

Pincher Creek Wildfire Mitigation Strategy



Prepared for:
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1 Introduction

The Pincher Creek Wildfire Mitigation Strategy was developed to provide practical and operational wildland/urban interface risk mitigation strategies to reduce the threat of wildfire to development in the MD of Pincher Creek and the Town of Pincher Creek.

The project objectives include:

- Assess wildfire hazard and risk to development
- Based on interface hazard and risk, develop and prioritize recommendations to reduce the threat of wildfire to development in the planning area

This Wildfire Mitigation Strategy (WFMS) was developed using standardized FireSmart hazard assessment protocols and mitigation measures were developed based on the seven disciplines of wildland/urban interface approach and current research and knowledge in interface community protection. FireSmart mitigation measures recommended in this strategy reduce the threat of wildfire to communities but do not remove the threat.

An implementation plan is included in this Plan to assist stakeholders to budget and complete projects based on the priorities identified.

This plan should be reviewed and updated at **five year intervals** to ensure it is based on current conditions.

2 Planning Area and Stakeholders

The planning area includes the following development areas (Map 1):

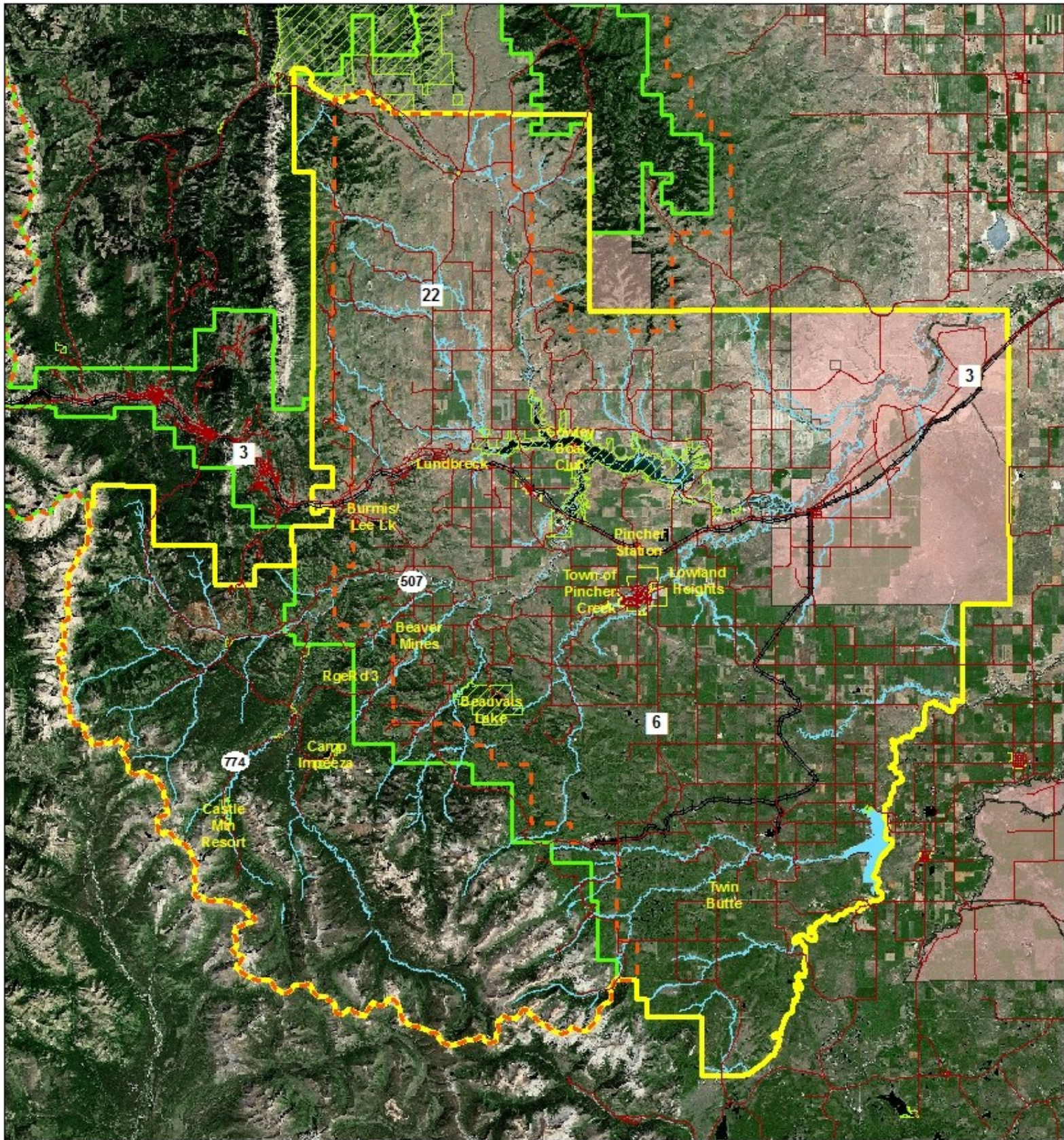
- Town of Pincher Creek
- MD of Pincher Creek
 - Castle Mountain Resort
 - Camp Impeza
 - Hamlet of Beaver Mines
 - Burmis/Lee Lake
 - Hamlet of Lundbreck
 - Hamlet of Pincher Station
 - Hamlet of Lowland Heights
 - Hamlet of Twin Butte
 - Cowley Boat Club
 - Beauvais Lake Provincial Park
 - RgeRd 3/Hwy 774

The area consists of private lands, Municipal lands, and Provincial crown-lands within and outside the Forest Protection Area.






Structural fire is the responsibility of Pincher Creek Regional Emergency Services and wildfire management is the jurisdiction of Alberta Agriculture and Forestry, Wildfire Management Branch within the Forest Protection Area and Pincher Creek Regional Emergency Services outside the Forest Protection Area.

Stakeholders consulted with in the planning process included:

- Dave Cox, Director of Emergency Services, Pincher Creek Emergency Services
- Al Roth, Director of Operations, Town of Pincher Creek
- Roland Milligan, Director of Development and Community Services, MD Pincher Creek
- Richard Paton, Wildfire Technologist, AB. Wildfire Management Branch



Map 1 - Planning Area

-  MD/Town/Village Boundary
-  First Nation
-  AB. Parks & Protected Areas
-  Roads
-  Railway
-  Forest Protection Area
-  Forest Reserve Boundary



1:414,190

3 Hazard & Risk Assessment

The hazard and risk assessment analyzes the risk of wildfire ignition, wildfire behaviour potential, and FireSmart hazard to determine priorities for action.

3.1 Wildfire Incidence

Provincial wildfire data was used for areas within the Forest Protection Area. Pincher Creek Emergency Services was not able to provide wildfire incidence data for the area outside the Forest Protection Area.

Provincial wildfire data for the ten-year period from 2006 to 2015 shows a total of 75 wildfires were discovered and actioned within two kilometres of the development areas within or adjacent to the Forest Protection Area (Maps 2A-2L). 99% were human-caused and 1% were lightning-caused and the majority of these wildfires were abandoned campfires in areas frequented by random campers.

Pincher Creek Emergency Services reports that they respond to several fires caused by the railroad, powerlines, and by landowner debris burning in the spring and fall seasons. Three fires in the past 10 years along the railroad right-of-way have resulted in structure losses or threats and a wildfire caused by a powerline in October 2013 near Talon Peak Estates reached 15 hectares in size, threatened several country-residential dwellings, and resulted in response from Pincher Creek Emergency Services and Alberta Wildfire Management (Map 2E).

Wildfire Incidence within the Forest Protection Area – 2006-2015

Hamlet	Wildfire Cause		Total
	Human	Lightning	
Camp Impeza	61	0	61
Castle Mountain Resort	9	0	9
Burmis/Lee Lake	2	0	2
RgeRd 3	1	1	2
Cowley Boat Club	1	0	1
Totals	74	1	75

3.2 Wildfire Behaviour Potential & FireSmart Hazard

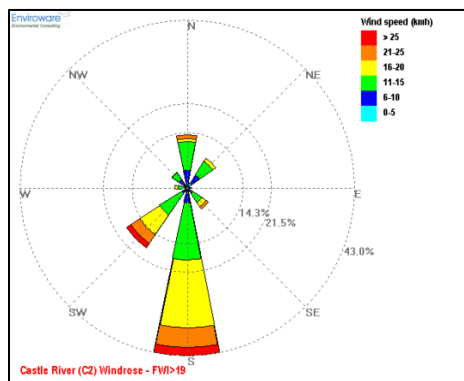
Wildfire behaviour potential is determined using Provincial wildland fuel types and fire weather records. FireSmart hazard assessments evaluate structural features, wildland fuel types, and topography within and adjacent to the development area to consistently quantify the wildland/urban interface hazard.

Wildfire behaviour assessment of the area shows that the potential for landscape-level wildland/urban interface fire exists in forest fuels in the western portions and in cured-grass fuels in the eastern portions of the planning area. The potential for community-level wildland/urban interface fires exists in unmanaged fuels in all of the development areas.

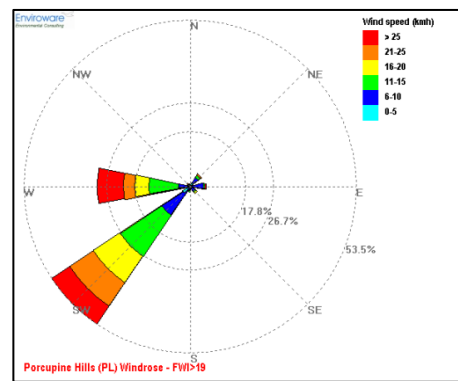
FireSmart Hazard Levels

Development Area	FireSmart Hazard Level	
	Structure & Site (0-30m)	Area (30-200m)
Castle Mountain Resort	Extreme	Extreme
Camp Impeeza	Extreme	Extreme
RgeRd 3/Hwy 774	Extreme	Extreme
Burmis/Lee Lake	Extreme	High
Beaver Mines	Extreme	Moderate
Beauvais Lake	Extreme	Low-Moderate
Pincher Station	High	Low-Moderate
Twin Butte	Low	Low-Moderate
Town of Pincher Creek	Low	Low-Moderate
Lundbreck	Low	Low-Moderate
Lowland Heights	Low	Low-Moderate
Cowley Boat Club	Low	Low

Fire weather records indicate that the Castle River area has an average of 57 spread-event days (Very High-Extreme fire danger) per year and the Porcupine Hills area has an average of 20 spread-event days per year. Predominant and strongest winds are from the south and southwest in the Castle River area and from the southwest and west in the Porcupine Hills area during the spread-event days.









Castle River (C2) Windrose

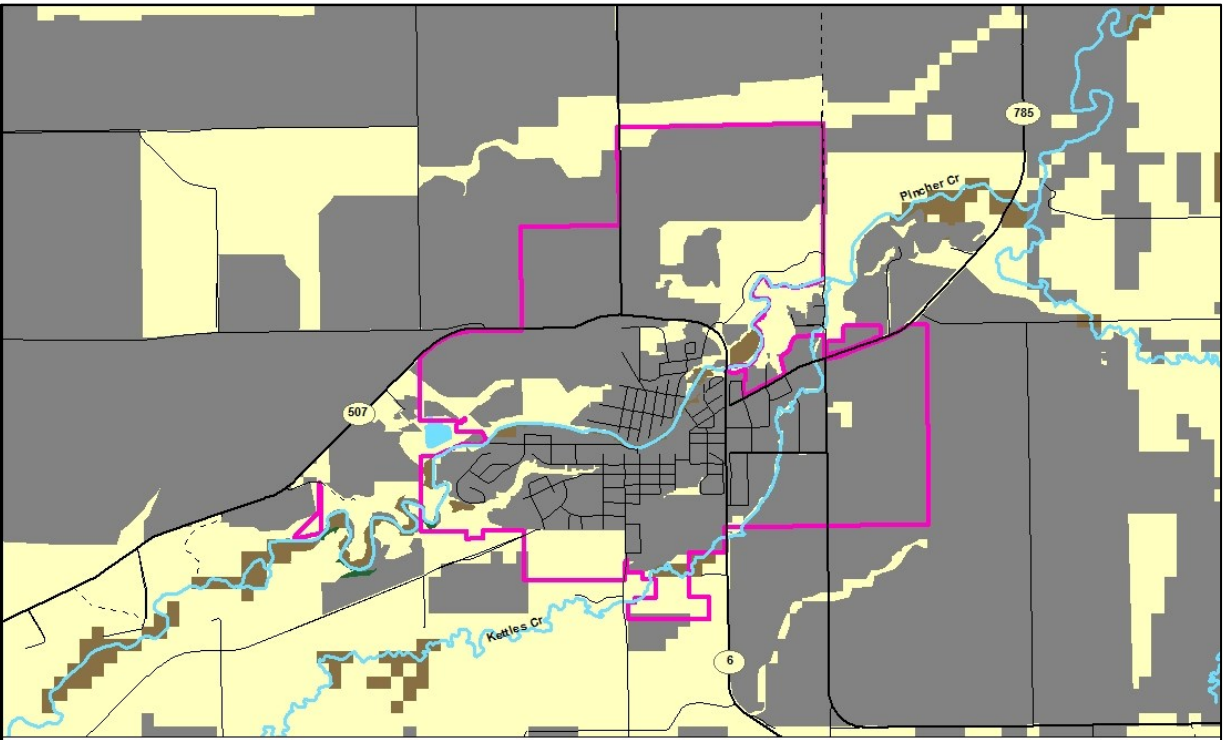


Porcupine Hills (PL) Windrose

3.2.1 Town of Pincher Creek

Factor	Comments
Development Type	<ul style="list-style-type: none"> ▪ Residential, commercial, light industrial urban development
Predominant Landscape-Level Fuel Types	<ul style="list-style-type: none"> ▪ Non-fuel (cultivated land) and cured-grass (O-1) with scattered coniferous (C-2) and deciduous (D-1) along the Pincher Creek valley
	
Predominant Community-Level Fuel Types	<ul style="list-style-type: none"> ▪ Non-fuel (NF), deciduous in the Pincher Creek valley, and cured-grass (O-1) on some MR/ER areas immediately adjacent to structures
	

Factor	Comments
Roofing Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 95+% ▪ Combustible – 5%
Siding Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 50% ▪ Combustible – 50%
Decks & Open Spaces	<ul style="list-style-type: none"> ▪ Combustible material not sheathed in common
Combustibles	<ul style="list-style-type: none"> ▪ Combustibles under decks/against structure is not common
Priority Zone 1-2 Clearance	<ul style="list-style-type: none"> ▪ Adequate for most – some cured-grass fuels from MR/ER lands immediately adjacent to fences and outbuildings
Priority Zone 3 Clearance	<ul style="list-style-type: none"> ▪ Adequate for most – some cured-grass fuels on MR/ER lands
	
<p>Comments:</p> <ul style="list-style-type: none"> ▪ FireSmart Structure/Site Hazard – LOW ▪ FireSmart Area Hazard – LOW-MODERATE ▪ Main threat is from lack of adequate clearance between structures and cured-grass fuels in MR/ER and vacant lots 	

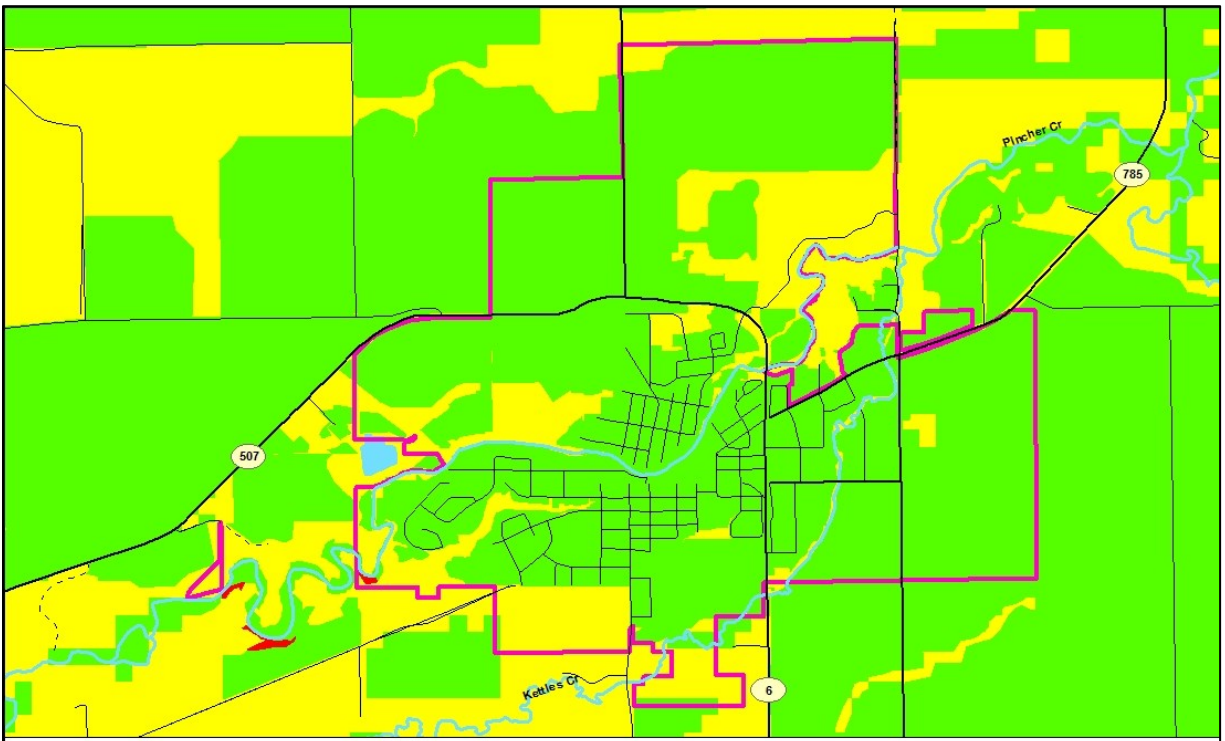


Map 2A - Wildfire Incidence & Wildland Fuel Types - Town of Pincher Creek

- | | | |
|---------------------------|------------------------------|------------------------|
| Human-Caused Wildfire | Spruce-Lichen Woodland (C-1) | Mixedwood-DC (M-1/M-2) |
| Lightning-Caused Wildfire | Boreal Spruce (C-2) | Mixedwood-CD (M-1/M-2) |
| Wildfire >4ha | Mature Pine (C-3) | Deciduous (D-1/D-2) |
| | Immature Pine (C-4) | Cured Grass (O-1) |
| | Open Pine (C-7) | Non-Fuel (NF) |

N

 1:35,000







Map 3A - FireSmart Hazard - Town of Pincher Creek



- | |
|--------------|
| Low |
| Moderate |
| High/Extreme |

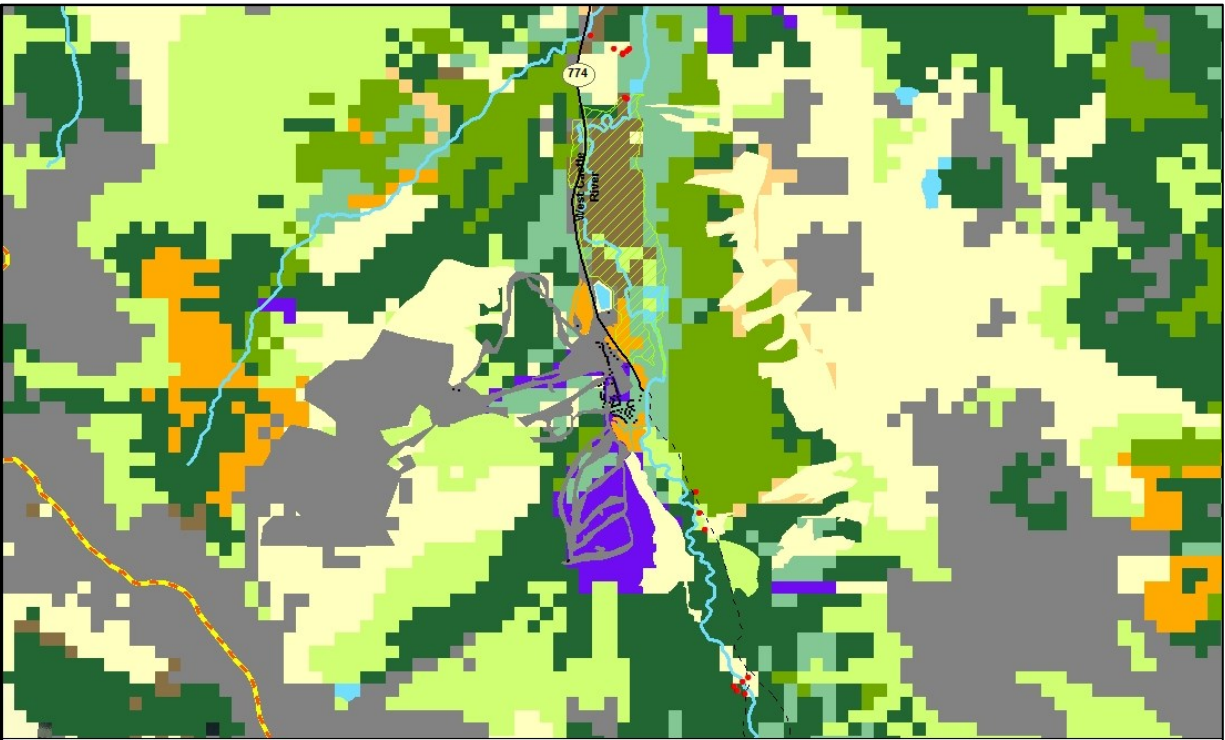
N

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3.2.2 Castle Mountain Resort

