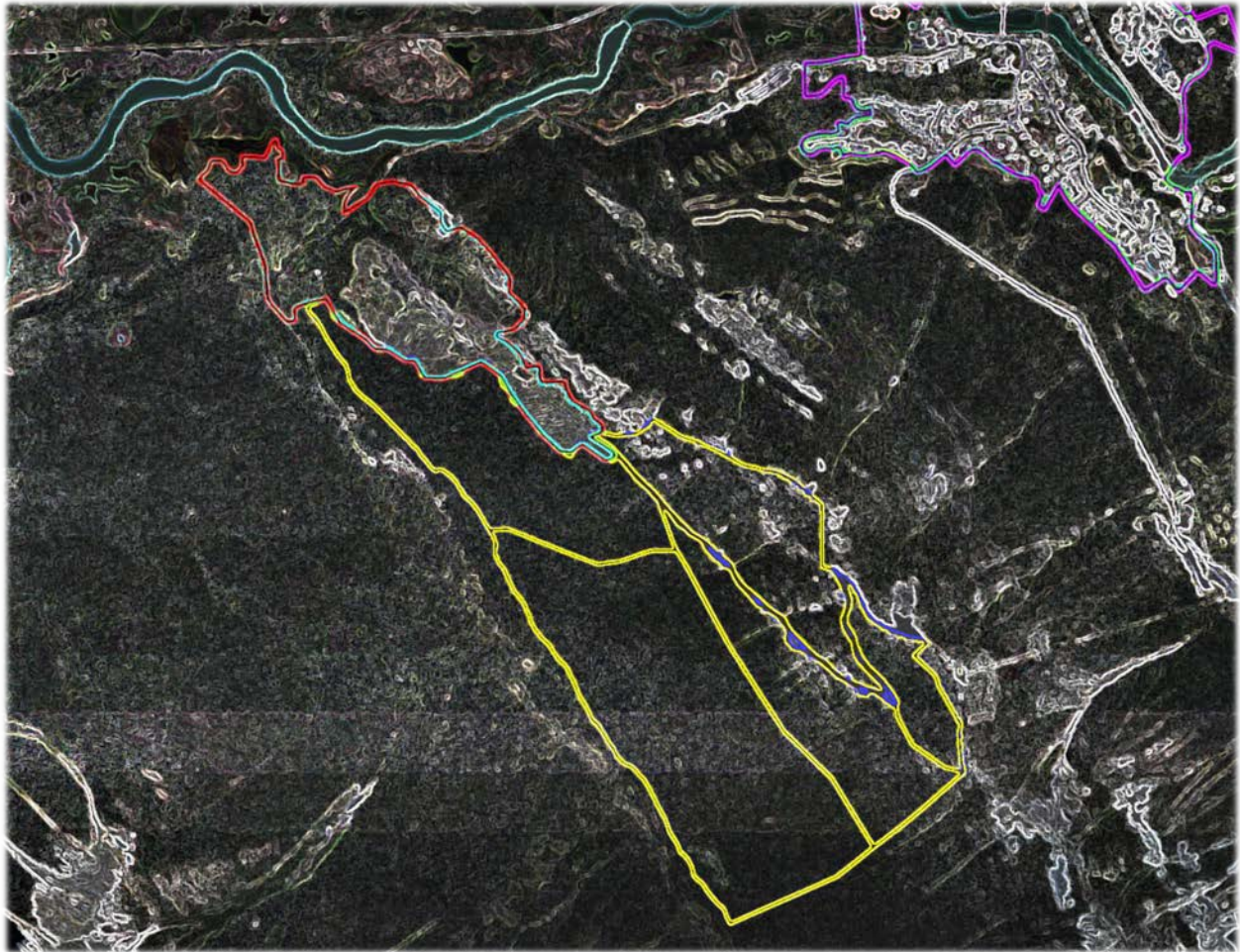


# West Sulphur Wildfire Risk Reduction Plan

**Executive Summary**

**May 4, 2018**



## **Introduction**

As a key step in the ongoing, collaborative wildfire protection for Banff National Park, Parks Canada is planning a large, multi-year fuel reduction project on the west side of Sulphur Mountain. This will be accomplished by thinning the forest; pruning individual trees to remove lower branches that can act as a ladder for a fire, and removing downed woody debris. Reducing forest fuels will help to lower the intensity and complexity of managing any potential wildfire in the area.

