing Dead and Fully Down > 25 5	Standing Dead and Fully Down > 25-50 10	Standing Dead and Fully Down > 50-75 15	Standing Dead and Fully Down > 75 20
11 Continuous Forest/Stand Cover within 20m (%)	0-20 0	21-40 3	41-60 5	61-80 7	81-100 10
Sub Total 118					
12 Windthrow	A	B	C	D	E
12 Magnitude Zone	48, 100 1	100, 100, 100 Dry Zone Wet 5 3 1	100, 100, 100 Dry Zone Wet 10 7 3	100, 100, 100 Dry Zone Wet 15 10 5	100, 100, 100 Dry Zone Wet 20 15 10
13 Potential Wildfire Exposure by Wind Direction	AS, B1, B2, GA, VS, R0, Y0, Y1, Y2, Y3, Y4, Y5, Y6, Y7 1	G3, G4, R2, R4, W4, W1, W2, W3 5	G7, G5, G4, G1, Y1, Y1, Y2 8	B1, Y5, Y3, Y2, Y3, Y4, Y5, Y6, Y7, Y8 10	Y7, Y6, Y2, Y1 15
Sub Total 30					
14 Aspect (> 15% slope)	North 0	East 5	< 10% slope all aspects 10	West 15	South 15
15 Slope (%)	< 10 1	11-20 5	20-44 10	45-54 12	> 54 15
16 Terrain	Flat 1	Sloping 1	Sloped aspect, minor fuel breaks 5	Consistent slope, steep draws or shallow gullies 7	Consistent slope, steep gullies 10
17 Landforms/Topographic Features in Wildfire Spread	< 5 ha isolated terrain 1	North end of east aspects dominant, midline spread restriction 5	Mountainous terrain, broken topography, regular wind and slope changes, multiple north-south to midline spread large water bodies 5	Rolling terrain, minor water bodies, no windward aspect and slope changes, minor restrictions to wildfire spread 10	Continuous, consistent topography, no restrictions to wildfire spread 15
Sub Total 75					
FUEL, WEATHER AND TOPOGRAPHY WILDFIRE BEHAVIOUR THREAT SCORE 118 + 30 + 75 = 223					
18 Pattern of Structures/Community on Slope	No Structures Values within 2 km 0	Increase of slope, > 20% below 5	Mid-slope development, elevated valley, < 10% slope 10	Mid-slope development, < 10% slope 12	Upper 1/3 of Slope 15
19 Type of Development	No Structures Values within 2 km 0	Perimeter interface, no infrastructure 5	Perimeter interface, with infrastructure 5	Interface > 1 km structure 10	Interface < 1 km structure infrastructure 15
20 Proximity of Development Area Relative to Values	No Structures Values within 2 km 0	Above > 500-200-500 < 100 m 1 10 20	500m > 500-200-500 < 200 m 1 10 25	100m/200m > 500-200-500 < 200 m 1 10 25	Below > 500-200-500 < 200 m 1 10 25
Sub Total 75					
WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE 118 + 75 = 193					
FINAL WILDFIRE THREAT SCORE 193					

* Proceed only if Fuel sub total > 20.
** Proceed to Structural component only if Wildfire Threat Behaviour Score is > 25 for a structural polygon.

Wildfire Behaviour Threat Class (check applicable class)	Wildfire Urban Interface Threat Class (check applicable class)
Low 0-40 <input type="checkbox"/>	Low 0-12 <input type="checkbox"/>
Moderate 41-55 <input checked="" type="checkbox"/>	Moderate 13-26 <input type="checkbox"/>
High 56-100 <input type="checkbox"/>	High 27-39 <input type="checkbox"/>
Extreme > 100 <input type="checkbox"/>	Extreme > 39 <input checked="" type="checkbox"/>

Last Updated: January 26, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 94



Photo 94-1 @ 315 degrees

City of Kamloops – Wildfire Threat Assessment Picture – Plot 95



Photo 95-1 @ 180 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 96

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot # 96 Comments: City of Kamloops
 Address: B. Monow Geographic Location/Street Name: Waddington
 Date: Apr 21/16 GPS: N 50° 39' 18.3" W 120° 20' 50.8"
 Photos: 0 H 4 L 4 Lead Ownership: (owner) (lease) (L.L.) Other (specify):