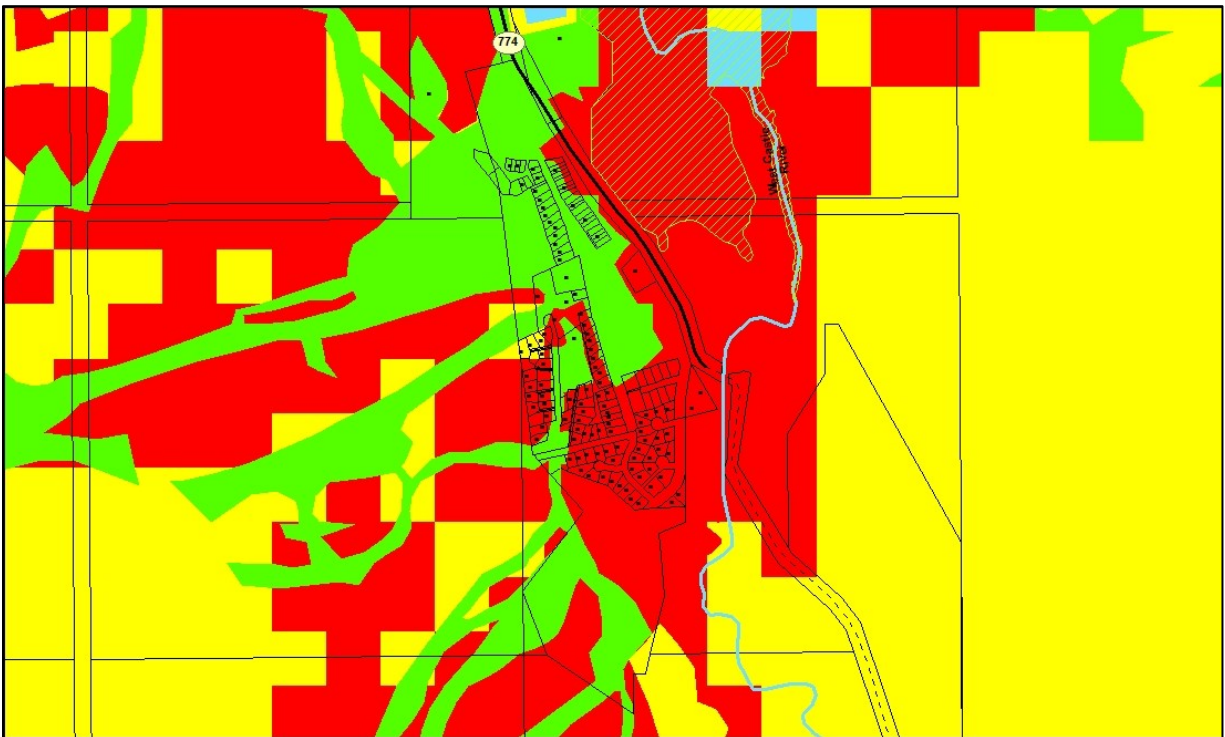
Factor	Comments
Development Type	<ul style="list-style-type: none"> ▪ Seasonal and permanent residential and commercial recreation development
Predominant Landscape-Level Fuel Types	<ul style="list-style-type: none"> ▪ Coniferous (C-2, C-3, C-4, C-7) with scattered mixedwood (M-1), deciduous (D-1), open spruce (C-1), and cured-grass (O-1) ▪ Some fuel reduction and prescribed burn work up the West Castle valley requires completion
	
Predominant Community-Level Fuel Types	<ul style="list-style-type: none"> ▪ Coniferous (C-3, C-2, C-7) and non-fuel (NF) ▪ Some fuel-reduced patches (M-1CD) around community perimeter have reduced hazard from Extreme to High
	

Factor	Comments
Roofing Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 95% ▪ Combustible – 5%
Siding Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 30% ▪ Combustible – 70%
Decks & Open Spaces	<ul style="list-style-type: none"> ▪ Combustible material not sheathed in common
Combustibles	<ul style="list-style-type: none"> ▪ Firewood under decks/against structure is common
Priority Zone 1-2 Clearance	<ul style="list-style-type: none"> ▪ Inadequate – more fuel removal/reduction needed by residents
Priority Zone 3 Clearance	<ul style="list-style-type: none"> ▪ Inadequate – more fuel reduction/removal needed by land managers
	
<p>Comments:</p> <ul style="list-style-type: none"> ▪ FireSmart Structure/Site Hazard – EXTREME ▪ FireSmart Area Hazard – EXTREME ▪ Main threat is from intense crown-fire in the West Castle River valley, spotting into the community, and the lack of clearance between combustibles and forest fuels 	



Map 2B - Wildfire Incidence & Wildland Fuel Types - Castle Mtn. Resort

- | | | |
|---------------------------|------------------------------|------------------------|
| Human-Caused Wildfire | Spruce-Lichen Woodland (C-1) | Mixedwood-DC (M-1/M-2) |
| Lightning-Caused Wildfire | Boreal Spruce (C-2) | Mixedwood-CD (M-1/M-2) |
| Wildfire >4ha | Mature Pine (C-3) | Deciduous (D-1/D-2) |
| | Immature Pine (C-4) | Cured Grass (O-1) |
| | Open Pine (C-7) | Non-Fuel (NF) |








Map 3B - FireSmart Hazard - Castle Mtn. Resort

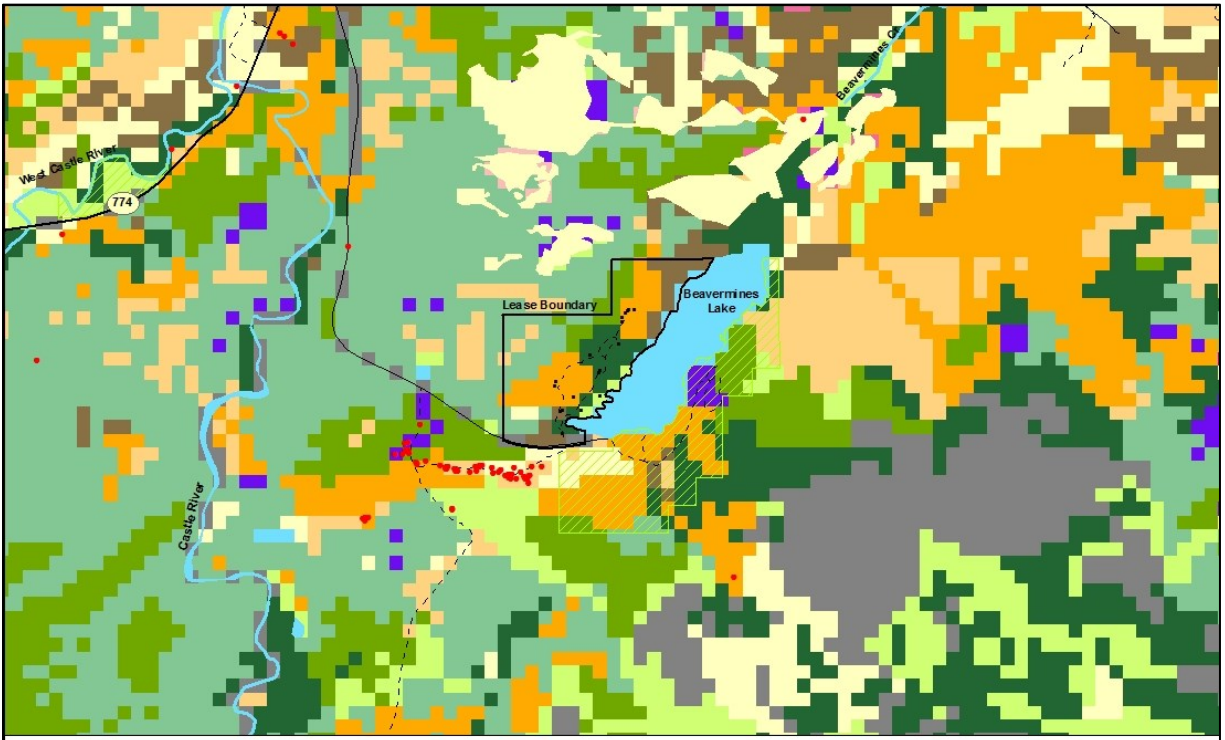
- | |
|--------------|
| Low |
| Moderate |
| High/Extreme |



3.2.3 Camp Impeeza

Factor	Comments
Development Type	<ul style="list-style-type: none"> ▪ Youth camp with cabins, outbuildings, tent frames, and camp operations buildings
Predominant Landscape-Level Fuel Types	<ul style="list-style-type: none"> ▪ Coniferous (C-3, C-2) with scattered mixedwood (M-1), deciduous (D-1), and cured-grass (O-1)
	
Predominant Community-Level Fuel Types	<ul style="list-style-type: none"> ▪ Coniferous (C-2) and mixedwood (M-1CD) ▪ Surface fuels light due to campers
	

Factor	Comments
Roofing Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 100% ▪ Combustible – 0%
Siding Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 10% ▪ Log/Timbers – 0% ▪ Combustible – 90%
Decks & Open Spaces	<ul style="list-style-type: none"> ▪ Combustible material not sheathed in common
Combustibles	<ul style="list-style-type: none"> ▪ Some combustible materials within 10m of structures
Priority Zone 1-2 Clearance	<ul style="list-style-type: none"> ▪ Inadequate – fuel removal/reduction needed around structures
Priority Zone 3 Clearance	<ul style="list-style-type: none"> ▪ Inadequate – fuel reduction needed by lease holders and/or land manager
	
<p>Comments:</p> <ul style="list-style-type: none"> ▪ FireSmart Structure/Site Hazard – EXTREME ▪ FireSmart Area Hazard – EXTREME ▪ Main threat is from intense crown-fire in coniferous fuels surrounding and within the Camp and lack of clearance between structures and forest fuels 	

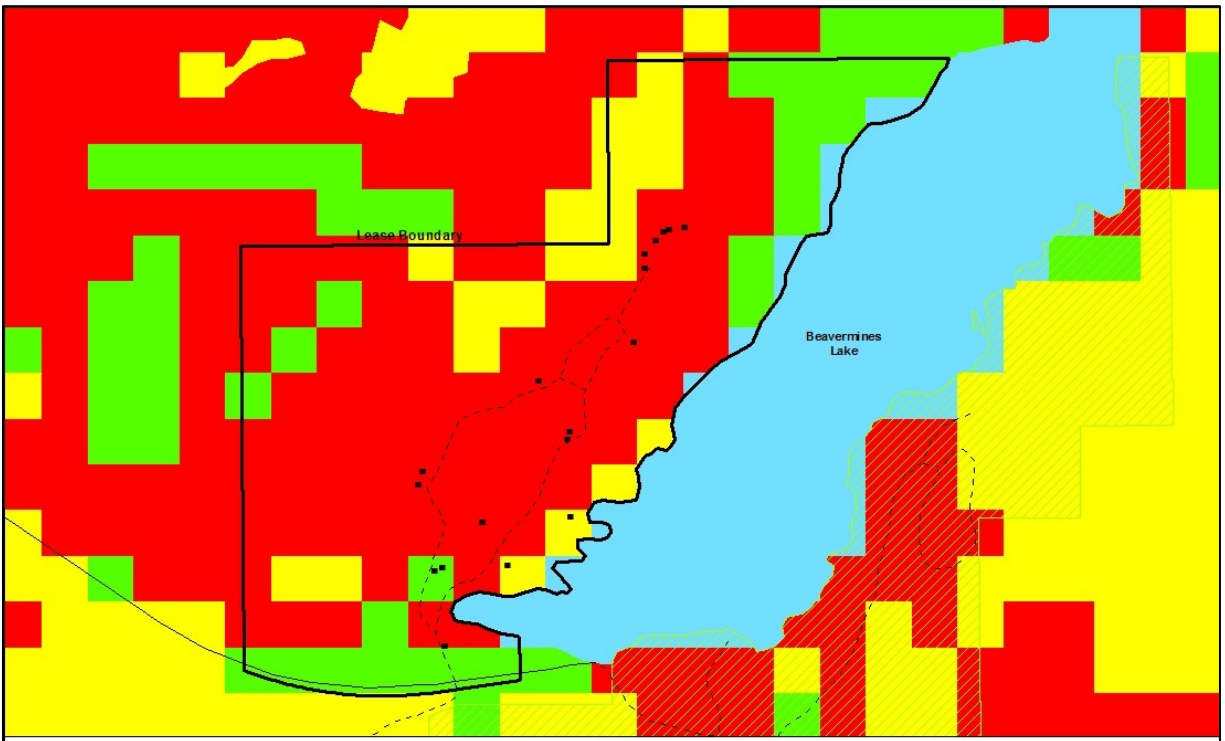


Map 2C - Wildfire Incidence & Wildland Fuel Types - Camp Impeeza

- | | | |
|-----------------------------|--------------------------------|--------------------------|
| ● Human-Caused Wildfire | ■ Spruce-Lichen Woodland (C-1) | ■ Mixedwood-DC (M-1/M-2) |
| ⚡ Lightning-Caused Wildfire | ■ Boreal Spruce (C-2) | ■ Mixedwood-CD (M-1/M-2) |
| ▨ Wildfire >4ha | ■ Mature Pine (C-3) | ■ Deciduous (D-1/D-2) |
| | ■ Immature Pine (C-4) | ■ Cured Grass (O-1) |
| | ■ Open Pine (C-7) | ■ Non-Fuel (NF) |

N

 1:32,000







Map 3C - FireSmart Hazard - Camp Impeeza



- | |
|----------------|
| ■ Low |
| ■ Moderate |
| ■ High/Extreme |

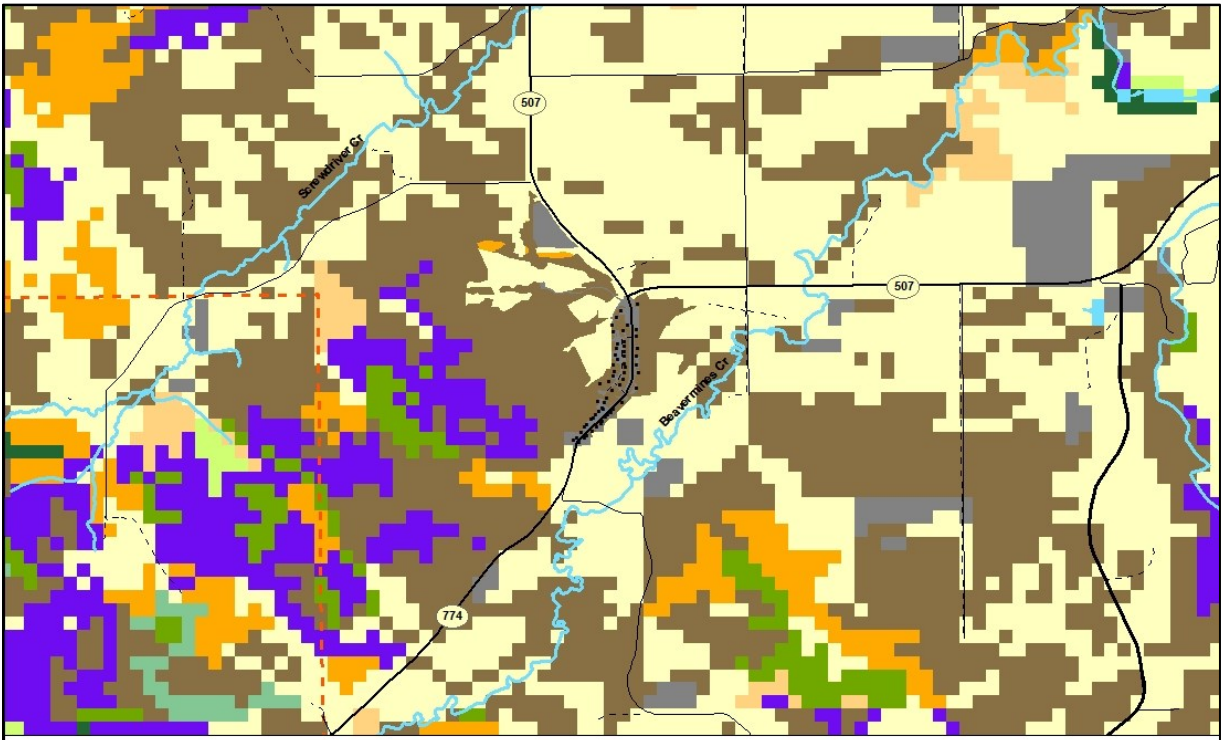
N

 1:9,500

3.2.4 Beaver Mines

Factor	Comments
Development Type	<ul style="list-style-type: none"> ▪ Hamlet with residential and commercial structures on large lots
Predominant Landscape-Level Fuel Types	<ul style="list-style-type: none"> ▪ Deciduous (D-1) and cured-grass (O-1) with scattered coniferous (C-7, C-3, C-4) and mixedwood (M-1) to the south and west
	
Predominant Community-Level Fuel Types	<ul style="list-style-type: none"> ▪ Deciduous (D-1), cured-grass (O-1) and non-fuel (NF)
	

Factor	Comments
Roofing Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 50% ▪ Combustible – 50%
Siding Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 35% ▪ Combustible – 65%
Decks & Open Spaces	<ul style="list-style-type: none"> ▪ Combustible material not sheathed in common
Combustibles	<ul style="list-style-type: none"> ▪ Abundant combustible materials within 10m of structures
Priority Zone 1-2 Clearance	<ul style="list-style-type: none"> ▪ Inadequate – 50% of structures with wild grass around structures
Priority Zone 3 Clearance	<ul style="list-style-type: none"> ▪ Adequate
	
<p>Comments:</p> <ul style="list-style-type: none"> ▪ FireSmart Structure/Site Hazard – EXTREME ▪ FireSmart Area Hazard – MODERATE ▪ Main threat is ember ignition of combustible wood-shake roofs from crown-fire in coniferous fuels to south and west 	

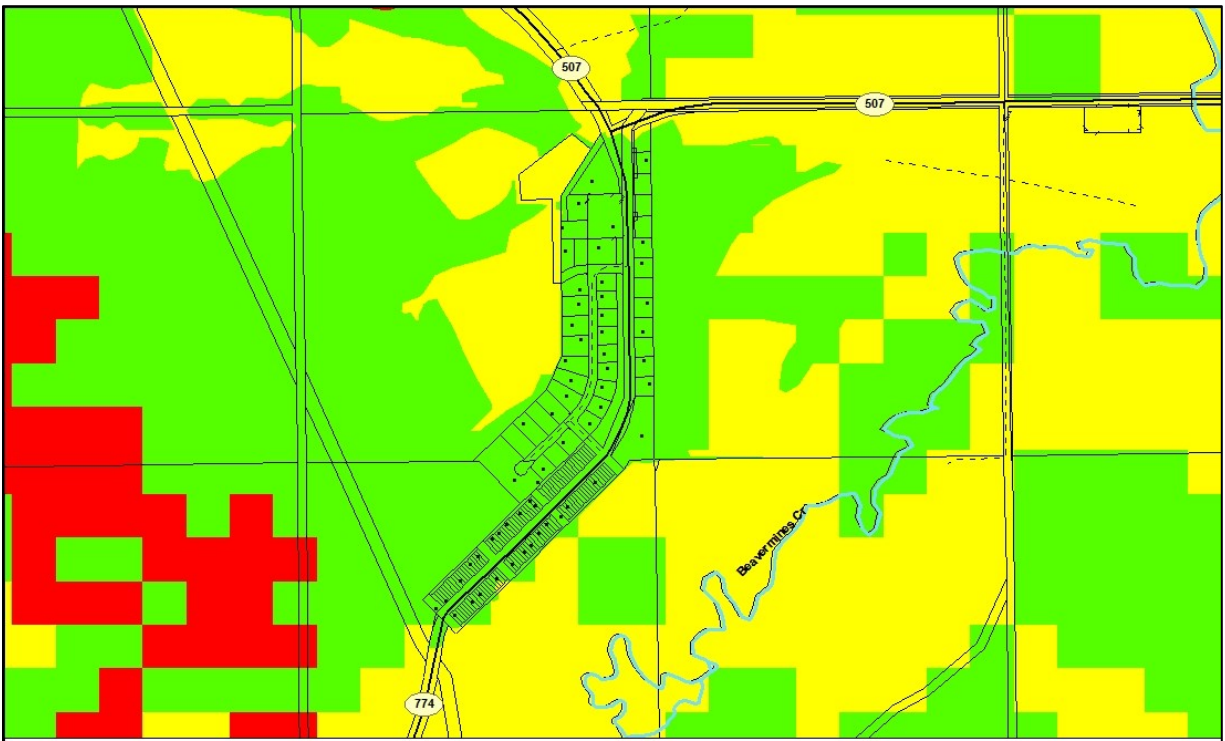


Map 2D - Wildfire Incidence & Wildland Fuel Types - Beaver Mines

- | | | |
|---------------------------|------------------------------|------------------------|
| Human-Caused Wildfire | Spruce-Lichen Woodland (C-1) | Mixedwood-DC (M-1/M-2) |
| Lightning-Caused Wildfire | Boreal Spruce (C-2) | Mixedwood-CD (M-1/M-2) |
| Wildfire >4ha | Mature Pine (C-3) | Deciduous (D-1/D-2) |
| | Immature Pine (C-4) | Cured Grass (O-1) |
| | Open Pine (C-7) | Non-Fuel (NF) |