Up until the late 20<sup>th</sup> century, protection from wildfire centered on fire suppression. As understanding of the negative impacts of fire suppression evolved in the 1970s and 80s, Parks Canada's fire management also evolved to focus on the use of prescribed fire and forest fuel reduction to decrease the risk of wildfire and improve park ecology. However, the previous decades of fire suppression resulted in large tracts of continuous, dense forest with significant amounts of woody debris. These conditions, along with prevailing westerly winds, increase the risk and severity of wildfire to the town of Banff and outlying facilities. Consequently, to protect the community and its residents, Parks Canada has worked continuously over the last 30 years on forest fuel management in various locations adjacent to the town of Banff. The fuel management sites in the West Sulphur Wildfire Risk Reduction (WRR) project will complete Parks Canada's work on a landscape-level fire guard that will further reduce the risk to the town and surrounding infrastructure from a fire approaching from the west, down the Bow Valley, or north, up the Spray River/Sundance Creek.

## **Background**

Banff National Park has worked extensively with partners to create a 'FireSmart' landscape in the Bow Valley (Figure 1). Following the 2003 fire season, the 'FireSmart' program was developed by firefighting agencies across the country, including Parks Canada, to provide guidelines to assist communities in reducing their vulnerability to wildfires. To date, 1500 hectares of forests have been modified to mitigate wildfire risk to the town and surrounding areas. This includes completed fuel management projects directly adjacent to the town of Banff (Figure 3), as well as large forest fuel reduction projects (Sulphur Mountain, Carrot Creek, Moose Meadows) and prescribed fires (Fairholme, Sawback) in strategic areas in the Bow Valley. The WRR project is an important piece in the ongoing efforts to reduce the risk of wildfire to the park while improving the area's ecology. (Figure 2).

Between 2000 and 2010, Parks Canada completed 93 hectares of thinning adjacent to the proposed project area. Parks Canada undertook considerable efforts to make the openings appear as natural as possible to avoid impacting the viewscape. Parks Canada will continue these efforts with this larger forest fuel management project, given the high visibility of the project location from the TransCanada Highway and surrounding areas.

In addition to landscape-level projects such as this one, Parks Canada will continue to work closely with the Town of Banff in planning and implementing fuel management directly adjacent to the community, as well other fuel management and prescribed burn projects in the rest of the park.