96

Factor	A	B	C	D	E
1. Duff Depth and Moisture Regime (m)	3	2-5 Dry forest Wet 5 3 1	5-10 Dry forest Wet 10 6 2	10-20 Dry forest Wet 12 8 4	>20 Dry forest Wet 15 10 5
2. Surface Fuel Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	81-100 5
3. Vegetation Fuel Composition	Herb, Herb, Interspersed Grass, Low Flammability Weeds 1	Herb, Deciduous Shrubs 2	Lichen, Conifer Shrubs 3	Fireweed, Purple 4	Scrubshrub, Evergreen, Krummholz Birch, Spruce Fir 5
4. Fine Woody Debris Continuity (<5cm) (% cover)	<25 0	Scattered, <10 coverage 5	10-25 coverage 7	>25 coverage, <10 on deep 9	>25 coverage, >10 on deep 10
5. Large Woody Debris Continuity (>5cm) (% cover)	<25 0	Scattered, <10 coverage 5	10-25 coverage 7	>25 coverage, not elevated 9	>25 coverage, partially elevated 10
6. Live and Dead Conifer Crown Closure (%)	0-25 0	26-40 5	41-60 10	61-80 12	>80 15
7. Live Deciduous Crown Closure (%)	>80 or <40% condensed crown closure 5	61-80 2	41-60 1	26-40 4	<20 5
8. Live and Dead Conifer Crown Deck Height (m)	5 or <10% crown deck height 5	3-5 5	2-3 2	1-2 1	<1 1
9. Live and Dead Squeezed and Overhanging Canopies (Observed)	0-50 0	501-1000 5	1001-2000 10	2001-4000 20	>4000 30
10. Forest Health (% of dominant and co-dominant stress)	Standing Dead and Partly Dead <5 or scattered 5	Standing Dead and Partly Dead 5-25 5	Standing Dead and Partly Dead >25-50 10	Standing Dead and Partly Dead >50-75 20	Standing Dead and Partly Dead >75-100 30
11. Continuous Forest/Slash Cover within 20m (%)	0-20 0	21-40 3	41-60 5	61-80 7	>80 10
Sub Total <u>22</u> / 255*					
Windburn					
12. Windburn Class	AT, Intergate 1	Class < 0.6 M Dry forest Wet 5 3 1	KL, SL, ES, ESF Dry forest Wet 10 7 3	KL, MS, SPS, (MS) and (SL), ESF, SW - Dry forest Wet 10 10 5	FF, DS 15
13. Historical Wildfire Occurrence Dry (WUI Zone Area)	05, 01, 02, 06, 05, 08, 09, 03, 05, 08, 07 1	03, 08, 01, 04, 06, 01, 05, 08 5	07, 15, 04, 04, 01, 01, 06 8	07, 05, 03, 02, 01, 05, 04, 04, 07, 02 10	01, 04, 02, 01 15
Sub Total <u>30</u> / 250					
Topography					
14. Aspect (> 15% slope)	North 1	East 5	< 10% slope all aspects 10	West 15	South 15
15. Slope (%)	<10 1	10-29 and 10% slope for North slopes 5	30-49 10	45-54 12	>55 15
16. Terrain	Flat 1	Rolling 2	Sloped, hilly, low to mid rise 5	Consistent slope, deep draws or shallow gullies 7	Consistent slope, deep gullies 10
17. Landscape Topographic Continuity in Wildfire Spread	< 5 ha isolated forest land 1	North and/or east aspects dominant, wildfire spread restricted from South aspect only 2	Discontinuous terrain, broken topography, regular aspect and slope changes, multiple aspects (low to mid rise) spread large water bodies 5	Rolling terrain, mid to water bodies, irregular aspect and slope changes, minor restrictions to wildfire spread 10	Continuous, consistent topography, no restrictions to wildfire spread 15
Sub Total <u>67</u> / 250					
FUEL, WEATHER AND TOPOGRAPHY WUI OF THE BURNED AREA TOTAL SCORE					
Sub Total <u>156</u> / 240**					
Structural					
18. Fuel Load/Structure/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 5	Mid slope headland, cleared valley, <10% slope 10	Mid slope residential, >15% slope 12	Upper 1/3 of slope 15
19. Type of Development	No Structures Values within 2 km 0	Perimeter Intertown, no structures 5	Perimeter Intertown, with houses 10	Intertown > 1 km clusters 15	Intertown < 1 km clusters 20
20. Proximity of Assessment Area Relative to Values	No Structures Values within 2 km 0	Above >500 200-500 <100 m 1 10 20	500m >500 200-500 <100 m 3 10 25	Rolling >500 200-500 <100 m 1 10 25	Below >500 200-500 <100 m 1 10 25
Sub Total <u>45</u> / 55					
* Proceed only if fuel sub total is >20					
** Proceed to Structural component only if WUI Threat Between Score is >15 for elevated polygons.					
TOTAL WILDFIRE THREAT SCORE <u>435</u> / 795					
Wildfire Behaviour Threat Class (check applicable class)			Wildland Urban Interface Threat Class (check applicable class)		
Low	0-11	<input type="checkbox"/>	Low	0-17	<input type="checkbox"/>
Moderate	12-25	<input checked="" type="checkbox"/>	Moderate	18-28	<input type="checkbox"/>
High	26-40	<input type="checkbox"/>	High	29-39	<input type="checkbox"/>
Extreme	>40	<input type="checkbox"/>	Extreme	>39	<input type="checkbox"/>