N

 1:33,000







Map 3D - FireSmart Hazard - Beaver Mines



- | |
|--------------|
| Low |
| Moderate |
| High/Extreme |

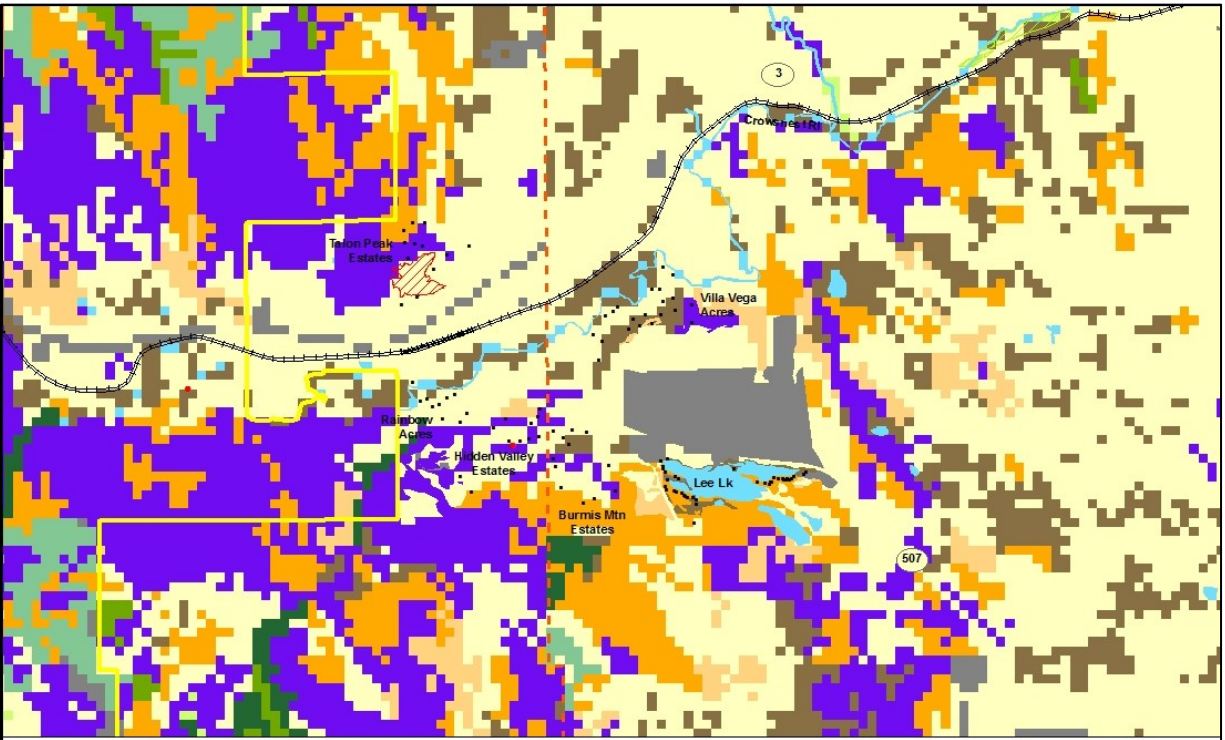
N

 1:10,000

3.2.5 Burmis/Lee Lake

Factor	Comments
Development Type	<ul style="list-style-type: none"> ▪ Country-residential development on large lots
Predominant Landscape-Level Fuel Types	<ul style="list-style-type: none"> ▪ Coniferous (C-7/C-3), mixedwood (M-1CD), and cured-grass (O-1) with scattered spruce (C-2) and deciduous (D-1)
	
Predominant Community-Level Fuel Types	<ul style="list-style-type: none"> ▪ Cured-grass (O-1), coniferous (C-7, C-3), and mixedwood (M-1CD) with scattered spruce (C-2) and deciduous (D-1)
	

Factor	Comments
Roofing Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 100% ▪ Combustible – 0%
Siding Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 25% ▪ Combustible – 75%
Decks & Open Spaces	<ul style="list-style-type: none"> ▪ Combustible material not sheathed in common
Combustibles	<ul style="list-style-type: none"> ▪ Abundant combustible materials within 10m of structures
Priority Zone 1-2 Clearance	<ul style="list-style-type: none"> ▪ Inadequate – 75% of structures with coniferous trees and/or wild grass within 10m
Priority Zone 3 Clearance	<ul style="list-style-type: none"> ▪ Adequate
	
<p>Comments:</p> <ul style="list-style-type: none"> ▪ FireSmart Structure/Site Hazard – EXTREME ▪ FireSmart Area Hazard – HIGH ▪ Main threat is intense landscape-level crown fire and ember ignition of wildland grasses and combustible materials on or around structures 	

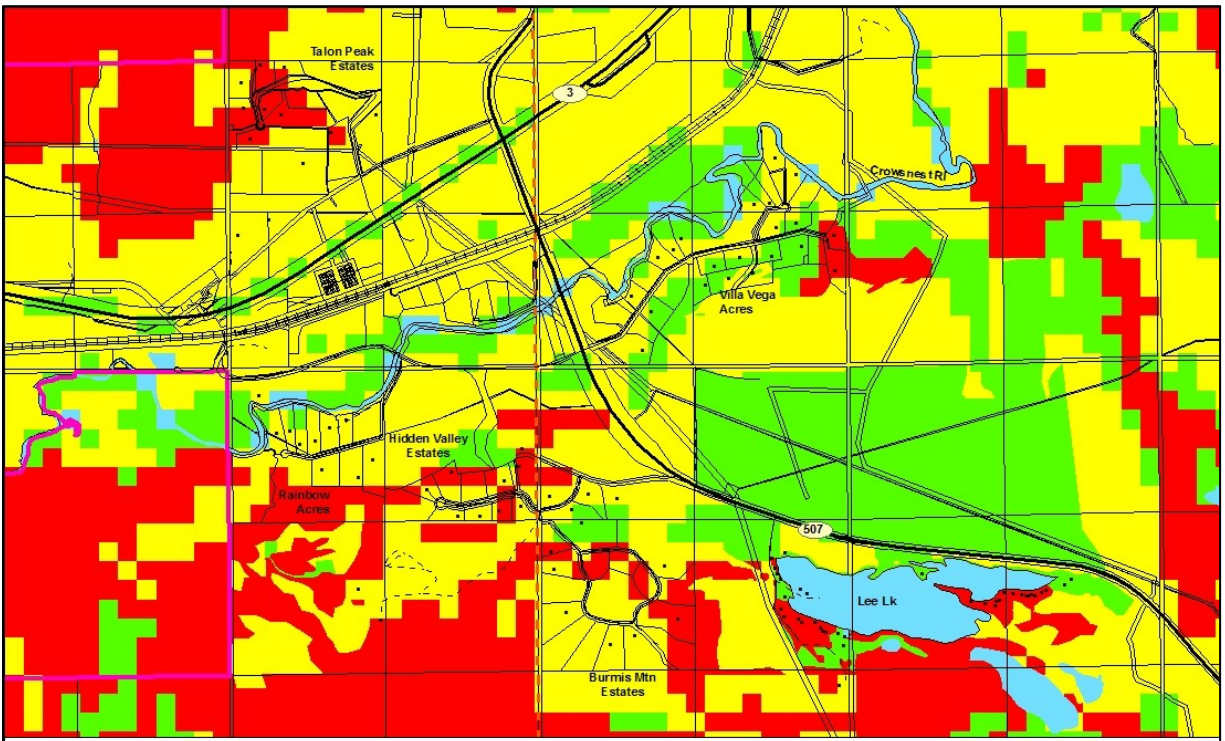


Map 2E - Wildfire Incidence & Wildland Fuel Types - Burmis/Lee Lake

- Human-Caused Wildfire
- Spruce-Lichen Woodland (C-1)
- Mixedwood-DC (M-1/M-2)
- Lightning-Caused Wildfire
- Boreal Spruce (C-2)
- Mixedwood-CD (M-1/M-2)
- Wildfire >4ha
- Mature Pine (C-3)
- Deciduous (D-1/D-2)
- Immature Pine (C-4)
- Cured Grass (O-1)
- Open Pine (C-7)
- Non-Fuel (NF)

N

 1:47,500







Map 3E - FireSmart Hazard - Burmis/Lee Lake



- Low
- Moderate
- High/Extreme

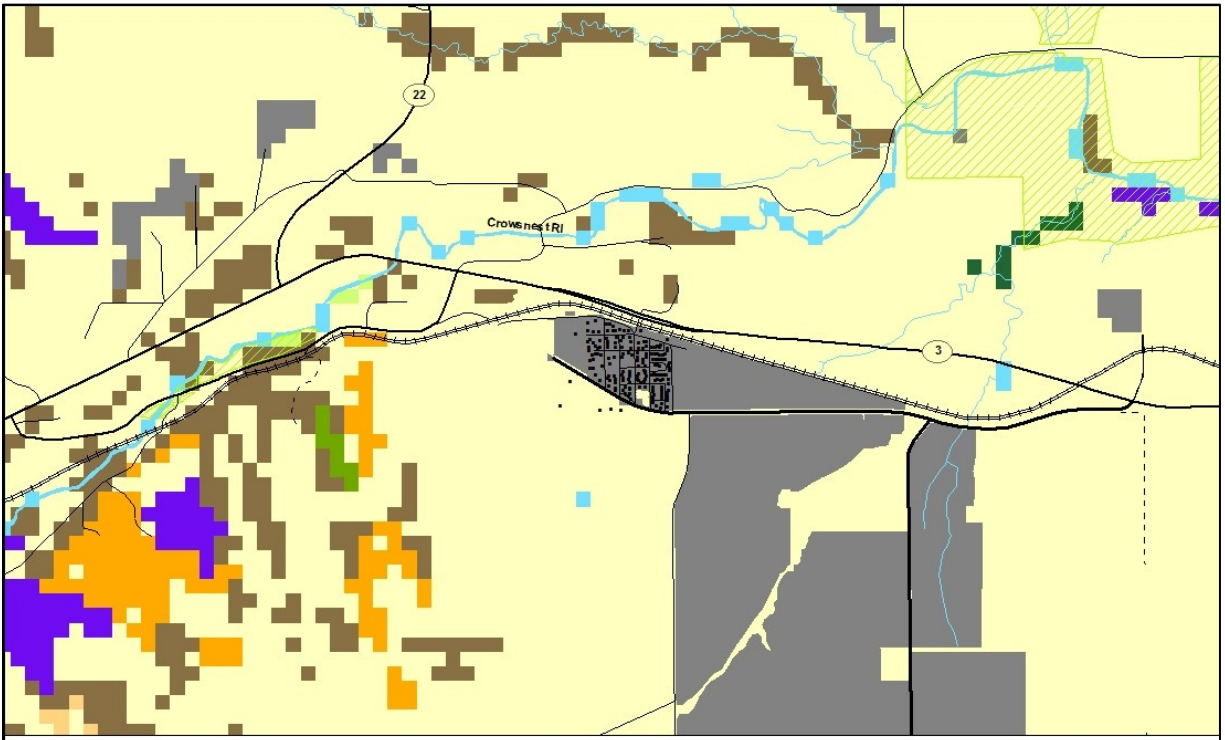
N

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3.2.6 Lundbreck

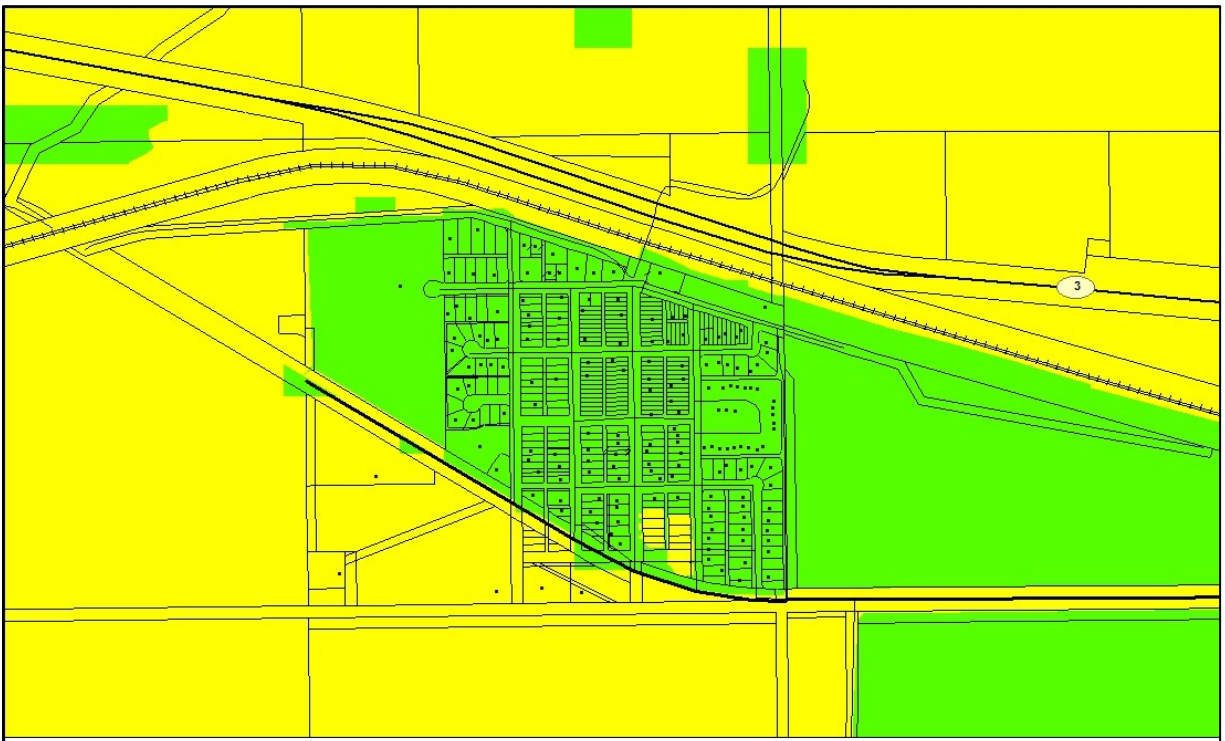
Factor	Comments
Development Type	<ul style="list-style-type: none"> ▪ Hamlet with urban residential and commercial development
Predominant Landscape-Level Fuel Types	<ul style="list-style-type: none"> ▪ Cured-grass (O-1) and non-fuel (NF) with scattered deciduous (D-1) and mixedwood (M-1) patches
	
Predominant Community-Level Fuel Types	<ul style="list-style-type: none"> ▪ Non-fuel (NF) and cured-grass (O-1)
	

Factor	Comments
Roofing Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 95% ▪ Combustible – 5%
Siding Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 60% ▪ Combustible – 40%
Decks & Open Spaces	<ul style="list-style-type: none"> ▪ Combustible material not sheathed in common
Combustibles	<ul style="list-style-type: none"> ▪ 40% of structures have combustible materials within 10m
Priority Zone 1-2 Clearance	<ul style="list-style-type: none"> ▪ Adequate – 90% ▪ Inadequate – 10% wild grass on vacant lots and CPR right-of-way within 10m of structures
Priority Zone 3 Clearance	<ul style="list-style-type: none"> ▪ Adequate
	
<p>Comments:</p> <ul style="list-style-type: none"> ▪ FireSmart Structure/Site Hazard – LOW ▪ FireSmart Area Hazard – LOW-MODERATE ▪ Main threat is from wildfire in cured-grass (spring/fall) under windy conditions along CPR railroad right-of-way or in unmaintained vacant lots within the Hamlet 	



Map 2F - Wildfire Incidence & Wildland Fuel Types - Lundbreck

- | | | |
|-----------------------------|--------------------------------|--------------------------|
| ● Human-Caused Wildfire | ■ Spruce-Lichen Woodland (C-1) | ■ Mixedwood-DC (M-1/M-2) |
| ⚡ Lightning-Caused Wildfire | ■ Boreal Spruce (C-2) | ■ Mixedwood-CD (M-1/M-2) |
| ▨ Wildfire >4ha | ■ Mature Pine (C-3) | ■ Deciduous (D-1/D-2) |
| | ■ Immature Pine (C-4) | ■ Cured Grass (O-1) |
| | ■ Open Pine (C-7) | ■ Non-Fuel (NF) |





Map 3F - FireSmart Hazard - Lundbreck

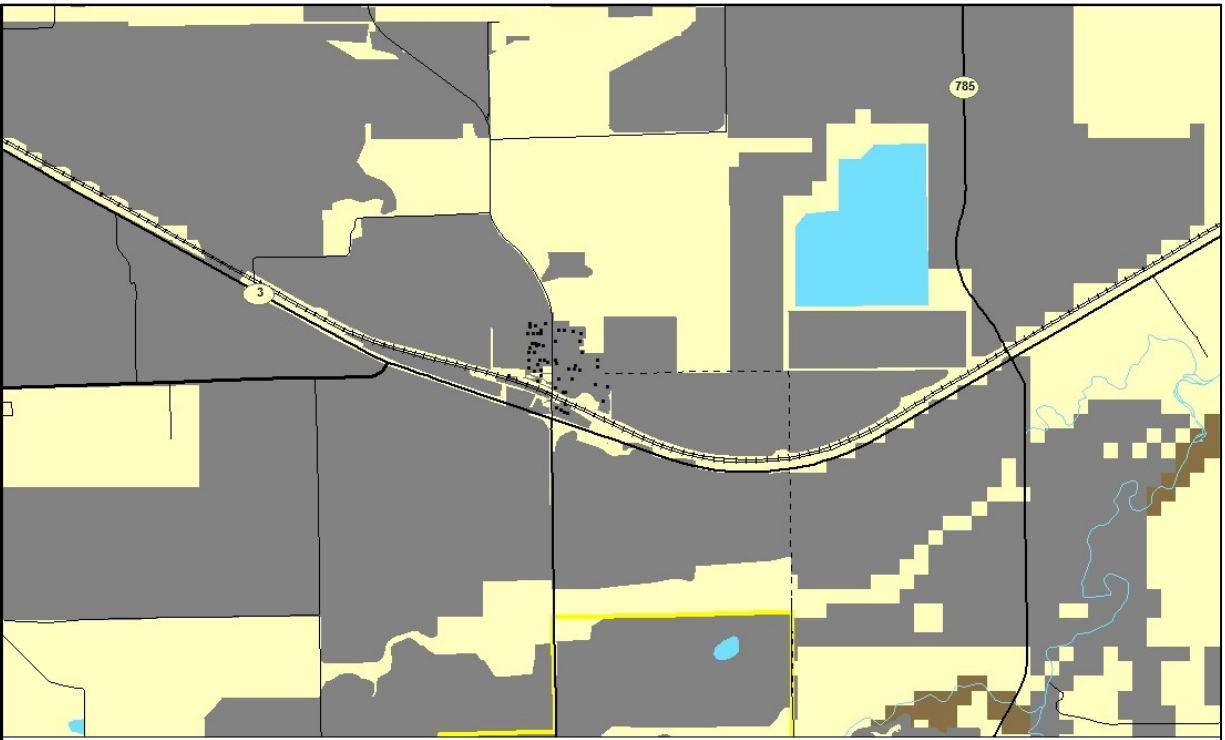
- | |
|----------------|
| ■ Low |
| ■ Moderate |
| ■ High/Extreme |



3.2.7 Pincher Station

Factor	Comments
Development Type	<ul style="list-style-type: none"> ▪ Hamlet with rural residential and industrial development
Predominant Landscape-Level Fuel Types	<ul style="list-style-type: none"> ▪ Non-fuel (NF) cultivated land and urban and cured-grass (O-1) with scattered deciduous (D-1) patches
	
Predominant Community-Level Fuel Types	<ul style="list-style-type: none"> ▪ Cured-grass (O-1) and non-fuel (NF)
	

Factor	Comments
Roofing Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 95% ▪ Combustible – 5% (old asphalt shingle)
Siding Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 40% ▪ Combustible – 60%
Decks & Open Spaces	<ul style="list-style-type: none"> ▪ Combustible material not sheathed-in common
Combustibles	<ul style="list-style-type: none"> ▪ Many structures have combustible materials (fences, debris piles, firewood) within 10m
Priority Zone 1-2 Clearance	<ul style="list-style-type: none"> ▪ Adequate – 40% ▪ Inadequate – 60% wild grass on lots and CPR right-of-way within 10m of structures
Priority Zone 3 Clearance	<ul style="list-style-type: none"> ▪ Adequate
	