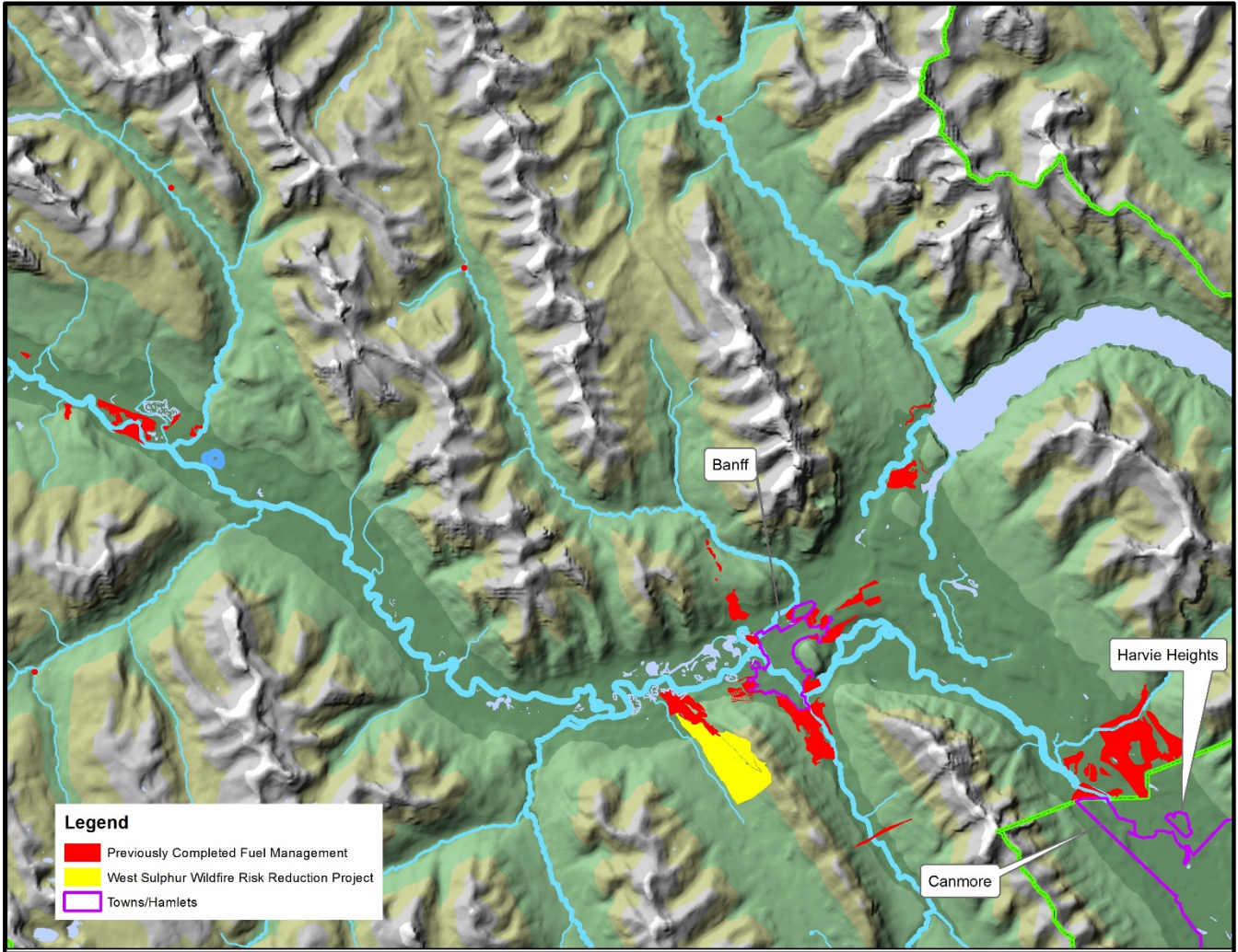


Figure 1: Completed fuel management units in the Bow Valley



## Location

On the west side of Sulphur Mountain, the WRR will be broken into five subunits, for a total of 349 hectares (ha). In three of the subunits (128 ha), thinning will be done by hand, while in the other two subunits (221 ha), trees will be removed using mechanical equipment.