SPR

Last Updated: January 24, 2013

City of Kamloops – Wildfire Threat Assessment Picture – Plot 96



Photo 96-1 @ 90 degrees

City of Kamloops – Wildfire Threat Assessment Picture – Plot 97



Photo 97-1 @ 200 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 98

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot #: 98
 Community: City of Kamloops
 Address: 137 Main St
 Geographic Location/Street Name: Kenway
 Date: Apr 20/16
 GPS/UTM: N 50 40 14.4 W 128 23 45.1
 Photos: 1 h 4
 Land Ownership: Crown Private I.L. Other (Specify)

98

Fuel	A	B	C	D	E
1 Fuel Type and Moisture Regime (%)	1-3 1	4-5 Dry Zone Wet 3 1	6-8 Dry Zone Wet 10 6 2	9-11 Dry Zone Wet 12 8 4	12-15 Dry Zone Wet 15 10 5
2 Surface Fuel Continuity (% cover)	<20 0	20-40 2	41-60 3	61-80 4	81-100 5
3 Vegetation Fuel Composition	Moss, Herb, Irrigated crops, Low Flammability Weeds 1	Herb, Deciduous Shrubs 2	Lichen, Conifer Shrubs 3	Prognosis, Lichen 4	Sagebrush, Junegrass, Knowledge Berries, Smooth Grass 5
4 Fine Woody Debris Continuity (<7cm) (% cover)	<1 coverage 1	Scattered, <10 coverage 2	10-25 coverage 3	>25 coverage, <10cm deep 4	>35 coverage, >10cm deep 5
5 Large Woody Debris Continuity (>7cm) (% cover)	<1 coverage 1	Scattered, <30 coverage 2	10-25 coverage 3	>25 coverage, not elevated 4	>35 coverage, partially elevated 5
6 Live and Dead Coniferous Crown Closure (%)	<10 2	10-20 3	21-40 4	41-60 5	61-80 6
7 Live Deciduous Crown Closure (%)	>30 or <20% uniform crown closure 1	40-60 2	61-80 3	81-100 4	>100 5
8 Live and Dead Deciduous Crown Height (m)	1.5 or <20% under crown down 1	2-5 2	6-10 3	11-15 4	>15 5
9 Live and Dead Suppressed and Understory Canopies (stem/ha)	0-200 1	201-1000 2	1001-2000 3	2001-4000 4	>4000 5
10 Forest Health (% of dominant and re-dominant species)	Standing Dead and Fuel Down <5 1	Standing Dead and Fuel Down 5-25 2	Standing Dead and Fuel Down 25-50 3	Standing Dead and Fuel Down 50-75 4	Standing Dead and Fuel Down >75 5
11 Continuous Forest/Stock Cover within 2km (%)	0-20 1	21-40 2	41-60 3	61-80 4	81-100 5
Sub Total					78