<p>Comments:</p> <ul style="list-style-type: none"> ▪ FireSmart Structure/Site Hazard – HIGH ▪ FireSmart Area Hazard – LOW-MODERATE ▪ Main threat is from wildfire in unmaintained cured-grass (spring/fall) along CPR railroad right-of-way and within the Hamlet immediately adjacent to structures and combustible wooden fences and debris piles 	



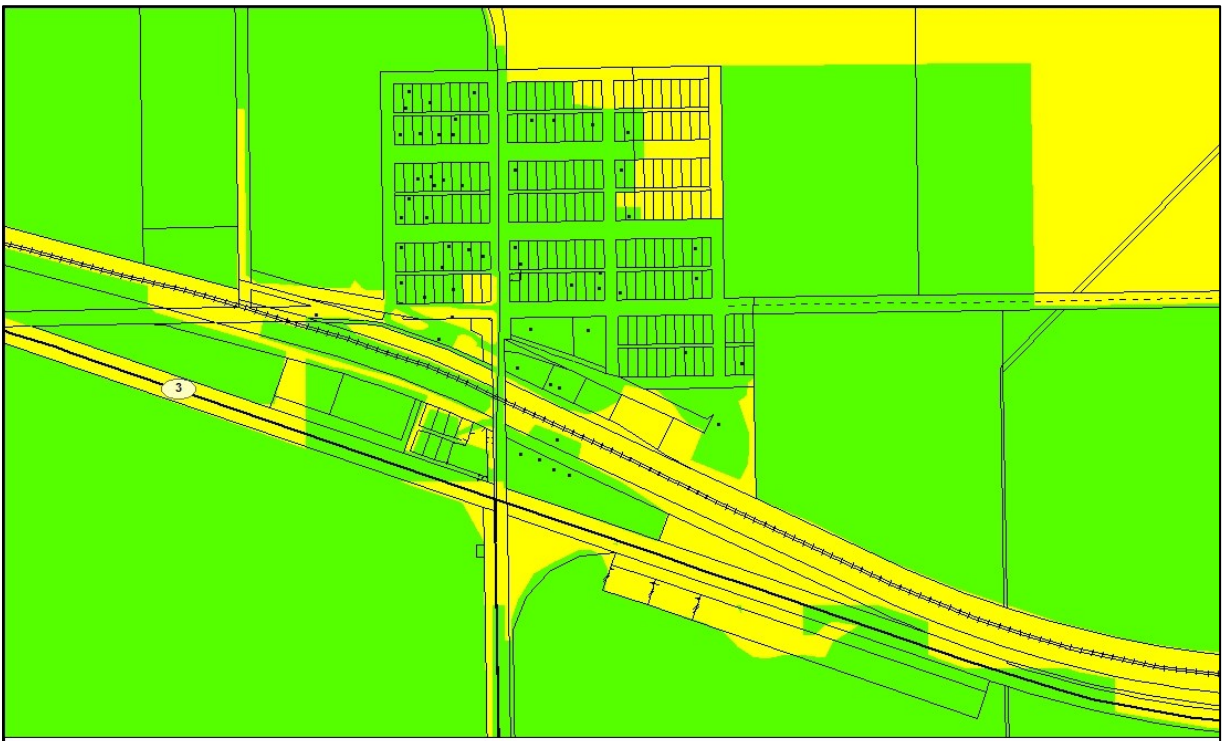
Map 2G - Wildfire Incidence & Wildland Fuel Types - Pincher Station

- Human-Caused Wildfire
- ⚡ Lightning-Caused Wildfire
- / / / Wildfire >4ha

- | | |
|---|--|
| <ul style="list-style-type: none"> Spruce-Lichen Woodland (C-1) Boreal Spruce (C-2) Mature Pine (C-3) Immature Pine (C-4) Open Pine (C-7) | <ul style="list-style-type: none"> Mixedwood-DC (M-1/M-2) Mixedwood-CD (M-1/M-2) Deciduous (D-1/D-2) Cured Grass (O-1) Non-Fuel (NF) |
|---|--|

N

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Map 3G - FireSmart Hazard - Pincher Station



- Low
- Moderate
- High/Extreme

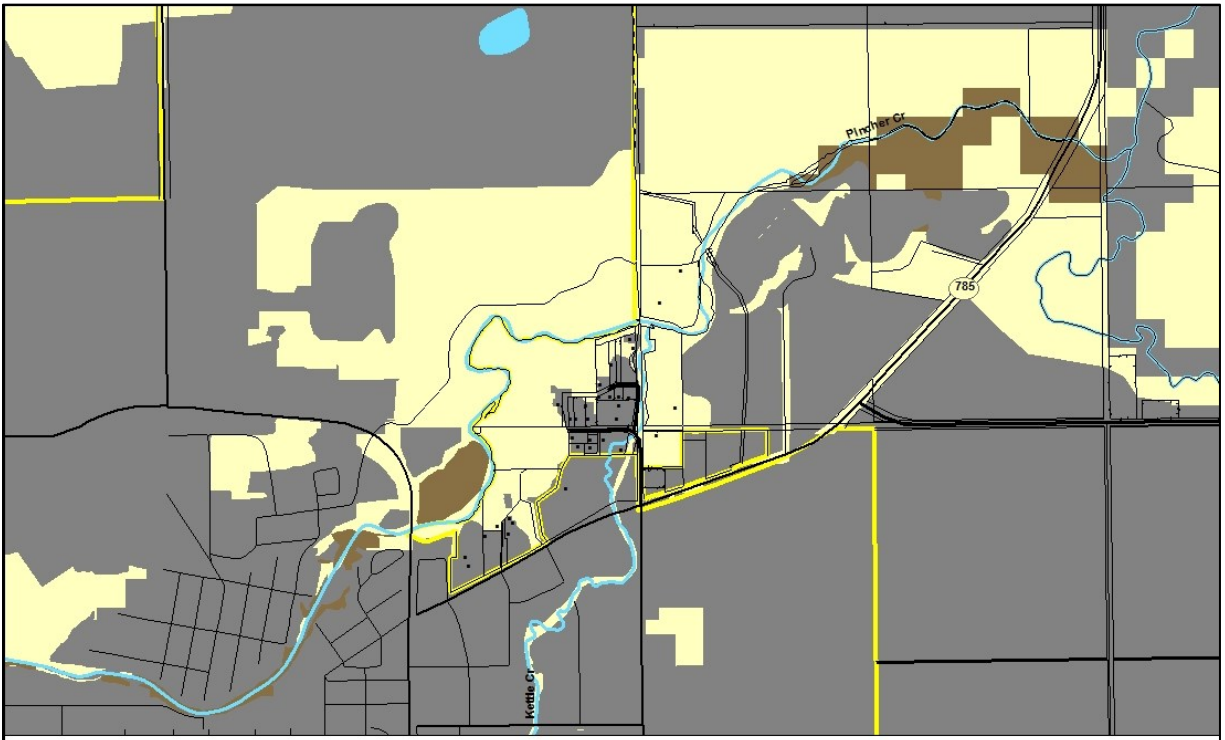
N

 1:7,000

3.2.8 Lowland Heights

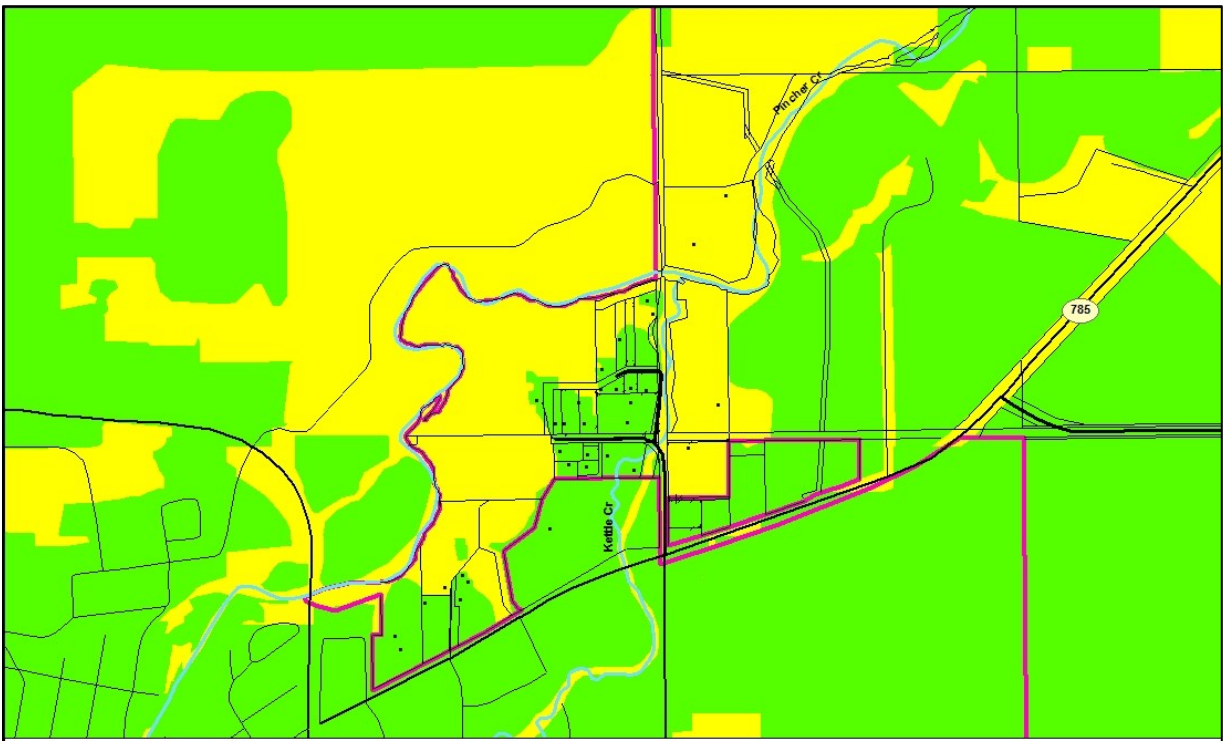
Factor	Comments
Development Type	<ul style="list-style-type: none"> ▪ Hamlet with rural residential development
Predominant Landscape-Level Fuel Types	<ul style="list-style-type: none"> ▪ Cured-grass/scrub deciduous (O-1) and non-fuel (NF) cultivated land with scattered deciduous (D-1) patches in the Pincher Creek valley
	
Predominant Community-Level Fuel Types	<ul style="list-style-type: none"> ▪ Non-fuel (NF) and cured-grass (O-1)
	

Factor	Comments
Roofing Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 95% ▪ Combustible – 5%
Siding Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 15% ▪ Combustible – 85%
Decks & Open Spaces	<ul style="list-style-type: none"> ▪ None or sheathed-in is common
Combustibles	<ul style="list-style-type: none"> ▪ Combustible materials (fences, debris piles, firewood) within 10m is common
Priority Zone 1-2 Clearance	<ul style="list-style-type: none"> ▪ Adequate – 80% ▪ Inadequate – 20% wild grass within 30m for some perimeter lots
Priority Zone 3 Clearance	<ul style="list-style-type: none"> ▪ Adequate
	
<p>Comments:</p> <ul style="list-style-type: none"> ▪ FireSmart Structure/Site Hazard – LOW ▪ FireSmart Area Hazard – LOW-MODERATE ▪ Minimal threat – most homes have well maintained yards. Possible wildfire in cured-grass/scrub deciduous fuels (spring/fall) between Lowland Heights and Pincher Creek could threaten perimeter structures 	



Map 2H - Wildfire Incidence & Wildland Fuel Types - Lowland Heights

- | | | |
|-----------------------------|--------------------------------|--------------------------|
| ● Human-Caused Wildfire | ■ Spruce-Lichen Woodland (C-1) | ■ Mixedwood-DC (M-1/M-2) |
| ⚡ Lightning-Caused Wildfire | ■ Boreal Spruce (C-2) | ■ Mixedwood-CD (M-1/M-2) |
| ▨ Wildfire >4ha | ■ Mature Pine (C-3) | ■ Deciduous (D-1/D-2) |
| | ■ Immature Pine (C-4) | ■ Cured Grass (O-1) |
| | ■ Open Pine (C-7) | ■ Non-Fuel (NF) |









Map 3H - FireSmart Hazard - Lowland Heights

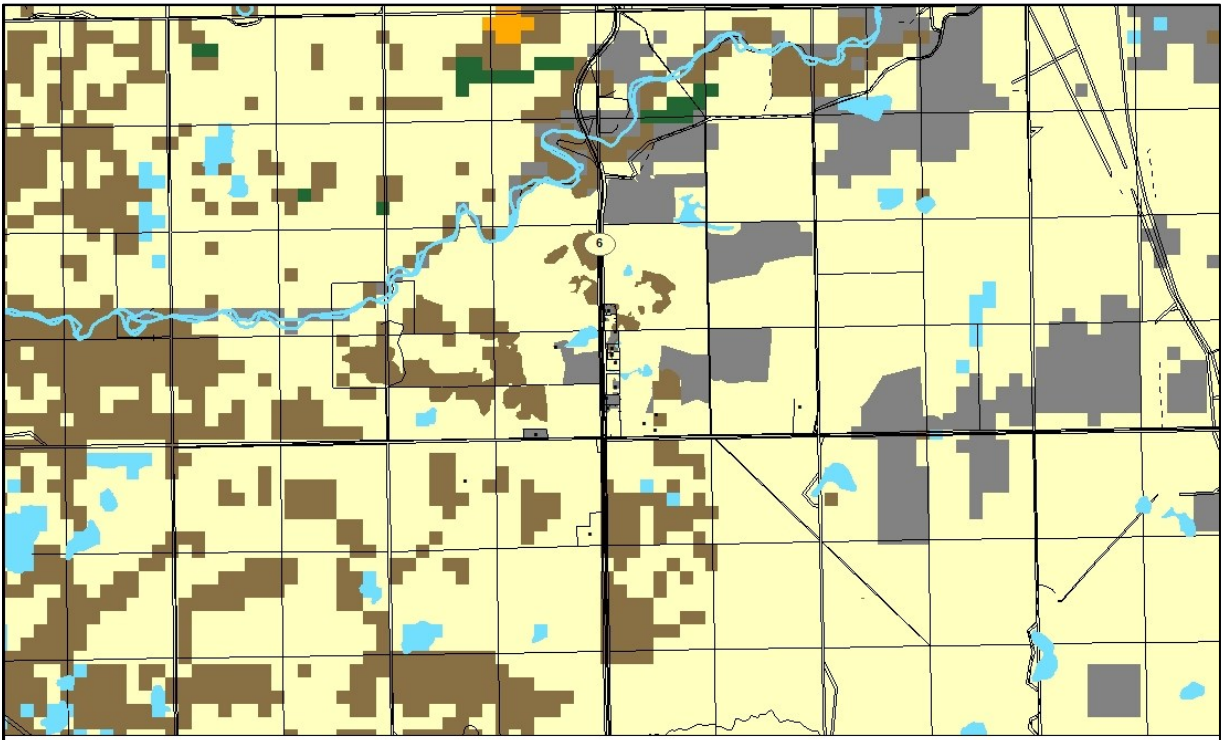
- | |
|----------------|
| ■ Low |
| ■ Moderate |
| ■ High/Extreme |



3.2.9 Twin Butte

Factor	Comments
Development Type	<ul style="list-style-type: none"> ▪ Hamlet with rural residential and commercial development
Predominant Landscape-Level Fuel Types	<ul style="list-style-type: none"> ▪ Cured-grass (O-1), deciduous (D-1), and non-fuel (NF) cultivated land
	
Predominant Community-Level Fuel Types	<ul style="list-style-type: none"> ▪ Non-fuel (NF) and cured-grass (O-1 with scattered deciduous (D-1) patches
	

Factor	Comments
Roofing Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 100% ▪ Combustible – 0%
Siding Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 10% ▪ Combustible – 90%
Decks & Open Spaces	<ul style="list-style-type: none"> ▪ Combustible material not sheathed-in is common
Combustibles	<ul style="list-style-type: none"> ▪ Combustible materials (fences, debris piles, firewood) within 10m is not common
Priority Zone 1-2 Clearance	<ul style="list-style-type: none"> ▪ Adequate – 75% ▪ Inadequate – 25%, wild grass within 10m of structures
Priority Zone 3 Clearance	<ul style="list-style-type: none"> ▪ Adequate
	
<p>Comments:</p> <ul style="list-style-type: none"> ▪ FireSmart Structure/Site Hazard – LOW ▪ FireSmart Area Hazard – LOW-MODERATE ▪ Main threat is for those structures with lack of adequate clearance from cured-grass fuels 	

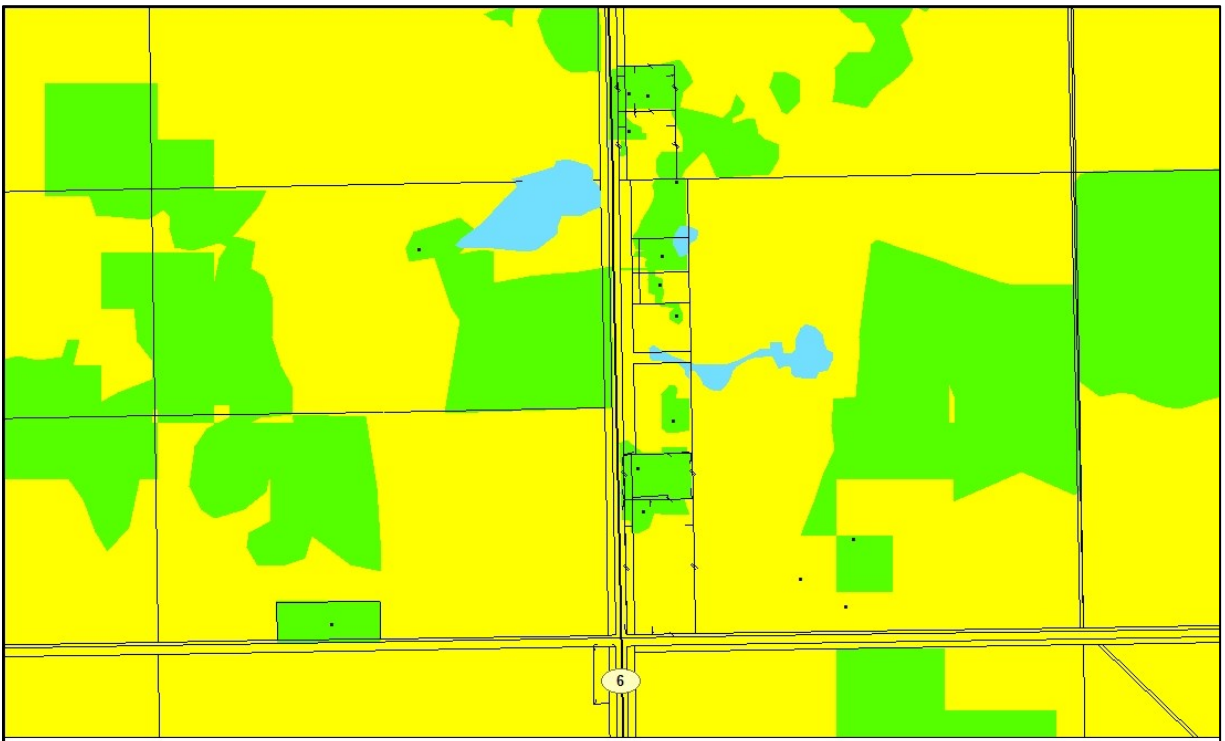


Map 2I - Wildfire Incidence & Wildland Fuel Types - Twin Butte

- | | | |
|---------------------------|------------------------------|------------------------|
| Human-Caused Wildfire | Spruce-Lichen Woodland (C-1) | Mixedwood-DC (M-1/M-2) |
| Lightning-Caused Wildfire | Boreal Spruce (C-2) | Mixedwood-CD (M-1/M-2) |
| Wildfire >4ha | Mature Pine (C-3) | Deciduous (D-1/D-2) |
| | Immature Pine (C-4) | Cured Grass (O-1) |
| | Open Pine (C-7) | Non-Fuel (NF) |