Weather	A	B	C	D	E
12 Atmospheric Zone	AT, Inverted 1	CW, ME, HI Dry Zone Wet 3 3 1	KH, SLS, ESSF Dry Zone Wet 10 7 3	DE, NS, SPS, CWH, A1, A2, B1, B2, B3, B4, B5, B6, B7, B8, B9, B10 Dry Zone Wet 15 10 5	PP, BG 15
13 Humidex/Wind Chill (by WMO Fire Index)	65, 81, 82, 86, 91, 94, 98, 93, 88, 84, 77 1	65, 68, 83, 84, 94, 91, 66, 91 2	67, 65, 64, 61, 61, 61, 66 3	67, 65, 64, 61, 61, 61, 66 4	67, 65, 64, 61, 61, 61, 66 5
Sub Total					50

Topography	A	B	C	D	E
14 Aspect (% 15% slope)	North 1	East 2	<10% slope all aspects 3	West 4	South 5
15 Slope (%)	<10 1	10-25 and near zero for north slopes 2	10-40 3	40-70 4	>70 5
16 Forest	Flat 1	Rolling 2	Deeply dissected, some low relief areas 3	Concave slope, deep draws or shallow gullies 4	Concave slope, deep gullies 5
17 Landcover/Topographic Limitations to Wildfire Spread	<5% isolated forest land 1	North-south east-west corridors, multiple north-south and/or west-east corridors 2	Mountainous terrain, broken topography, regular aspect and slope changes, multiple north-south and/or west-east corridors, multiple north-south and/or west-east corridors 3	Rolling terrain, minor water bodies, several aspect and slope changes, several north-south and/or west-east corridors 4	Continuous, consistent topography, no restriction on wild fire spread 5
Sub Total					123

FUEL, WEATHER AND TOPOGRAPHY	A	B	C	D	E
18 Position of Structure Community on Slope	No Structures Values within 2 km 1	Bottom of slope, valley bottom 2	Mid-slope hillside, elevated valley, <10% slope 3	Mid-slope, concave, >10% slope 4	Upper 10% slope 5
19 Age of Development	No Structures Values within 2 km 1	Perimeter interface, no medium 2	Perimeter interface, with medium 3	Interior >1 structure 4	Interior <1 structure 5
20 Proximity of Acquisition Area Relative to Values	No Structures Values within 2 km 1	None >500 200-500 <200 m 1 10 20	Medium >500 200-500 <200 m 1 12 25	High/Rolling >500 200-500 <200 m 1 12 25	Extreme >500 200-500 <200 m 1 12 25
Sub Total					123

Proceed only if Fuel Sub Total >= 25
 Proceed to Structural component only if Weather Threat Behaviour Score is >= 95 for untreated polygons

WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE
 TOTAL WILDFIRE THREAT SCORE: 179 / 295

Wildfire Behaviour Threat Class (not applicable class)

Low	0-40	<input type="checkbox"/>
Medium	41-95	<input type="checkbox"/>
High	96-140	<input checked="" type="checkbox"/>
Extreme	>140	<input type="checkbox"/>

Wildland Urban Interface Threat Class (not applicable class)

Low	0-13	<input type="checkbox"/>
Medium	14-24	<input type="checkbox"/>
High	25-38	<input checked="" type="checkbox"/>
Extreme	>39	<input type="checkbox"/>

Last Updated: January 26, 2017

City of Kamloops – Wildfire Threat Assessment Picture – Plot 98



Photo 98-1 @ 45 degrees

City of Kamloops - Wildfire Behaviour Threat Assessment Plot 99

WILDLAND URBAN INTERFACE WILDFIRE THREAT ASSESSMENT WORKSHEET Pre-treatment Post-treatment

Plot # **99** Community **City of Kamloops**

Address **Brimacombe** Geographic Location/Street Name

Date **Dec 2015** GPS/Alt **N 55° 41' 42" W 120° 22' 51.5"**

Photo **H** Land Ownership Crown Private I.A. Other (specify)