N

 1:33,000







Map 3I - FireSmart Hazard - Twin Butte



- | |
|--------------|
| Low |
| Moderate |
| High/Extreme |

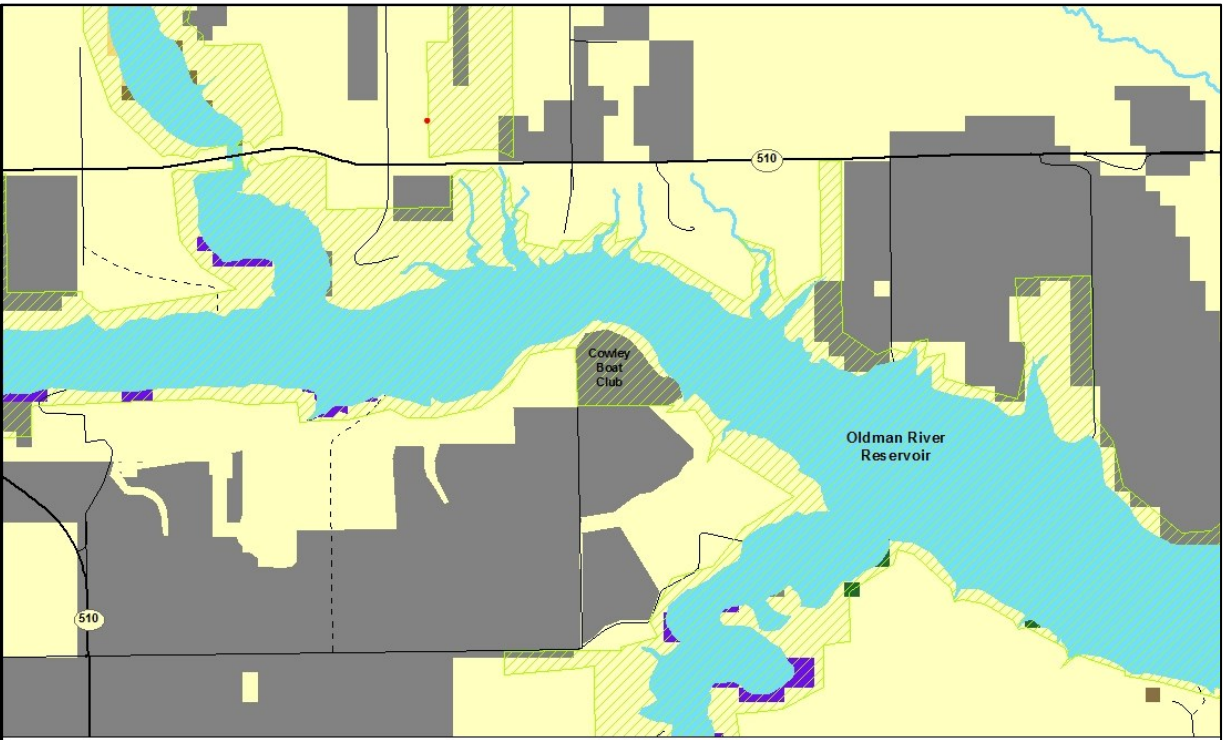
N

 1:7,700

3.2.10 Cowley Boat Club

Factor	Comments
Development Type	<ul style="list-style-type: none"> Seasonal recreational vehicle park – 261 sites
Predominant Landscape-Level Fuel Types	<ul style="list-style-type: none"> Cured-grass (O-1) and non-fuel (NF) cultivated land
	
Predominant Community-Level Fuel Types	<ul style="list-style-type: none"> Non-fuel/maintained grass (NF) and deciduous (D-1) within the RV park with cured-grass (O-1) between the RV Park and lake
	

Factor	Comments
Roofing Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 100% ▪ Combustible – 0%
Siding Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 100% ▪ Combustible – 0%
Decks & Open Spaces	<ul style="list-style-type: none"> ▪ Combustible material not sheathed-in is common
Combustibles	<ul style="list-style-type: none"> ▪ Combustible materials (firewood) within 10m is common
Priority Zone 1-2 Clearance	<ul style="list-style-type: none"> ▪ Adequate – 100% ▪ Inadequate – 0%
Priority Zone 3 Clearance	<ul style="list-style-type: none"> ▪ Adequate
	
<p>Comments:</p> <ul style="list-style-type: none"> ▪ FireSmart Structure/Site Hazard – LOW ▪ FireSmart Area Hazard – LOW ▪ Minimal threat due to maintenance of grasses within the RV Park 	



Map 2J - Wildfire Incidence & Wildland Fuel Types - Cowley Boat Club

- Human-Caused Wildfire
- ⚡ Lightning-Caused Wildfire
- Wildfire >4ha

- | | |
|---|--|
| <ul style="list-style-type: none"> Spruce-Lichen Woodland (C-1) Boreal Spruce (C-2) Mature Pine (C-3) Immature Pine (C-4) Open Pine (C-7) | <ul style="list-style-type: none"> Mixedwood-DC (M-1/M-2) Mixedwood-CD (M-1/M-2) Deciduous (D-1/D-2) Cured Grass (O-1) Non-Fuel (NF) |
|---|--|



1:29,000







Map 3J - Wildfire Incidence & Wildland Fuel Types - Cowley Boat Club



- Low
- Moderate
- High/Extreme

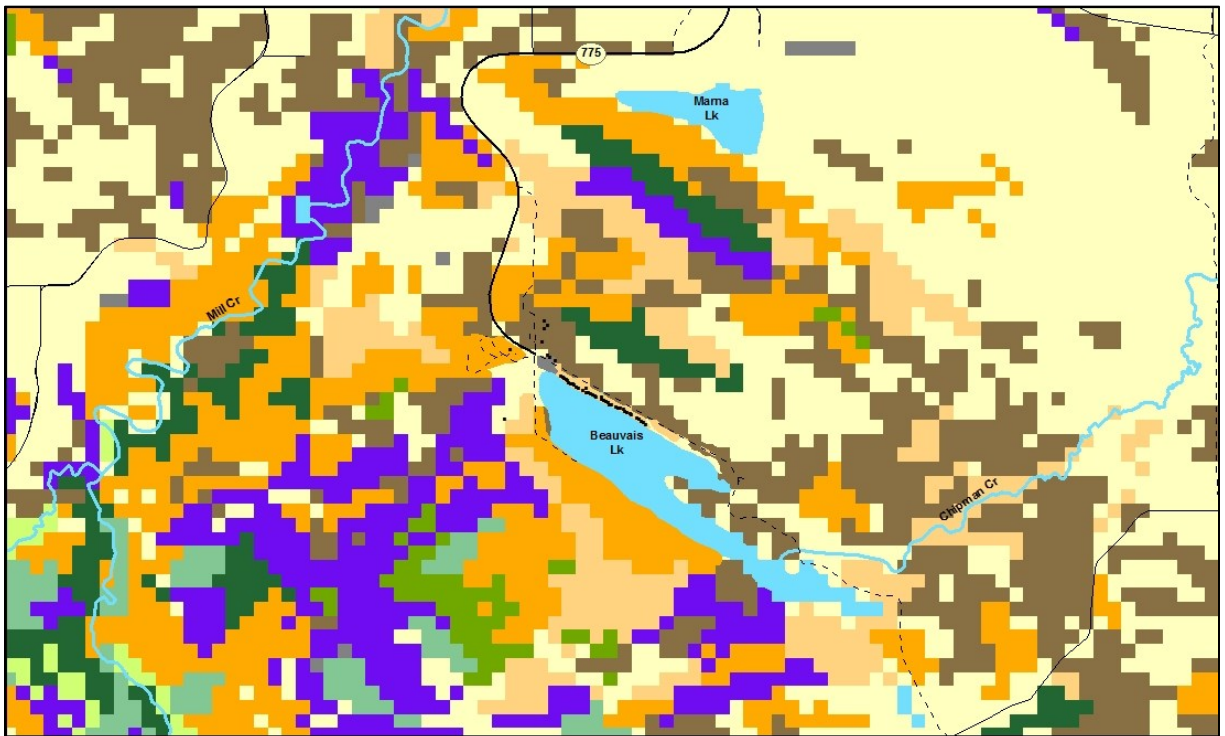


1:5,636

3.2.11 Beauvais Lake

Factor	Comments
Development Type	<ul style="list-style-type: none"> ▪ Seasonal cottage development – 39 lots
Predominant Landscape-Level Fuel Types	<ul style="list-style-type: none"> ▪ Coniferous (C-7/C-3/C-2) to north, west, and south and deciduous (D-1), mixedwood (M-1), and cured-grass (O-1) to east
	
Predominant Community-Level Fuel Types	<ul style="list-style-type: none"> ▪ Mixedwood (M-1DC) within the cabin subdivision
	

Factor	Comments
Roofing Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 70% ▪ Combustible – 30%
Siding Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 0% ▪ Combustible – 100%
Decks & Open Spaces	<ul style="list-style-type: none"> ▪ Combustible material not sheathed-in is common
Combustibles	<ul style="list-style-type: none"> ▪ Combustible materials (firewood) within 10m is not common
Priority Zone 1-2 Clearance	<ul style="list-style-type: none"> ▪ Adequate – 0% ▪ Inadequate – 100%, mixedwood and wild grass within 30m of structures
Priority Zone 3 Clearance	<ul style="list-style-type: none"> ▪ Adequate
	
<p>Comments:</p> <ul style="list-style-type: none"> ▪ FireSmart Structure/Site Hazard – EXTREME ▪ FireSmart Area Hazard – LOW-MODERATE ▪ Main threat is from intense crown-fire to west or south and ember ignition of combustible structures, materials, and/or fuels surrounding structures 	

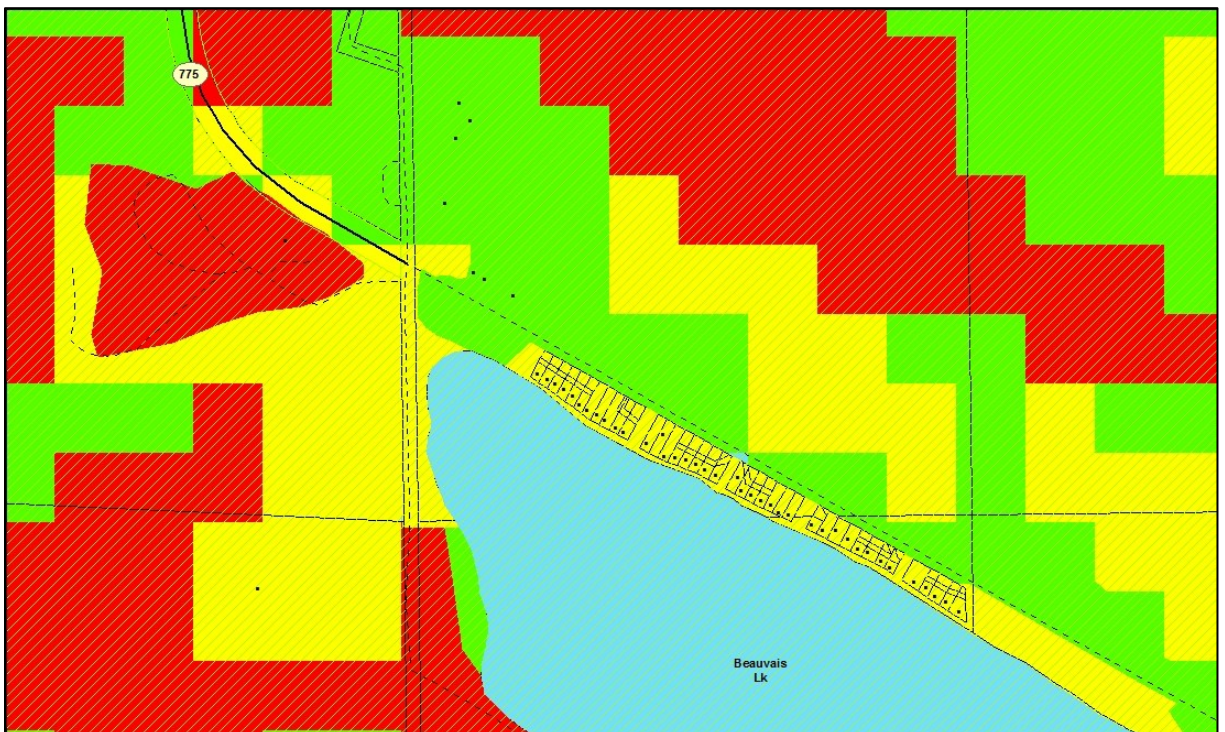


Map 2K - Wildfire Incidence & Wildland Fuel Types - Beauvais Lake

- | | | |
|---------------------------|------------------------------|------------------------|
| Human-Caused Wildfire | Spruce-Lichen Woodland (C-1) | Mixedwood-DC (M-1/M-2) |
| Lightning-Caused Wildfire | Boreal Spruce (C-2) | Mixedwood-CD (M-1/M-2) |
| Wildfire >4ha | Mature Pine (C-3) | Deciduous (D-1/D-2) |
| | Immature Pine (C-4) | Cured Grass (O-1) |
| | Open Pine (C-7) | Non-Fuel (NF) |

N

 1:31,000







Map 3K - FireSmart Hazard - Beauvais Lake



- | |
|--------------|
| Low |
| Moderate |
| High/Extreme |

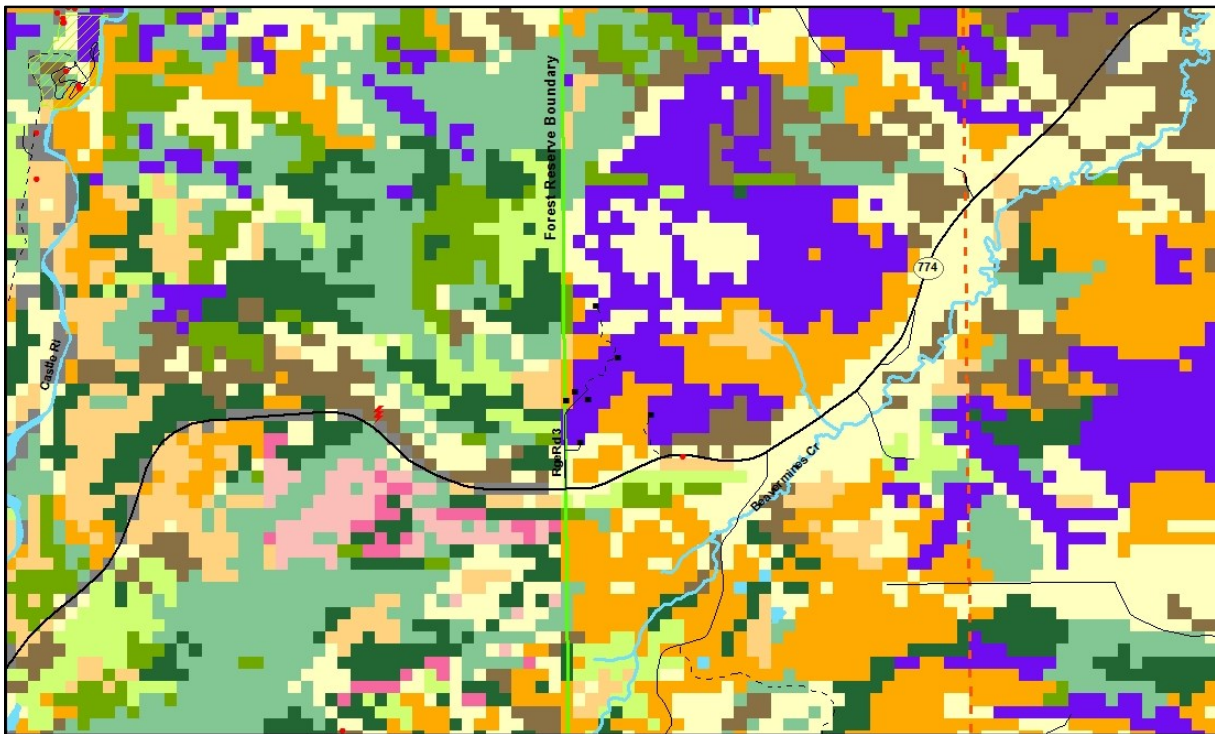
N

 1:6,250

3.2.12 RgeRd 3-0/Hwy 774

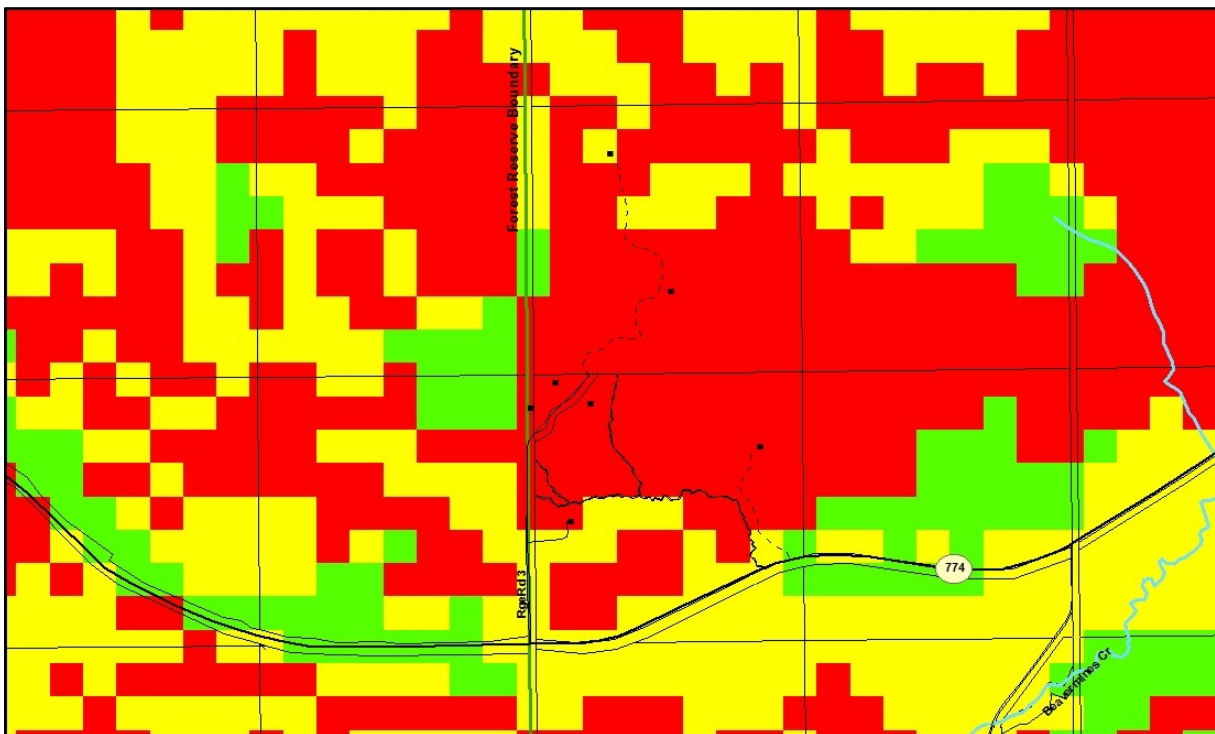
Factor	Comments
Development Type	<ul style="list-style-type: none"> Rural residential structures
Predominant Landscape-Level Fuel Types	<ul style="list-style-type: none"> Coniferous (C-7/C-3/C-2/C-4) and mixedwood (M-1CD) with scattered cured-grass (O-1) and deciduous (D-1) patches
	
Predominant Community-Level Fuel Types	<ul style="list-style-type: none"> Dense coniferous (C-7/C-3) surrounding homes
	

Factor	Comments
Roofing Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 100% ▪ Combustible – 0%
Siding Materials	<ul style="list-style-type: none"> ▪ Non-Combustible – 25% ▪ Combustible – 75%
Decks & Open Spaces	<ul style="list-style-type: none"> ▪ Combustible material not sheathed-in is common
Combustibles	<ul style="list-style-type: none"> ▪ Combustible materials (firewood) within 10m is not common
Priority Zone 1-2 Clearance	<ul style="list-style-type: none"> ▪ Adequate – 0% ▪ Inadequate – 100%
Priority Zone 3 Clearance	<ul style="list-style-type: none"> ▪ Inadequate – 100%
	
<p>Comments:</p> <ul style="list-style-type: none"> ▪ FireSmart Structure/Site Hazard – EXTREME ▪ FireSmart Area Hazard – EXTREME ▪ Main threat is from intense crown-fire with long-range spotting and ignition due to combustible structures and lack of adequate clearance from forest fuels 	



Map 2L - Wildfire Incidence & Wildland Fuel Types - RgeRd3

- | | | |
|---------------------------|------------------------------|------------------------|
| Human-Caused Wildfire | Spruce-Lichen Woodland (C-1) | Mixedwood-DC (M-1/M-2) |
| Lightning-Caused Wildfire | Boreal Spruce (C-2) | Mixedwood-CD (M-1/M-2) |
| Wildfire >4ha | Mature Pine (C-3) | Deciduous (D-1/D-2) |
| | Immature Pine (C-4) | Cured Grass (O-1) |
| | Open Pine (C-7) | Non-Fuel (NF) |



Map 3L - FireSmart Hazard - RgeRd3

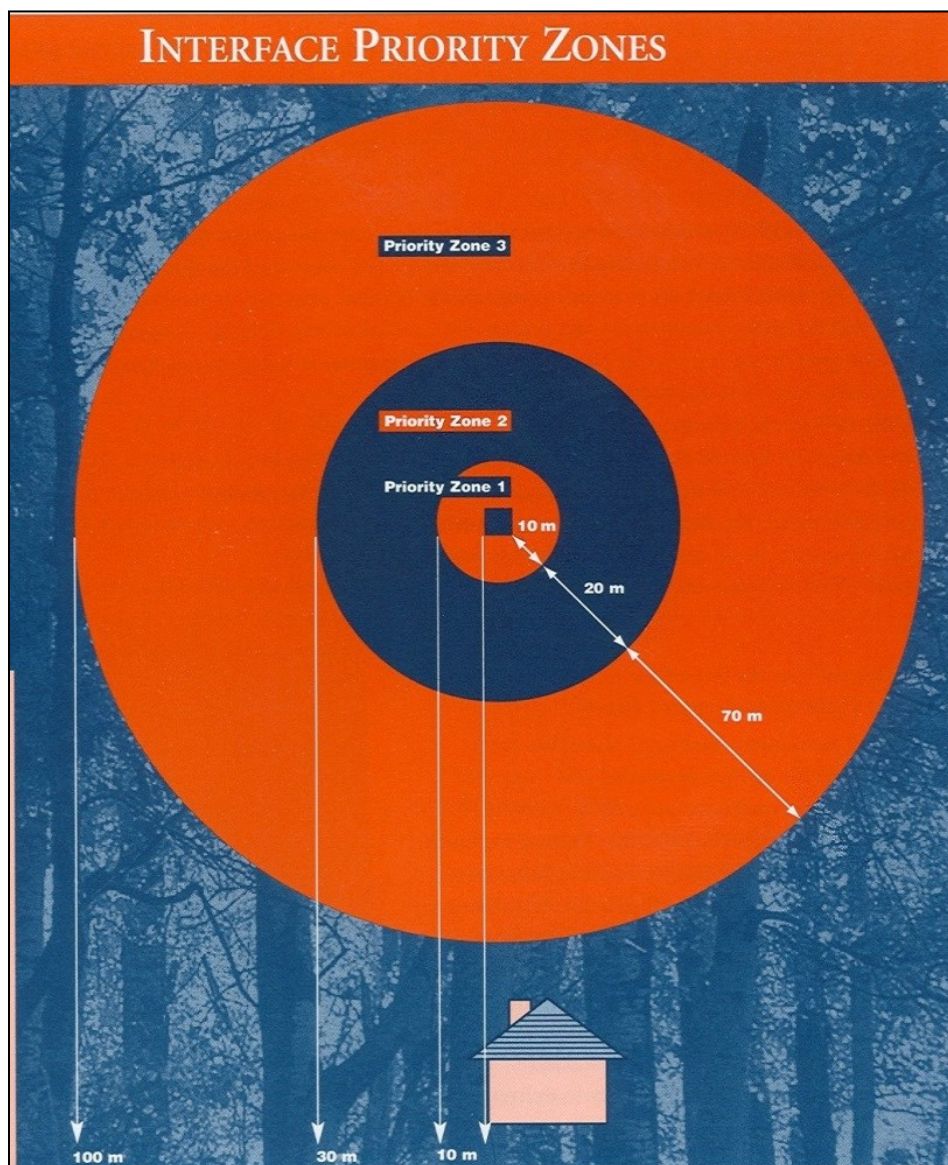
- | |
|--------------|
| Low |
| Moderate |
| High/Extreme |



4 Vegetation Management Options

The goal of vegetation management is to create a fuel-reduced buffer between structures and flammable wildland vegetation to reduce the intensity and rate of spread of wildfire approaching or leaving the development. Vegetation management options are proposed to reduce the threat of wildfire to developed areas. While vegetation management projects reduce the threat of wildfire to developments, they do not ensure structure survival under all hazard conditions.

FireSmart standards refer to three interface priority zones with vegetation management for interface structures recommended in Zones 1 (0-10m) and 2 (10-30m) at a minimum and in Zone 3 (30-100m+) based on hazard and risk.



Interface Priority Zones

Priority Zone 1 is the area extending from the structure a minimum of 10 metres in all directions. FireSmart guidelines recommend **removal** of all combustible wildland fuels with the objective to **create an environment that will not support any wildfire**. In some cases this may be the only Zone that residents need to treat. FireSmart **Priority Zone 1** vegetation management options may include:

- **Removal** of all flammable forest vegetation
- **Pruning** of all coniferous limbs to a minimum height of 2 metres from ground level on residual trees
- **Removal** of all dead and down forest vegetation from the forest floor
- **Establishment** of a non-combustible surface cover around the structure
- **Removal** of all combustible material piles (firewood, lumber, etc.) within 10 metres of the structure
- Regular **maintenance** to ensure that all combustible needles, leaves, and native grass are mowed and/or removed

Adequate **Priority Zone 1-2** (0-30 metres) clearance from coniferous and/or native surface fuels is lacking for many of the structures in the development areas and **vegetation management by landowners is required in all of the development areas in this report.**

Priority Zone 1-2 Clearance

Zone 1-2 Clearance	Development Area	Action Required
Predominantly Inadequate (>50%) from Forest Overstory and Surface Fuels	<ul style="list-style-type: none"> ▪ Castle Mountain Resort ▪ Camp Impeeza ▪ RgeRd 3-0 ▪ Lee Lake ▪ Beauvais Lake 	<ul style="list-style-type: none"> ▪ Conduct FireSmart Zone 1-2 vegetation management around all structures
Predominantly Inadequate (>50%) from Native Grass Surface Fuels	<ul style="list-style-type: none"> ▪ Beaver Mines ▪ Burmis subdivisions ▪ Pincher Station 	
Scattered Inadequate (<50%) from Native Grass Surface Fuels	<ul style="list-style-type: none"> ▪ Town of Pincher Creek ▪ Lundbreck ▪ Lowland Heights ▪ Cowley Boat Club 	<ul style="list-style-type: none"> ▪ Conduct FireSmart Zone 1-2 vegetation management around structures that are adjacent to unmaintained native grass surface fuels



Adequate Priority Zone 1-2 Clearance from Forest Overstory



Inadequate Priority Zone 1-2 Clearance from Forest Overstory



Adequate Priority Zone 1-2 Clearance from Surface Fuels



Inadequate Priority Zone 1-2 Clearance from Surface Fuels

Recommendation 1: Encourage residents to establish adequate FireSmart Priority Zone 1-2 clearance from wildland fuels on their private or leased lands.

Priority Zones 2-3 are the areas beginning 10 metres from the structure and extending to 30 metres (Zone 2) and 100 metres or farther (Zone 3), depending on the wildfire hazard and risk. FireSmart guidelines recommend **reduction** of combustible wildland fuels with the objective to **create an environment that will only support fires of lower intensity and rate of spread**. Structures in forested areas should treat Zone 2 (10-30m) at a minimum while those structures with high or extreme hazard levels resulting from heavy continuous coniferous forest and/or steep topography should be treated in Zones 2 and 3 (10-100m). FireSmart **Priority Zone 2-3** vegetation management options include:

- **Thinning** of flammable forest vegetation within 10 metres of structures
- **Pruning** of all coniferous limbs to a minimum height of 2 metres from ground level on residual trees
- **Removal** of all dead and down forest vegetation from the forest floor
- Regular **maintenance** to ensure that all flammable regrowth, dead and down and dead standing are removed

Several **Priority Zone 2-3** fuels reduction areas are proposed for **Municipal, Provincial, and private lands** within and/or surrounding:

- Castle Mountain Resort
- Camp Impeeza
- RgeRd 3-0
- Lundbreck
- Pincher Station
- Town of Pincher Creek

Proposed fuel modification areas in this report are conceptual and will require detailed fuels reduction planning to identify fuels management prescription standards, unit boundaries, and operational constraints prior to implementation.

Recommendation 2: Implement FireSmart Zone 2-3 vegetation management on Municipal and Provincial lands based on priority and available funding and encourage residents and lease holders to implement FireSmart Zone 2-3 vegetation management on private and lease lands.

4.1 Castle Mountain Resort (Map 4A)

Existing Vegetation Management

Approximately 84 hectares of FireSmart vegetation management has been performed within and surrounding the Castle Mountain Resort using mechanical equipment, hand-crews, and prescribed fire.

Vegetation Management Type	Area (Ha)
Fuel Removal – Harvesting	25
Fuel Removal – Prescribed Fire	4
Fuel Reduction – Thin/Prune/Clean	55
Total	84 Ha



2007 Fuel Reduction



2012 Fuel Reduction



2005 Fuel Removal



2008 Minimal Standards Fuel Reduction

Many of the fuel-reduced areas were completed to minimal standards and require a second-pass to further reduce stand-density, ladder fuels, and dead and down material to FireSmart standards.

Proposed Vegetation Management

Zone 1-2

The majority of structures have inadequate clearance from forest fuels resulting in EXTREME FireSmart Structure and Site hazard class.

Residents need to conduct FireSmart Zone 1-2 vegetation management on their lots to reduce the threat of wildfire to the community including removal of firewood piles stored next to structures or underneath decks.

Zone 2-3

Several FireSmart Zone 2-3 fuels reduction areas are proposed for thinning, pruning, and dead/down removal on **Municipal, Provincial, and private lands** within and/or surrounding Castle Mountain Resort.

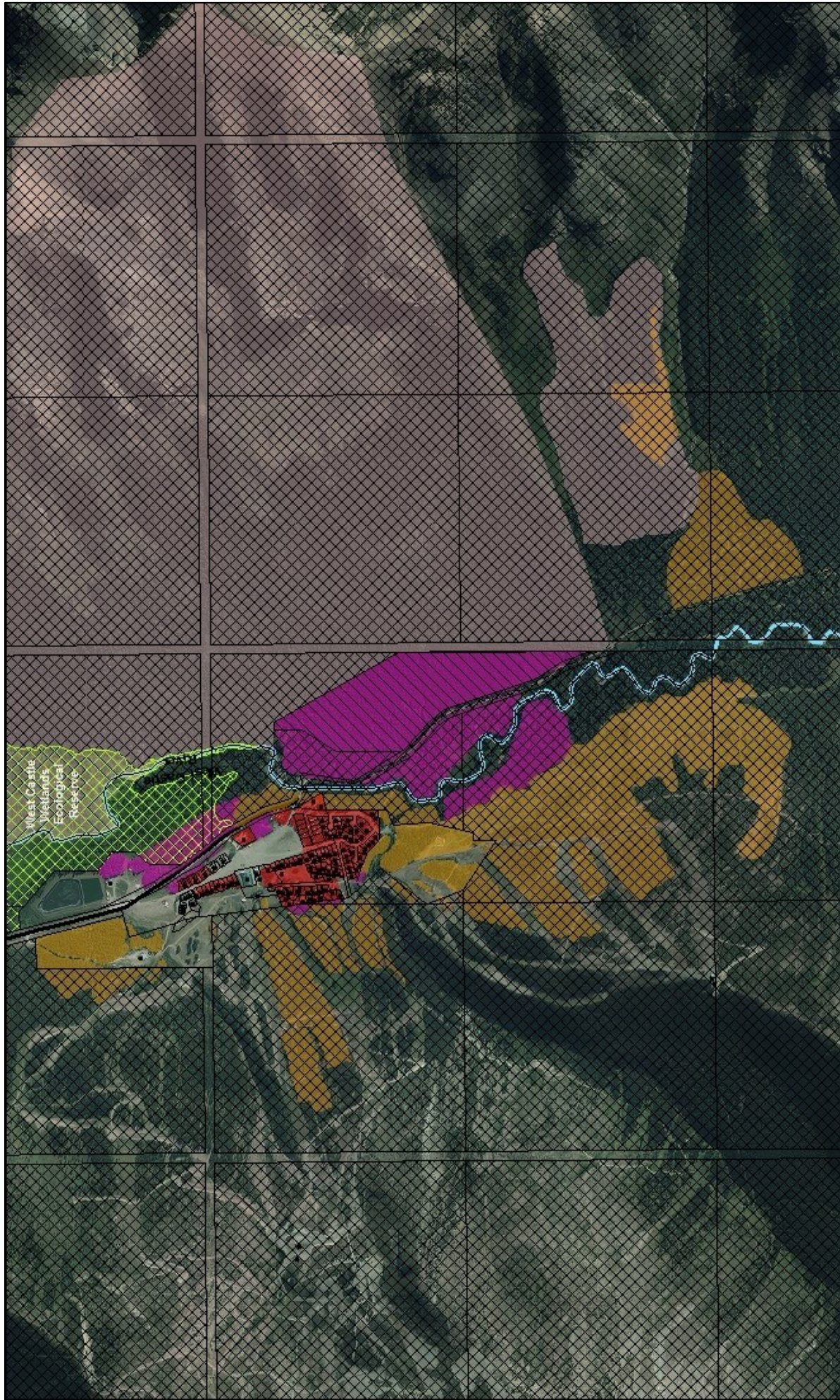
Alberta Wildfire Management is proposing to complete the planned prescribed burns south and north of Castle Mountain Resort on the east-side of the Castle River when the appropriate conditions exist.

Priorities





Vegetation management priorities should include:

1. Zone 1 fuel removal
2. New proposed Zone 2-3 fuel reduction and prescribed burns
3. Second-pass Zone 2-3 fuel reduction in existing areas that do not meet FireSmart standards

Vegetation Management Type	Estimated Area (Ha) by Land Owner			Total Area (Ha)
	Private	Municipal	Provincial	
Zone 1 Fuel Removal	9.0			9.0
Zone 2-3 Fuel Reduction	2.1	16.0	18.0	36.1
Prescribed Burn			1110.0	1110.0
Total Area (Ha)	11.1	16.0	1128.0	1155.1



Map 4A - FireSmart Vegetation Management - Castle Mountain Resort

-  Completed Fuel Modification
-  Proposed Zone 1-2 Fuel Modification
-  Proposed Zone 2-3 Fuel Reduction
-  Proposed Prescribed Burn

-  Municipal Govt. Land
-  Provincial Govt. Land
-  Private Land



1:16,000

4.2 Camp Impeeza (Map 4B)

Existing Vegetation Management

Camp staff completed some minor fuels reduction around a couple of the main buildings on the site however, the threat of wildfire to structures remains EXTREME.

Proposed Vegetation Management

Zone 1-2

The majority of structures have inadequate clearance from forest fuels resulting in EXTREME FireSmart Structure and Site hazard class.

Camp Impeeza needs to conduct FireSmart Zone 1-2 vegetation management around all camp structures to reduce the threat of wildfire.

Zone 2-3

Camp Impeeza needs to conduct FireSmart fuel reduction for a minimum of 100 metres from all structures or to lease boundary.

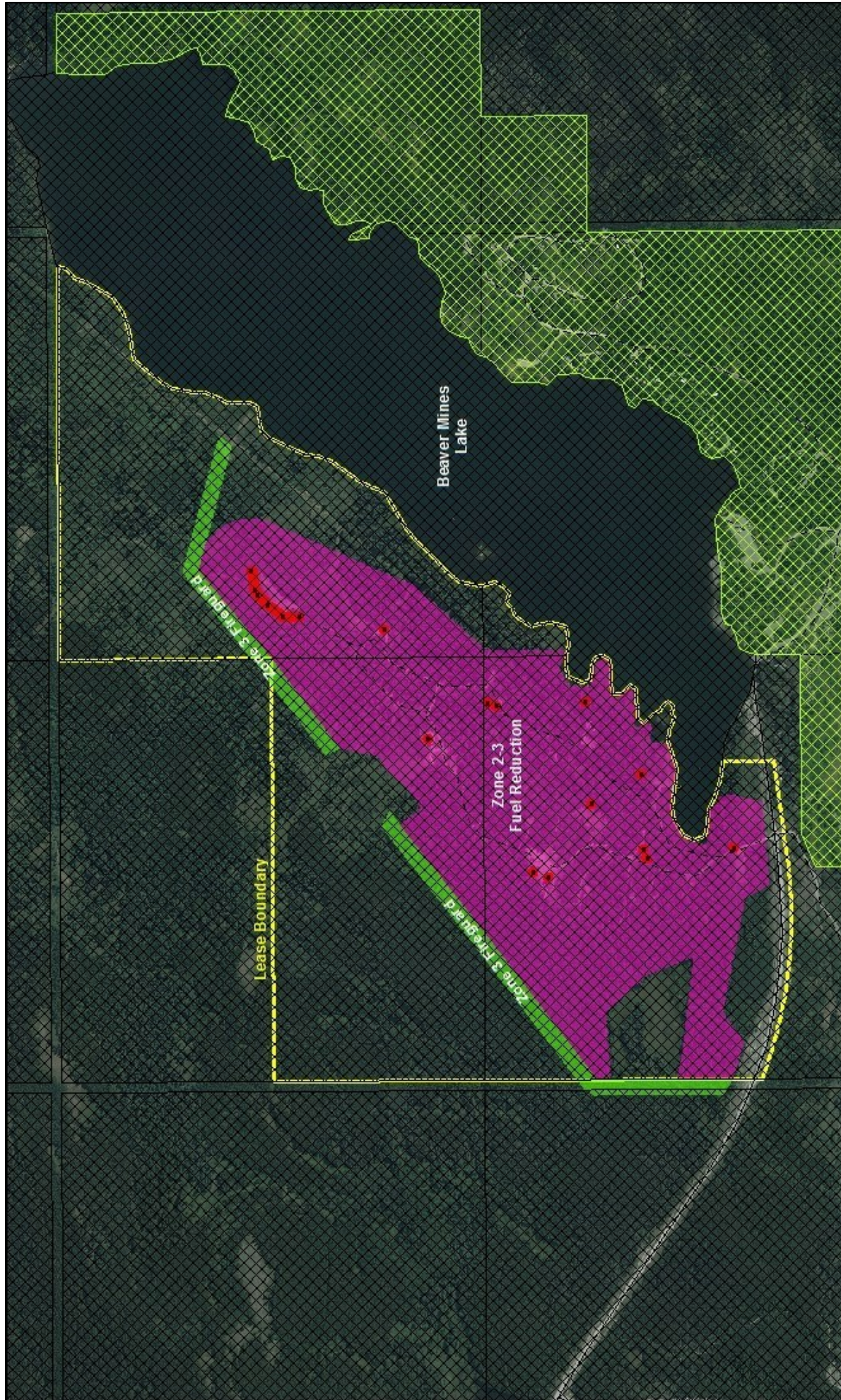
The Provincial and/or Municipal governments should construct a minimum 30 metre wide fireguard around the north and east boundary of the lease to provide an anchor point for wildfire containment and suppression when required.

Priorities








Vegetation management priorities should include:

1. Zone 1-2 FireSmart vegetation management
2. Zone 2-3 fuel reduction 100 metres from structures or to lease boundary
3. Zone 3 fireguard

Vegetation Management Type	Estimated Area (Ha) by Land Owner			Total Area (Ha)
	Private	Municipal	Provincial	
Zone 1 Fuel Removal	0.9			0.9
Zone 2-3 Fuel Reduction	46.7			46.7
Fireguard			4.8	4.8
Total Area (Ha)	47.6		4.8	52.4



Map 4B - FireSmart Vegetation Management - Camp Impeeza

- | | | | |
|---|--|---|------------------------------|
|  | Completed Fuel Modification |  | Municipal Govt. Land |
|  | Proposed Zone 1-2 Fuel Modification |  | Provincial Govt. Land |
|  | Proposed Zone 2-3 Fuel Removal |  | Private Land |
|  | Proposed Zone 2-3 Fuel Reduction | | |



1:9,500

4.3 RgeRd 3-0 (Map 4C)

Existing Vegetation Management

One resident has completed some Zone 1-2 fuel reduction surrounding their structure however the majority of the structures in this development area are surrounded by flammable forest fuels and are at EXTREME threat to wildfire.

Proposed Vegetation Management

Zone 1-2

All structures have inadequate clearance from forest fuels resulting in EXTREME FireSmart Structure and Site hazard class.

Residents need to conduct FireSmart Zone 1-2 vegetation management around all dwellings and outbuildings to reduce the threat of wildfire.

Zone 2-3

Residents need to conduct FireSmart fuel reduction for a minimum of 100 metres from all structures or to lot boundary.