Factor	A	B	C	D	E
1. Soil Depth and Moisture Regime (cm)	1-2 2	2-5 Dry Zonal Wet 3 3 1	5-20 Dry Zonal Wet 10 6 2	20-70 Dry Zonal Wet 12 8 4	>70 Dry Zonal Wet 15 10 5
2. Surface Fuel Continuity (Dry mass)	<10 0	10-40 2	41-80 3	81-100 4	>100 5
3. Vegetation Fuel Composition	Moist, Herbic, Irrigated Crops, Low Flammability Needs 1	Herbic, Deciduous Shrubs 2	Lichen, Conifer Shrubs 3	Prostrate, Juniper 4	Sagebrush, Bunchgrass, Forbs, etc. 5
4. Fine Woody Debris Continuity (<10cm) (% cover)	<10% 1	Scattered, <10% cover 2	10-25% cover 3	>25% cover, <10 cm deep 4	>25% cover, >10 cm deep 5
5. Large Woody Debris Continuity (>10cm) (% cover)	<10% 1	Scattered, <10% cover 2	10-25% cover 3	>25% cover, not stacked 4	>25% cover, partially stacked 5
6. Live and Dead Grasses Cover Closure (%)	<20 1	20-50 2	51-80 3	81-100 4	>100 5
7. Live Deadwood Cover Closure (%)	<20% 1	20-50% 2	51-80% 3	81-100% 4	>100% 5
8. Live and Dead Grasses/Grass Base Height (m)	5 or > 20% cover 1	2-5 2	2-3 3	3-2 4	<1 5
9. Live and Dead Succulent and Woody Vegetation Density	0-200 1	501-1000 2	1001-2000 3	2001-4000 4	>4000 5
10. Forest Density (% of dominant and co-dominant species)	Standing Dead and Partly Down 1	Standing Dead and Partly Down 2	Standing Dead and Partly Down 3	Standing Dead and Partly Down 4	Standing Dead and Partly Down 5
11. Continuous Forest/Slash Cover Width (m)	0-20 1	21-40 2	41-60 3	61-80 4	>80 5
Sub Total 71/55*					
12. Microclimate Zone	W1, W2 1	W3, W4, W5 2	W6, W7, W8 3	W9, W10, W11, W12 4	W13, W14 5
13. Microclimate Frequency (by Wildfire Zone)	45, 81, 82, 85, 95, 99, 10, 13, 15, 16, 17 1	63, 64, 65, 66, 67, 68, 69, 70 2	67, 65, 64, 64, 71, 71, 76 3	81, 85, 83, 82, 83, 85, 86, 86, 87, 82 4	87, 88, 87, 81 5
Sub Total 20/10					
14. Aspect (>15% slope)	North 1	East 2	<10% slope all aspects 3	West 4	South 5
15. Slope (%)	<10 1	10-20 and flat slope on North slopes 2	20-40 3	41-54 4	>55 5
16. Terrain	Flat 1	Rolling 2	Sloped terrain, minor low relief drains 3	Steep slope, deep drainage 4	Coastal slope, steep gullies 5
17. Landforms/Topographic Limitations to Wildfire Spread	< 5 ha ridge/valley 1	North and/or east aspects dominant, wildfire spread restricted from South and/or West 2	Irregular terrain, broken topography, regular aspect and slope changes, multiple restrictions to wildfire spread 3	Rolling terrain, with water bodies, irregular aspect and slope changes, multiple restrictions to wildfire spread 4	Continuous, continuous topography, no restrictions to wildfire spread 5
Sub Total 25/24**					
FUEL, WEATHER AND TOPOGRAPHY WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE					
18. Position of Structures/Community on Slope	No Structures Values within 2 km 0	Bottom of slope, valley bottom 1	Mid-slope benchland, elevated valley, <10% slope 2	Mid-slope top/benches, >10% slope 3	Upper 1/3 of slope 4
19. Type of Development	No Structures Values within 2 km 0	Residential (1-2 storey) 1	Residential (3-4 storey) with mid-rises 2	Mid-rise > 4 storey 3	Intermix < 1 storey/multi-storey 4
20. Proximity of Assessment Area Relative to Values	No Structures Values within 2 km 0	Above >500 200-500 <100m 1 10 20	Below >500 200-500 <100m 1 12 25	Below >500 200-500 <100m 1 12 25	Below >500 200-500 <100m 1 15 30
TOTAL WILDLAND URBAN INTERFACE WILDFIRE THREAT SCORE 79/5					

* Based only on Fuel sub-total > 20
** Based on Structural component only if Wildfire Threat Behaviour Score is > 95 for delineated polygons

Wildfire Behaviour Threat Class (when applicable)

Low 0-40
 Moderate 41-95
 High 96-149
 Extreme > 149

Wildland Urban Interface Threat Class (when applicable)

Low 0-13
 Moderate 14-26
 High 27-39
 Extreme > 39

Last Updated: January 24, 2013

99

City of Kamloops – Wildfire Threat Assessment Picture – Plot 99



Photo 99-1 @ 80 degrees

Appendix C

Fire Weather Data

Fire Weather System

Danger History in the Forest

Year	Danger Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total days
20 AFTON														
Average	Extreme	0.00	0.00	0.00	0.10	2.00	2.00	8.20	6.30	1.30	0.10	0.10	0.00	20.10
Average	High	0.00	0.00	0.00	0.80	9.40	7.20	12.80	17.90	11.20	4.00	0.10	0.00	63.40
Average	Moderate	0.50	0.00	0.40	10.50	10.10	8.60	5.40	4.00	7.00	8.80	3.70	0.30	59.30
2006	Extreme					1	3	14	8					26
	High				3	10	5	15	17	8				58
	Moderate				13	13	11		5	2				44
2007	Extreme					10	5	9	3	1				28
	High				1	17	11	14	21	13				77
	Moderate				17	4	9	4	6	5	1	1		47
2008	Extreme						3	16	11	2				32
	High				2	10	12	14	18	23	5			84
	Moderate				16	17	10	1	2	5	20	6		77
2009	Extreme					1	9	16	18	1				45
	High					8	17	10	13	15	14			77
	Moderate				9	12	4	3		10	3	7		48
2010	Extreme							3	2					5
	High					6	1	17	19	1				44
	Moderate			1	14	11	8	7	6	3	7	1		58
2011	Extreme							5	2	5		1		13
	High					2	2	6	28	23	4	1		66
	Moderate				8	14	13	8	1	2	25	21	3	95
2012	Extreme					4		1	2	1	1			9
	High					14	4	4	19	18	17			76
	Moderate	5		3	8	10	3	11	8	8	7			63
2013	Extreme					2		5	5					12
	High					6		13	18	6				43
	Moderate				2	12	4	12	6	15	1			52
2014	Extreme							7	6					13
	High						8	14	6					28
	Moderate				4		12	5	3	5	6			35
2015	Extreme				1	2		6	6	3				18
	High				2	21	12	21	20	5				81
	Moderate				14	8	12	3	3	15	18	1		74

Fire Weather System

Danger History in the Forest

Year	Danger Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total days
20 LEIGHTON LAKE														
Average	Extreme	0.00	0.00	0.00	0.00	0.00	0.20	0.80	2.70	1.80	0.10	0.00	0.00	5.60
Average	High	0.00	0.00	0.00	0.00	1.80	1.70	10.20	15.00	8.30	3.00	0.10	0.00	40.10
Average	Moderate	0.00	0.00	0.00	1.30	7.20	5.30	13.00	8.50	8.40	6.90	2.60	0.00	53.20
2006	Extreme								4	1				5
	High							18	12					30
	Moderate				7	9	4	11	10	7				48
2007	Extreme							3						3
	High					4		15	16	6				41
	Moderate					16	10	7	10	10				53
2008	Extreme								3	3				6
	High						2	12	17	15	3			49
	Moderate				2	5	6	13	10	9	7			52
2009	Extreme							2	6	2				10
	High						5	12	25	8	2			52
	Moderate					3	10	12		13	13			51
2010	Extreme													0
	High							2	6					8
	Moderate					2	5	17	13	1	2	3		43
2011	Extreme								1	9				10
	High							2	13	17	6	1		39
	Moderate						4	14	14	4	16	21		73
2012	Extreme								2	2	1			5
	High					4	2	1	18	18	18			61
	Moderate				1	11	2	17	8	7	2			48
2013	Extreme								3					3
	High					3		16	17	9				45
	Moderate					11		14	11	10				46
2014	Extreme							3	2					5
	High							8	10					18
	Moderate							15	5	10	10			40
2015	Extreme						2		6	1				9
	High					7	8	16	16	10	1			58
	Moderate				3	15	12	10	4	13	19	2		78