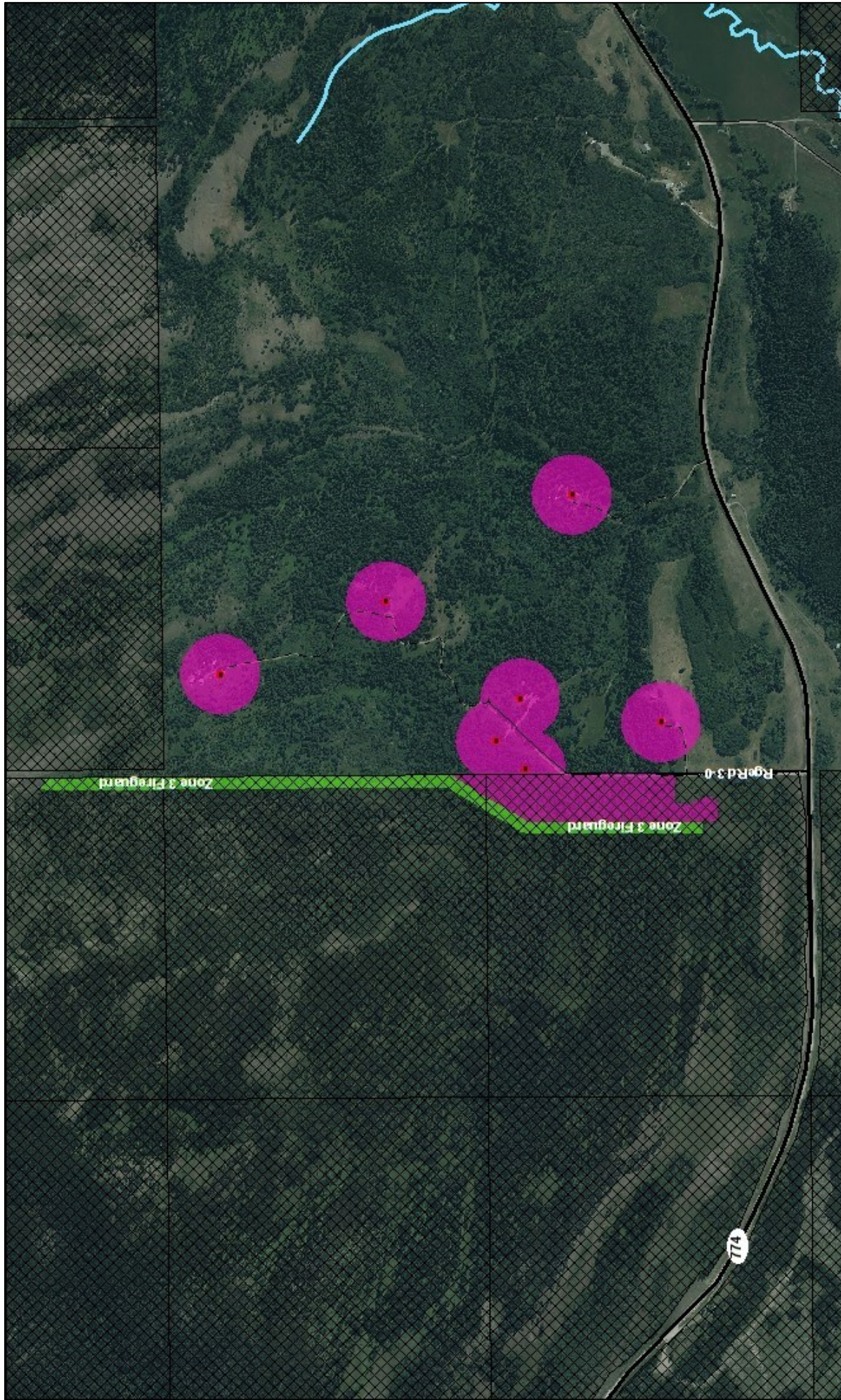
The Provincial government should construct a minimum 30 metre wide fireguard along or near the Forest Reserve boundary to provide an anchor point for wildfire containment and suppression when required.

Priorities








Vegetation management priorities should include:

1. Zone 1-2 FireSmart vegetation management by residents
2. Zone 2-3 fuel reduction 100 metres from structures by residents
3. Zone 3 fireguard by Provincial government

Vegetation Management Type	Estimated Area (Ha) by Land Owner			Total Area (Ha)
	Private	Municipal	Provincial	
Zone 1 Fuel Removal	0.3			0.3
Zone 2-3 Fuel Reduction	18.6		6.1	24.7
Fireguard			5.0	5.0
Total Area (Ha)	18.9		11.1	30.0



Map 4C - FireSmart Vegetation Management - RgeRd 3-0

- | | | | |
|---|--|---|------------------------------|
|  | Completed Fuel Modification |  | Municipal Govt. Land |
|  | Proposed Zone 1-2 Fuel Modification |  | Provincial Govt. Land |
|  | Proposed Zone 2-3 Fuel Removal |  | Private Land |
|  | Proposed Zone 2-3 Fuel Reduction | | |



1:12,500

4.4 Lundbreck (Map 4D)

Existing Vegetation Management

Most residents have completed adequate Zone 1 landscaping on their lots and the ball diamonds on the west-side of Lundbreck are well maintained.

Proposed Vegetation Management

Zone 2-3

Cured-grass fuels on the CPR right-of-way and Municipal lands adjacent to the right-of-way are proposed for annual hazard reduction burning to reduce the threat of grass fire threatening structures adjacent to the right-of-way.

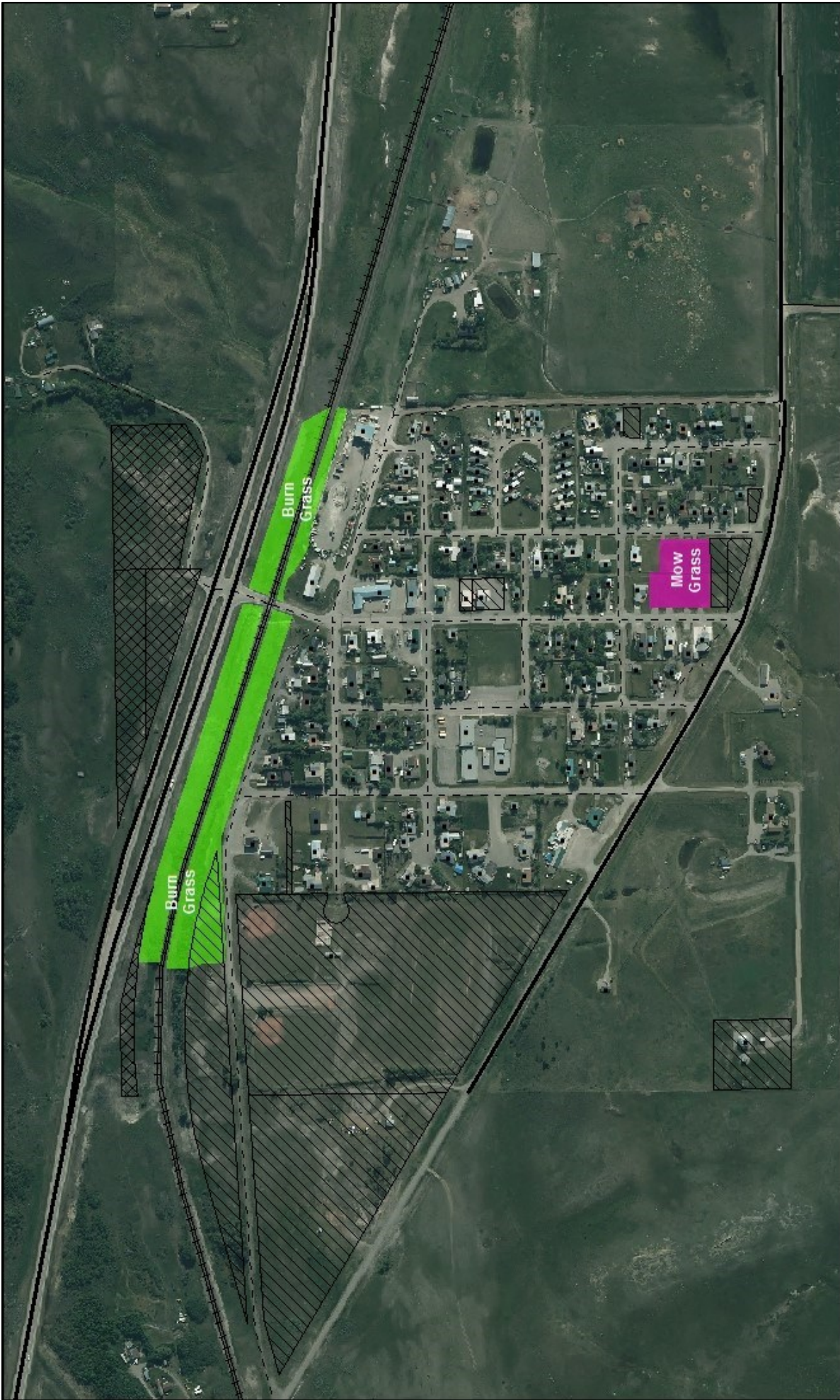
Vacant lots on the south-side of the Hamlet have significant unmaintained cured-grass fuels immediately adjacent to structures on developed lots. These grasses require mowing by the landowners or the MD of Pincher Creek.

Priorities








Vegetation management priorities should include:

1. Zone 2-3 hazard reduction burning along the CPR right-of-way
2. Zone 2-3 grass mowing on vacant lots on the south-side of the Hamlet

Vegetation Management Type	Estimated Area (Ha) by Land Owner			Total Area (Ha)
	Private	Municipal	Provincial	
Zone 2-3 Hazard Reduction Burning	3.3	0.4		3.7
Zone 2-3 Grass Mowing	0.6			0.6
Total Area (Ha)	3.9	0.4		4.3



Map 4D - FireSmart Vegetation Management - Lundbreck

- | | | | |
|---|--|---|------------------------------|
|  | Completed Fuel Modification |  | Municipal Govt. Land |
|  | Proposed Zone 1-2 Fuel Modification |  | Provincial Govt. Land |
|  | Proposed Zone 2-3 Fuel Removal |  | Private Land |
|  | Proposed Zone 2-3 Fuel Reduction | | |



1:6,000

4.5 Pincher Station (Map 4E)

Proposed Vegetation Management

Zone 1-2

All private lot owners need to ensure that native grass fuels adjacent to dwellings, outbuildings, and fences are mowed regularly.

Zone 2-3

Cured-grass fuels on the CPR right-of-way and private and municipal lands adjacent to the right-of-way are proposed for annual hazard reduction burning to reduce the threat of grass fire threatening structures adjacent to the right-of-way.

The vacant lots in the northeast corner of the Hamlet have significant unmaintained cured-grass fuels immediately adjacent to two structures on developed lots. These grasses require mowing by the landowners or the MD of Pincher Creek.

Priorities

Priorities are:

- Zone 2-3 hazard reduction burning along the CPR right-of-way
- Zone 2-3 grass mowing on the vacant lot in the northeast corner of the Hamlet

Vegetation Management Type	Estimated Area (Ha) by Land Owner			Total Area (Ha)
	Private	Municipal	Provincial	
Zone 2-3 Hazard Reduction Burning	4.6			4.6
Zone 2-3 Grass Mowing	2.6	0.8		3.4
Total Area (Ha)	7.2	0.8		8.0



Map 4E - FireSmart Vegetation Management - Pincher Station

- Completed Fuel Modification
- Proposed Zone 1-2 Fuel Modification
- Proposed Zone 2-3 Fuel Removal
- Proposed Zone 2-3 Fuel Reduction

- Municipal Govt. Land
- Provincial Govt. Land
- Private Land



1:6,000

4.6 Town of Pincher Creek (Map 4F)

Proposed Vegetation Management

Zone 1-2

Zone 1-2 vegetation management is adequate for most private lots within the Town however some that back on to reserve and/or private lands with unmaintained native grass fuels do not have sufficient clearance. The Town of Pincher Creek should focus public education efforts on those priority private lot owners identified on Map 4F to ensure that native grass fuels adjacent to dwellings, outbuildings, and fences are maintained regularly.

The Pincher Creek Museum/Pioneer Village site has many old buildings with combustible roofing and siding materials putting it at Extreme threat to grass fire. Grass mowing and maintenance on the site is excellent and should continue. The large Black poplar trees, surrounding and within the site, produce “poplar fluff” during the spring that could accumulate enough to support surface fire in the site. This material should be removed regularly throughout the spring season.

Zone 2-3

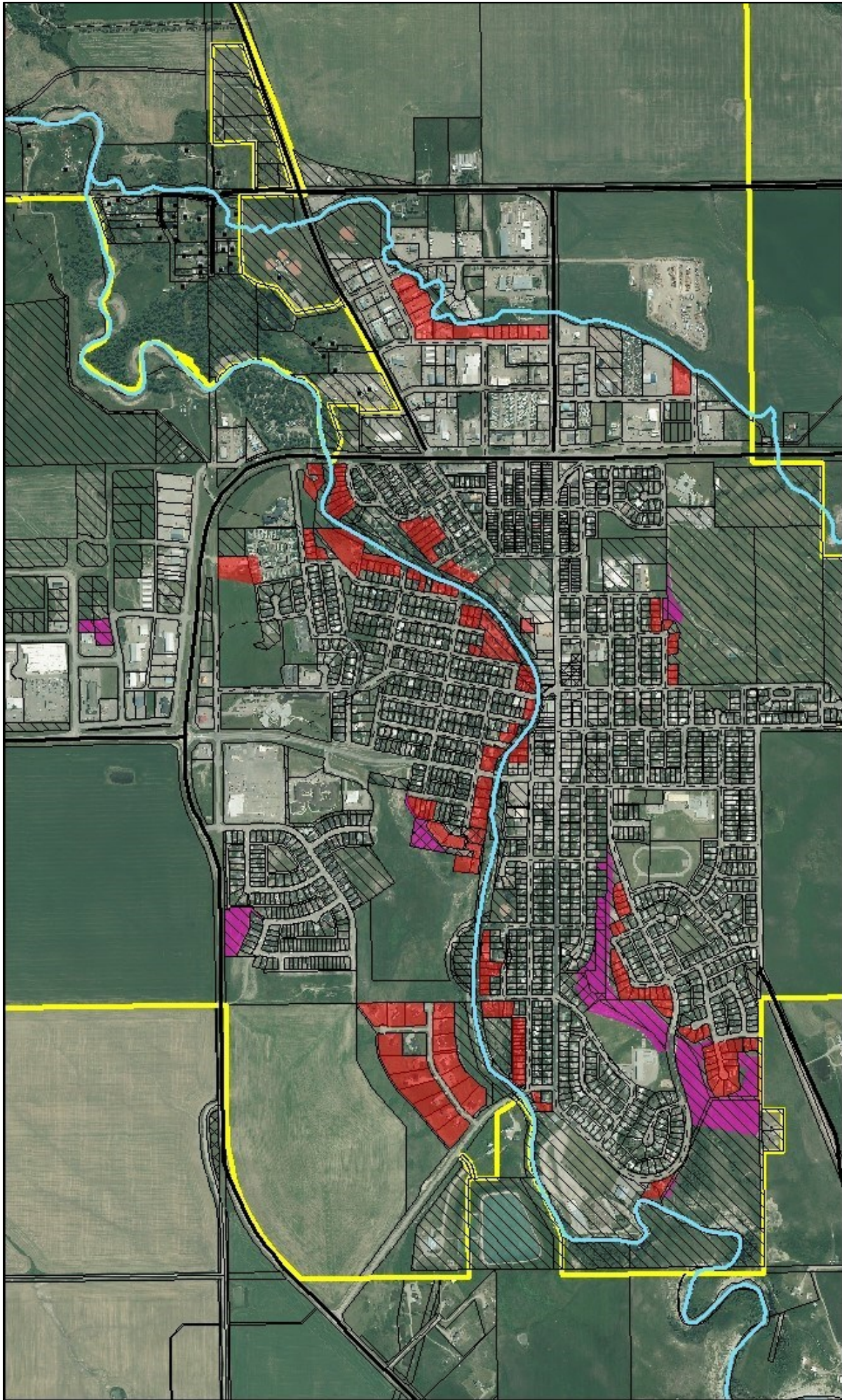
Cured-grass fuels private and municipal lands adjacent to structures present grass fire threat to wooden fences, outbuildings, and some residences. The Town and private landowners should maintain grass fuels (mow/brush saw) for a minimum of 10 metres behind back lot lines of adjacent properties with structures and improvements.

Priorities








Priorities are:

- Zone 1-2 grass maintenance on private lots
- Zone 2-3 grass maintenance on Municipal reserve and private lands backing onto developed lots

Vegetation Management Type	Estimated Area (Ha) by Land Owner		
	Private	Municipal	Provincial
Zone 1-2 Fuel Removal	See Priority Areas on Map 4F		
Zone 2-3 Grass Maintenance	See Priority Areas on Map 4F		



Map 4F - FireSmart Vegetation Management - Pincher Creek

- | | | | |
|---|--|---|------------------------------|
|  | Completed Fuel Modification |  | Municipal Govt. Land |
|  | Proposed Zone 1-2 Fuel Modification |  | Provincial Govt. Land |
|  | Proposed Zone 2-3 Fuel Removal |  | Private Land |
|  | Proposed Zone 2-3 Fuel Reduction | | |



1:15,000

4.7 Vegetation Management Maintenance

Landowners and land managers must provide periodic inspections of fuel modification areas and complete maintenance as required. Fuel modification maintenance is required on various different timelines depending on several factors.

Priority Zone 1 (10 metres from structure) – must be maintained regularly throughout the fire season including:

- Watering and maintaining/mowing grass around all structures including outbuildings
- Cleaning of dead needles and leaves from roof, eaves troughs, and around structures
- Storage of combustible materials (firewood, lumber, etc.) a minimum of 10 metres from structures

Priority Zones 2-3 (10-100 metres from structure) – should be inspected and maintained as required including:

- Manage (mow/burn) native grasses
- Removal of dead and down and dead standing trees
- Thinning/removal of re-growth after original fuel reduction
- Conduct second-pass removals in existing areas that do not meet FireSmart standards

Recommendation 3: Inspect and maintain all FireSmart vegetation management areas on a regular basis.

5. Development and Legislation Options

Consideration of wildfire at the development planning stage is encouraged to ensure that wildfire hazard is identified and the appropriate mitigation measures are developed and implemented prior to construction.

5.1 Structural Options

Structural characteristics that contribute to a structure's ability to withstand wildfire ignition include exterior roofing, siding, and decking materials and proper construction and maintenance of eaves, vents, and openings to reduce the threat of airborne ember ignition of the structure.

Roofing materials in the development areas consist of primarily of non-combustible materials **except for Beaver Mines with a significant number of structures with combustible wood-shake roofing materials and Castle Mountain Resort and Lowland Heights with scattered dwellings with combustible wood-shake roofing materials**, putting those structures at higher threat of airborne ember ignition.

Siding materials consist primarily of combustible wood, vinyl, or log siding with some structures having non-combustible stucco, fibre-cement, or metal siding.

Combustible wooden decks and porches with open undersides are common which increases the wildfire threat.



Combustible Structural Materials




Non-Combustible Structural Materials

5.2 Infrastructure Options

Infrastructure options include provision of adequate access standards, adequate and accessible fire suppression water supply, utility installation standards, and adequate road and address signage.

5.2.1 Access

The following access standards not meeting FireSmart standards were observed.

Development Area	Access Characteristics
Castle Mountain Resort	<ul style="list-style-type: none"> ▪ Main access is Highway 774 which is dead-end access through dense fire-origin coniferous fuels that could result in a loss of ingress and egress for emergency responders and residents ▪ Driveway access to scattered structures is narrow with poor turnarounds for fire apparatus
Camp Impeeza	<ul style="list-style-type: none"> ▪ Main access road through Camp Impeeza is narrow and runs through dense coniferous fuels that could result in a loss of ingress and egress for emergency responders and campers ▪ Driveway access to scattered structures is narrow with poor turnarounds for fire apparatus
Burmis/Lee Lake	<ul style="list-style-type: none"> ▪ Main access roads at Lee Lake are narrow, dead-end through mixedwood and coniferous fuels that could result in a loss of ingress and egress for emergency responders and residents ▪ Driveway access to scattered structures is narrow with poor turnarounds for fire apparatus
Beauvais Lake	<ul style="list-style-type: none"> ▪ Driveway access to structures is narrow with poor turnarounds for fire apparatus
RgeRd 3-0	<ul style="list-style-type: none"> ▪ Main access road (RgeRd 3-0) is narrow and steep (>25%) and runs through dense coniferous fuels resulting in poor ingress/egress capability ▪ Driveway access to structures is narrow with poor turnarounds for fire apparatus 

5.2.2 Water Supply

Development Area	Fire Service Water Supply
Town of Pincher Creek	Pressurized fire hydrants
Castle Mountain Resort	Gravity-fed hydrant from cistern
Camp Impeeza	Natural (Beaver Mines Lake)
Beaver Mines	None
Burmis/Lee Lake	None
Lundbreck	Pressurized fire hydrants
Pincher Station	None
Lowland Heights	None
Twin Butte	None
Cowley Boat Club	Natural (Oldman Reservoir)
Beauvais Lake	Natural (Beauvais Lake)
RgeRd 3-0	None

5.2.3 Franchised Utilities

Development Area	Power	Gas
Town of Pincher Creek	Overhead not at risk & underground	Underground natural gas
Castle Mountain Resort	Overhead at risk & underground	Propane tanks at risk and tank-farm
Camp Impeeza	Overhead to site at risk Underground onsite	Propane tanks at risk
Beaver Mines	Overhead not at risk	Underground natural gas
Burmis/Lee Lake	Overhead at risk and underground	Underground natural gas, scattered 500gal. propane tanks
Lundbreck	Overhead not at risk	Underground natural gas
Pincher Station	Overhead not at risk	Underground natural gas
Lowland Heights	Overhead not at risk	Underground natural gas
Twin Butte	Overhead not at risk	Underground natural gas
Cowley Boat Club	Overhead to site not at risk Underground onsite	Propane tanks not at risk
Beauvais Lake	Overhead at risk	Propane tanks (500-1000 gal.) at risk
RgeRd 3-0	Overhead at risk	Propane tanks at risk

5.2.4 Road and Address Signage

FireSmart standards for road and address signage include:

- Signs should be clearly visible and legible from the road and use a consistent system of sequenced numbering
- Signs and posts should be built of non-combustible materials and mounted 2 metres above the surface of the road
- Letters, numbers, and symbols should be a minimum of 10 centimetres high, reflective, and contrast with the background color of the sign

The MD of Pincher Creek rural addressing meets FireSmart standards **however is not used in Castle Mountain Resort, Lee Lake, or Beauvais Lake development areas**. The Town of Pincher Creek street addressing meets FireSmart standards and lot addressing is posted on the front of each structure.

Development Area	Road Signage	Address Signage
Town of Pincher Creek	Meets FireSmart standards	N/A – Urban community
Castle Mountain Resort	Does not meet FireSmart standards	Does not meet FireSmart standards
Camp Impeeza	Meets FireSmart standards	N/A
Beaver Mines	Meets FireSmart standards	Meets FireSmart standards
Burmis	Meets FireSmart standards	Meets FireSmart standards
Lee Lake	Meets FireSmart standards	Does not meet FireSmart standards
Lundbreck	Meets FireSmart standards	N/A – Urban community
Pincher Station	Meets FireSmart standards	Meets FireSmart standards
Lowland Heights	Meets FireSmart standards	Meets FireSmart standards
Twin Butte	Meets FireSmart standards	Meets FireSmart standards
Cowley Boat Club	Meets FireSmart standards	N/A
Beauvais Lake	Does not meet FireSmart standards	Does not meet FireSmart standards
RgeRd 3-0	Meets FireSmart standards	Meets FireSmart standards



Street Addressing Meeting FireSmart Standards – Town of Pincher Creek & MD of Pincher Creek Hamlets



Lot Rural Addressing Meeting FireSmart Standards – MD of Pincher Creek

5.2.5 Parks and Open Spaces

The Town of Pincher Creek has significant municipal and environmental reserve lands along Pincher Creek and spread throughout the Town, some of which present grass fire threat to properties backing onto these reserves.

Many of these MR/ER lands have walking trails however most do not provide adequate width or grade for fire department apparatus or the trail entrances are blocked with large boulders and some do not provide adequate width or grade for grass mowing equipment to manage hazardous grass fuels properly.



Future development areas should consider fire department access to MR and ER lands at the planning stage to ensure that all hazardous municipal and environmental reserve lands provide adequate room at crest of slope for grass mowing equipment to manage grass fuels immediately behind developed lots and for fire department apparatus to safely travel and suppress grass fire when required.

Recommendation 4: Ensure that all infrastructure options meet FireSmart standards including:

- Access road and driveway widths and grades
- Fire suppression water supply for multi-lot developments
- Tree-freeing along overhead powerlines
- Propane tank clearance from wildland fuels
- Road and address signage
- Adequate access in parks and open spaces for maintenance and fire department equipment

5.3 Legislation Options

Legislating *FireSmart* requirements for new development is an important step to creating FireSmart communities. The following documents were reviewed for current policies related to FireSmart development:

- Town of Pincher Creek/Municipal District of Pincher Creek No.9 Intermunicipal Development Plan (Sept. 2010)
- MD of Pincher Creek Municipal Development Plan – Bylaw No. 1062-02 (Sept. 2002)
- MD of Pincher Creek Land Use Bylaw – Bylaw 1140-08 (Consolidated to Oct 2013)
- Burmis Lundbreck Corridor Area Structure Plan – Bylaw 1228-12 (Jan 2013)
- Oldman River Reservoir Area Structure Plan – Bylaw 1120-06 (Sept 2007)
- Town of Pincher Creek Municipal Development Plan – Bylaw 1518 (Sept 2001)
- Town of Pincher Creek Land Use Bylaw – Bylaw 1547-AA (Consolidated to Apr 2016)

The only document that had any specific policies dealing with FireSmart development or wildfire hazard was the Burmis – Lundbreck Corridor Area Structure Plan.

Existing policies in each of the documents are discussed below with recommendations to consider.

5.3.1 Intermunicipal Development Plan – MD & Town of Pincher Creek

<p>Part A4 – Goals & Objectives</p>	<p>4. To discourage development on flood-prone areas, potentially unstable slopes, undermined areas and other hazard lands and to ensure public health and safety issues are given adequate consideration when land use and related decisions are being made.</p> <p>Wildfire should be considered as a hazard when considering new developments.</p>
<p>Part B10 - Creeks and Hazard Lands</p>	<p>10.4 Where either municipality identifies that a development, subdivision or re-designation application may occur on or in potentially hazardous land, the developer shall provide an analysis prepared by a qualified professional showing the approval is appropriate and safe at that location.</p> <p>A “Wildfire Risk Assessment” should be requested by the development authority for proposed developments on or adjacent to wildfire hazard lands.</p>

5.3.2 Municipal District of Pincher Creek Development Legislation

MD of Pincher Creek Municipal Development Plan

<p>Section II.C - Objectives</p>	<p>3. To foster land use patterns that minimize environmental impact and facilitate the development of a healthy, safe and viable municipality and to promote sustainable development and land use patterns.</p> <p>16. To recognize hazard lands and either avoid development of these lands or, where necessary, utilize mitigative measures to minimize the risk to health and safety and to reduce the risk of property damage.</p> <p>Development authority should require the developer to implement all mitigative measures in the “Wildfire Risk Assessment” prior to development.</p>
<p>Section III.I – Environmentally Significant Areas</p>	<p>1. The municipality through its land use bylaw shall continue to address hazard lands with a view to reducing risks to health, safety and property damage.</p> <p>See comment above.</p>

MD of Pincher Creek Land Use Bylaw (2013)

<p>Section 31 – Development on Hazardous Lands</p>	<p>Section 31.1-16 refers to slope stability, flood plains, and avalanches as hazardous lands but does not consider wildfire as a hazard.</p> <p>Add Wildfire as a hazard and a Section to state: Before a development permit is issued, the Development Officer may require that the applicant provide a Wildfire Risk Assessment assessing the threat of wildfire to the proposed development and recommended measures to reduce that threat..</p> <p>Section 31.2 - No permanent building shall be permitted within 6 m (19.7 ft.) of the top or bottom of an escarpment or slope where grade is 15 percent or greater.</p> <p>FireSmart standards recommend a minimum setback of 10 metres from crest of slope for single-story buildings and proportionally greater setbacks for taller buildings.</p>
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Burmis – Lundbreck Corridor Area Structure Plan

<p>Burmis – Lundbreck Corridor ASP</p>	<p>Section 5.3.1.a.(iv) - avoid clear-cutting of existing vegetation during site preparation. Rather, selective tree removal and pruning of limbs should be encouraged through consideration of FireSmart development practices, community education, land use bylaw amendments, developing other municipal bylaws, etc.</p> <p>Section 5.3.2 c. - Unless identified for active recreational amenities, public open spaces should remain in their natural “undisturbed” state. Strategies should be implemented to appropriately maintain public open spaces should they become a nuisance (e.g. risk of fire, weeds, etc.)</p> <p><i>Continue to use these policies to manage hazardous vegetation and reduce the threat of wildfire to development.</i></p>
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5.3.3 Town of Pincher Creek Development Legislation

Municipal Development Plan (2001)

<p>Recreation, Parks and Open Space Targets</p>	<p>The southwestern portion of Pincher Creek has been zoned an environmental preservation area for the purpose of avoiding development on hazardous land and maintaining specific areas in their natural state. This area could be developed in the future as a passive park area.</p> <p><i>Town representatives have identified the southwest portion as an area of wildfire concern thus the concept of avoiding development in this area is valid.</i></p>
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Town of Pincher Creek Land Use Bylaw (2016)

There are no specific references to wildfire or FireSmart development policies in the Land Use Bylaw.

5.3.4 Recommended FireSmart Revisions to Development Legislation

The following FireSmart revisions to current development legislation are recommended.

Factor	Recommendation(s)
Hazardous Lands	<ul style="list-style-type: none"> ▪ Include wildfire as development constraint similar to lands subject to flooding, avalanche, and/or erosion/subsidence.
Development on Potentially Hazardous Lands	<ul style="list-style-type: none"> ▪ Require the development of a Wildfire Risk Assessment completed by a qualified professional identifying the wildfire hazard to the proposed development and mitigation measures to reduce the threat ▪ Require the developer to implement and complete all mitigation measures recommended in the Wildfire Risk Assessment prior to beginning development
Exterior Construction Materials	
Roofing	<ul style="list-style-type: none"> ▪ All roofing materials on new, replacement, or retrofitted dwellings, accessory buildings and commercial buildings within 2 kilometres of High and Extreme FireSmart hazard class areas shall meet a minimum Class “C” U.L.C. rating or as specified by the Development Authority.
Siding	<ul style="list-style-type: none"> ▪ All siding materials on new, replacement, or retrofitted dwellings, accessory buildings and commercial buildings within High and Extreme FireSmart hazard class areas shall use fire-resistant materials and extend from ground level to the roofline or as specified by the Development Authority.
Decking	<ul style="list-style-type: none"> ▪ All exterior deck materials on new, replacement, or retrofitted dwellings, accessory buildings and commercial buildings within 2 kilometres of High and Extreme FireSmart hazard class areas shall use fire-resistant materials or as specified by the Development Authority. ▪ All new dwellings, accessory buildings, and commercial buildings with exposed undersides and/or with raised decks and porches less than 2 metres from ground level shall be sheathed from the floor level to the ground level with non-combustible materials to prohibit the entry of sparks and embers under the structure.

Factor	Recommendation(s)
Infrastructure Standards	
Water Supply	<ul style="list-style-type: none"> ▪ All multi-lot country residential subdivisions shall provide dedicated fire suppression water supply as requested by the Development Authority.
Access	<ul style="list-style-type: none"> ▪ Access to all new dwellings and commercial buildings shall meet adequate standards for emergency vehicle access as requested by the Development Authority.
Propane Tanks	<ul style="list-style-type: none"> ▪ All above-ground propane tanks, greater than 100 gallons, shall have a minimum of 3 metres non-combustible clearance from wildland fuels.
Landscaping/Vegetation Management	<ul style="list-style-type: none"> ▪ All new or rebuilt fences on lots within 2 kilometres of Moderate, High, or Extreme FireSmart hazard class areas shall be constructed of non-combustible materials. ▪ All new dwellings, accessory buildings, and commercial buildings shall establish and maintain FireSmart defensible space for a minimum of 30 metres from the structure or to lot boundary. ▪ All new dwellings, accessory buildings, and commercial buildings shall have a minimum of one-metre of non-combustible surface cover (gravel, rock, concrete, etc.) around the perimeter of the structure. All new exposed decks, greater than 2 metres from ground level shall require a minimum one-metre of non-combustible surface cover placed around the outside perimeter and underneath. ▪ Fire resistant species shall be used for landscaping within 10 metres of all structures.

Recommendation 5: Revise current MD of Pincher Creek and Town of Pincher Creek development legislation to consider the recommended FireSmart revisions.

6. Public Education Options

Many of the private lots within the development areas are at High-Extreme threat to wildfire due to a lack of adequate FireSmart actions on private lands. Education of the residents on FireSmart hazard and measures they can take to reduce the hazard to their structure is required in an effort to reduce wildfire threat to structures.

6.1 FireSmart Hazard Assessments

Residents would benefit from a FireSmart Hazard Assessment of their home and property to identify those items that present wildfire threat and recommended methods to reduce that threat. The FireSmart Canada FireSmart-Protecting Your Community from Wildfire and the Alberta government FireSmart Homeowners Manual both provide FireSmart Hazard Assessment templates that could be used.

Recommendation 6: Identify and train Pincher Creek Emergency Services members to provide FireSmart Hazard Assessments, and measures to reduce the threat, to those residents that request one.

6.2 Key Messages

The following key messages are recommended to educate residents on their priorities to reduce the threat of wildfire to their structures.

- Call Pincher Creek Emergency Services to arrange for a FireSmart Hazard Assessment of your home and property
- Use non-combustible roofing, siding, decking, and fencing materials for new structures or retrofits of existing structures
- Thin or remove the spruce and pine trees around your house and outbuildings for a **minimum** of 30 metres
- Provide regular maintenance of grass, brush, and dead needles and leaves for a minimum of 30 metres around your house and outbuildings
- Skirt the undersides of your decks and porches to reduce the chances of fire getting underneath
- Store combustible material piles (firewood, debris piles, etc.) a minimum of 10 metres away from your structures
- Install address signage meeting FireSmart standards at the entrance to your property

Recommendation 7: Public education on acceptable FireSmart standards is recommended for all MD and Town of Pincher Creek residents.

6.3 FireSmart Canada Community Recognition Program

FireSmart Canada has initiated the FireSmart Community Recognition Program to motivate and engage residents to plan and take FireSmart actions in their “own backyards” to reduce wildfire losses from the “grassroots” level.

The program is driven through identification and training of key Municipal and wildland fire agency personnel to act as Local FireSmart Representatives to guide the process and community members to act as Community Champions to lead and implement the FireSmart Community Recognition Program within their community.

Recommendation 8: Pincher Creek Emergency Services should identify and train key Fire Services personnel to act as Local FireSmart Representatives and to identify and work with the appropriate Community Champions within the MD and Town of Pincher Creek to work towards Recognized FireSmart Community status.

7. Inter-Agency Cooperation and Cross-Training Options

Inter-agency stakeholders within the planning area include:

- Town of Pincher
- MD of Pincher Creek
- Pincher Creek Emergency Services
- Alberta Wildfire Management – Calgary Wildfire Management Area

Pincher Creek Emergency Services and Alberta Wildfire Management hold a Mutual-Aid Wildfire Agreement with each other for mutual-aid wildfire response and have used it to assist each other.

Pincher Creek Emergency Services continues to be active in cross-training their members in wildfire, wildland/urban interface fire operations, and emergency management. Cross-training options may include:

Wildfire:

- Grassland Wildfire Operations (S-100G)
- Wildland Firefighter (NFPA 1051 Level I)

Wildland/Urban Interface:

- Structure & Site Preparation (S-115)/Sprinkler Workshop
- Fire Operations in the Wildland/Urban Interface (S-215)

Incident Command System:

- Introduction to ICS (I-100)
- Basic ICS (I-200)
- Intermediate ICS (I-300)
- Advanced ICS (I-400)
- ICS for Executives (I-402)
- Emergency Coordination Centre Workshop

Recommendation 9: Pincher Creek Emergency Services and Municipality personnel should be cross-trained and qualified based on their participation in the emergency management organization:

- Wildland Firefighter (NFPA 1051 Level I or equivalent)
- Structure & Site Preparation (S-115)/Sprinkler Workshop
- Fire Operations in the Wildland/Urban Interface (S-215)
- Incident Command System (I-100 to I-400)/Emergency Coordination Centres as applicable

AB. Wildfire Management may assist with this cross-training where applicable and qualified training providers should be used.

8. Emergency Planning Options

Emergency preparedness is an important part of any disaster planning. The need for organization, clear chain of command, and an understanding of job responsibilities during a wildland/urban interface fire are of paramount importance.

8.1 Pincher Creek Region Joint Municipal Emergency Plan

The Pincher Creek Region Joint Municipal Emergency Management Plan (MEP, 2015) was reviewed and the following points were noted.

<p>1.8 – Emergency Services Organization</p>	<ul style="list-style-type: none"> ▪ The Incident Command System (ICS) model and Emergency Site Management (ESM) model and terminology are referred to throughout the MEP. Recommend <u>revise to Incident Command System model only</u> to reduce confusion during an incident
<p>3.12 – Forest/Wildfire Response Plan</p>	<ul style="list-style-type: none"> ▪ Section refers to Alberta Environment and Sustainable Resources and should be updated to Alberta Agriculture and Forestry, Wildfire Management Branch

Recommendation 10: Update the Pincher Creek Region Joint Municipal Emergency Plan to:

- Use the Incident Command System model only
- Update the Forest/Wildfire Response Plan

8.2 Wildfire Preparedness Guides

Wildfire Preparedness Guides provide emergency responders with detailed tactical information to protect values at risk from approaching wildfire. At present, there are no Wildfire Preparedness Guides for the development areas.

Wildfire Preparedness Guides are recommended for the following development areas in order or priority:

1. Castle Mountain Village
2. Camp Impeeza/RgeRd 3-0
3. Burmis/Lee Lake
4. Beaver Mines
5. Beauvais Lake

Recommendation 11: Develop Wildfire Preparedness Guides for the recommended development areas in order of priority.

Exercises to test emergency plans for operational effectiveness are an excellent tool to ensure emergency management personnel and mutual-aid partners are familiar with the tools and tactics available.

Recommendation 12: Conduct a wildland/urban interface table-top, functional, or field exercise between Pincher Creek Emergency Services and mutual-aid partners to train local emergency responders and test the Municipal Emergency Plan and Wildfire Preparedness Guide(s) for operational effectiveness.

9 Implementation Plan

The goal of the implementation plan is to identify the responsible stakeholders for each of the recommendations and set timelines for commencement and completion based on priorities and funding availability.

Vegetation Management

Item	Recommendation	Responsible Agency
Priority Zone 1-2 Fuels Reduction	Recommendation 1: Encourage residents to establish adequate FireSmart Priority Zone 1-2 clearance from wildland fuels on their private or leased lands.	MD Pincher Creek Town of Pincher Creek
Priority Zone 2-3 Fuels Reduction	Recommendation 2: Implement FireSmart Zone 2-3 vegetation management on Municipal and Provincial lands based on priority and available funding and encourage residents and lease holders to implement FireSmart Zone 2-3 vegetation management on private and lease lands.	MD Pincher Creek Town of Pincher Creek AB. Wildfire Mgt.
Vegetation Management Maintenance	Recommendation 3: Inspect and maintain all FireSmart vegetation management areas on a regular basis.	MD Pincher Creek Town of Pincher Creek AB. Wildfire Mgt.

Development & Legislation

Item	Recommendation	Responsible Agency
Infrastructure	Recommendation 4: Ensure that all infrastructure options meet FireSmart standards including: <ul style="list-style-type: none"> ▪ Access road and driveway widths and grades ▪ Fire suppression water supply for multi-lot developments ▪ Tree-freeing along overhead powerlines ▪ Propane tank clearance from wildland fuels ▪ Road and address signage ▪ Adequate access in parks and open spaces for maintenance and fire department equipment 	MD of Pincher Creek Town of Pincher Creek
Development Legislation	Recommendation 5: Revise current MD of Pincher Creek and Town of Pincher Creek development legislation to consider the recommended FireSmart revisions.	MD of Pincher Creek Town of Pincher Creek

Public Education

Item	Recommendation	Responsible Agency
FireSmart Hazard Assessments	Recommendation 6: Identify and train Pincher Creek Emergency Services members to provide FireSmart Hazard Assessments, and measures to reduce the threat, to those residents that request one.	Pincher Creek Emergency Services
Public Education Priorities	Recommendation 7: Public education on acceptable FireSmart standards is recommended for all MD and Town of Pincher Creek residents.	MD of Pincher Creek Town of Pincher Creek
FireSmart Canada Community Recognition Program	Recommendation 8: Pincher Creek Emergency Services should identify and train key Fire Services personnel to act as Local FireSmart Representatives and to identify and work with the appropriate Community Champions within the MD and Town of Pincher Creek to work towards Recognized FireSmart Community status.	Pincher Creek Emergency Services

Interagency Cooperation & Cross-Training

Item	Recommendation	Responsible Agency
Cross-Training	<p>Recommendation 9: Pincher Creek Emergency Services and Municipality personnel should be cross-trained and qualified based on their participation in the emergency management organization:</p> <ul style="list-style-type: none"> ▪ Wildland Firefighter (NFPA 1051 Level I or equivalent) ▪ Structure & Site Preparation (S-115)/Sprinkler Workshop ▪ Fire Operations in the Wildland/Urban Interface (S-215) ▪ Incident Command System (I-100 to I-400)/Emergency Coordination Centres as applicable <p>AB. Wildfire Management may assist with this cross-training where applicable and qualified training providers should be used.</p>	Pincher Creek Community Emergency Mgt. Agency Pincher Creek Emergency Services AB Wildfire Mgt.

Emergency Planning

Item	Recommendation	Responsible Agency
Municipal Emergency Plan	<p>Recommendation 10: Update the Pincher Creek Region Joint Municipal Emergency Plan to:</p> <ul style="list-style-type: none"> ▪ Use the Incident Command System model only ▪ Update the Forest/Wildfire Response Plan 	Pincher Creek Community Emergency Mgt. Agency
Wildfire Preparedness Guides	Recommendation 11: Develop Wildfire Preparedness Guides for the recommended development areas in order of priority.	Pincher Creek Emergency Services
Emergency Exercise	Recommendation 12: Conduct a wildland/urban interface table-top, functional, or field exercise between Pincher Creek Emergency Services and mutual-aid partners to train local emergency responders and test the Municipal Emergency Plan and Wildfire Preparedness Guide(s) for operational effectiveness.	Pincher Creek Community Emergency Mgt. Agency AB Wildfire Mgt. AB EmergMgt Agency