Fire Weather System

Danger History in the Forest

Year	Danger Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total days
20 PASKA LAKE														
Average	Extreme	0.00	0.00	0.00	0.00	0.00	0.10	0.10	1.40	1.30	0.00	0.00	0.00	2.90
Average	High	0.00	0.00	0.00	0.00	0.00	0.40	6.60	10.10	4.40	1.10	0.00	0.00	22.60
Average	Moderate	0.00	0.00	0.00	0.00	2.10	3.10	12.50	10.80	8.20	4.90	0.10	0.00	41.70
2006	Extreme								2					2
	High							10	13					23
	Moderate						4	16	8	7	1			36
2007	Extreme													0
	High							4	2					6
	Moderate					6	3	16	12	6				43
2008	Extreme								2	5				7
	High							13	20	7	2			42
	Moderate						3	11	7	11	2			34
2009	Extreme								3	2				5
	High							9	20	12	2			43
	Moderate						9	16	8	8	14			55
2010	Extreme													0
	High													0
	Moderate							5	17					22
2011	Extreme									4				4
	High								5	17				22
	Moderate							5	18	9	9	1		42
2012	Extreme									2				2
	High								5	6	7			18
	Moderate					5		11	15	18	14			63
2013	Extreme								1					1
	High							9	17	2				28
	Moderate						1	16	9	12	2			40
2014	Extreme													0
	High							6	12					18
	Moderate							16	3	7	4			30
2015	Extreme						1	1	6					8
	High						4	15	7					26
	Moderate					10	11	13	11	4	3			52

Fire Weather System

Danger History in the Forest

Year	Danger Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total days
20 SPARKS LAKE														
Average	Extreme	0.00	0.00	0.00	0.00	0.00	0.30	1.60	2.00	0.40	0.00	0.00	0.00	4.30
Average	High	0.00	0.00	0.00	0.00	3.50	2.50	12.20	15.00	8.50	2.20	0.00	0.00	43.90
Average	Moderate	0.00	0.00	0.00	1.40	8.40	5.80	9.60	10.20	6.90	3.00	0.60	0.00	45.90
2006	Extreme							3	3					6
	High					2	3	17	15	7				44
	Moderate				4	11	4	9	11	2				41
2007	Extreme						1	3						4
	High					17	2	17	14	4				54
	Moderate				2	9	9	5	10	6				41
2008	Extreme							1	1					2
	High						3	15	12	16	3			49
	Moderate				1	4	9	10	16	13	8	3		64
2009	Extreme						2	2	6					10
	High					1	11	20	12	16	1			61
	Moderate					10	10	5	11	10	14			60
2010	Extreme													0
	High							4	8					12
	Moderate				7	9	1	17	10	1	1	1		47
2011	Extreme									3				3
	High							3	15	16				34
	Moderate					5	2	5	16	10	5	2		45
2012	Extreme								4	1				5
	High							2	21	24	18			65
	Moderate					12	3	14	6	3	1			39
2013	Extreme							1						1
	High					5		13	26	2				46
	Moderate					12		12	5	6				35
2014	Extreme							3	1					4
	High							14	13					27
	Moderate						6	9	9	13	1			38
2015	Extreme							3	5					8
	High					10	6	17	14					47
	Moderate					12	14	10	8	5				49

Appendix D
City of Kamloops Overview Map 1

Appendix E

City of Kamloops Wildfire Threat Map 2

Appendix F
City of Kamloops PSTA, Fire History, Critical
Infrastructure Map 3

Appendix G
City of Kamloops PSTA Fuel Types Map 4

Appendix H
City of Kamloops CWPP Fuel Types Map 5