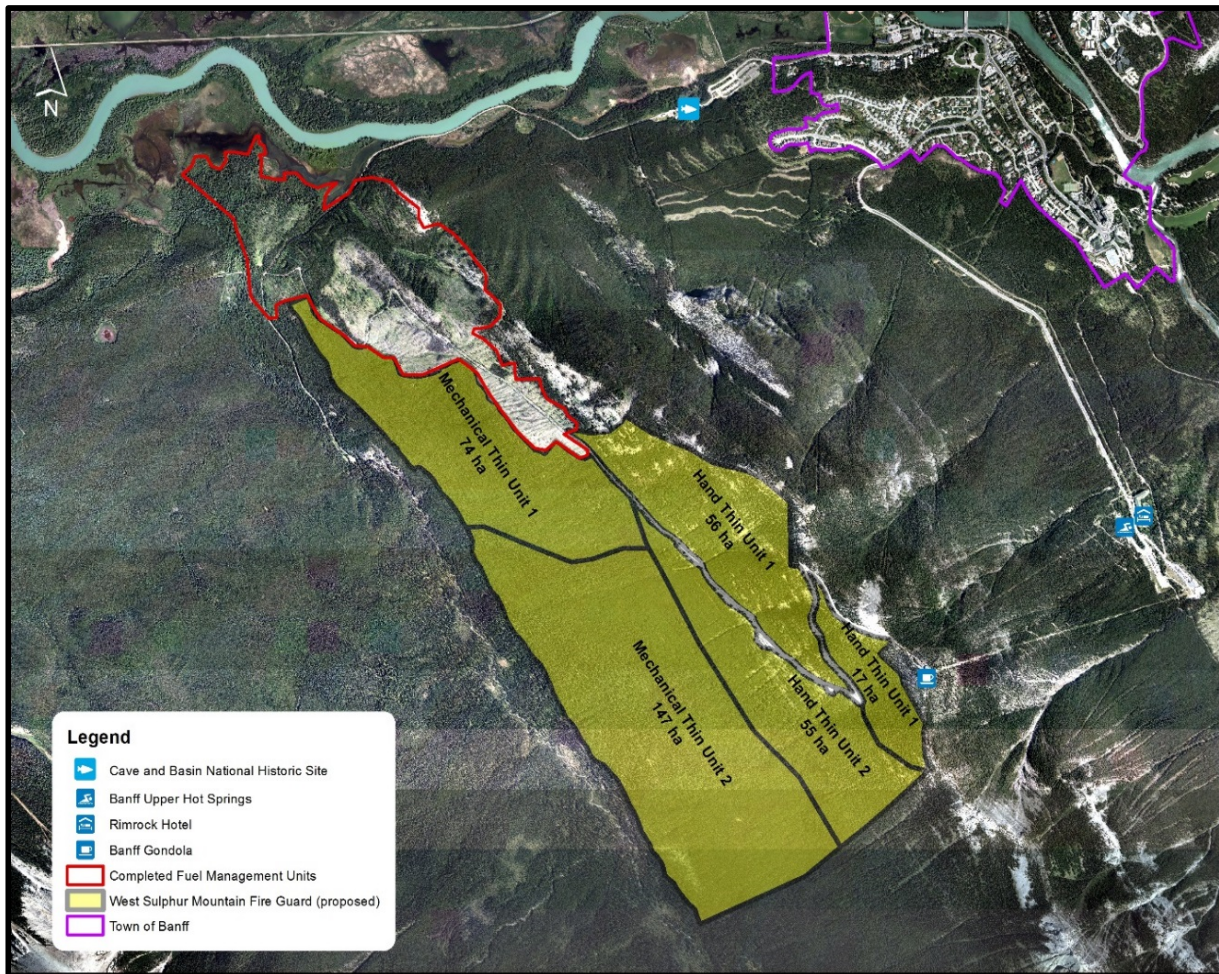


Figure 2: Completed and planned fuel management units on west Sulphur Mountain

## Overview

Work on the WRR project is planned to take place over multiple years. Initial planning for the fire guard began in 2016 with a projected implementation start date of fall/winter 2018.

The general prescription for forest thinning is to remove smaller diameter trees (less than 25cm) to reduce the overall density of the forest and potential for crown fires (that spread between tree tops). This work will be conducted using a combination of ground crews cutting and pruning trees and removing coarse woody debris, as well as mechanical tree removal. Specific details will be refined based on slope, soil conditions, and tree species composition.

The project has been designed to retain small clusters of trees to mimic natural disturbances, such as avalanche and fire. This will reduce the visual impact of the project, creating landscape features that would have been common prior to human intervention. Once completed, there will be a noticeable difference in the area compared to what it looked like before. From the ground, the forest will be more open, allowing more sunlight in, which, over time, will allow for more grass and shrubs to flourish. This, in turn, will improve the area's biodiversity. Although human activity will be evident in the first year after tree removal, it will not take long for the forest ground cover to grow back and make the work much less noticeable.

Given that predominately smaller trees will be removed, the majority of the wood will not be merchantable. Any wood suitable for firewood or other uses will be salvaged, with the remainder being left on site as residual coarse woody debris, to be burned or kept as habitat for small mammals. All burning associated with debris disposal or follow-up maintenance will be completed during good atmospheric venting conditions to reduce the impacts of smoke to the community.

The WRR unit contains the Species at Risk Act (SARA)-listed whitebark pine in the higher elevations, potential bat habitat and Type II matrix habitat for woodland caribou. An environmental impact assessment is being completed and will prescribe mitigations for key ecosystem components, including those SARA-listed species. Mitigation of these risks include retaining all whitebark pine, Douglas-fir, and deciduous trees and shrubs. Other trees that provide important wildlife habitat for cavity nesting birds and other species, such as SARA-listed bats, will also be identified and protected. Parks Canada fire management personnel will continue to work closely with wildlife specialists so that the project results in a net benefit to the wildlife in the form of improved habitat for wildlife such as ungulates, wolves and bears.



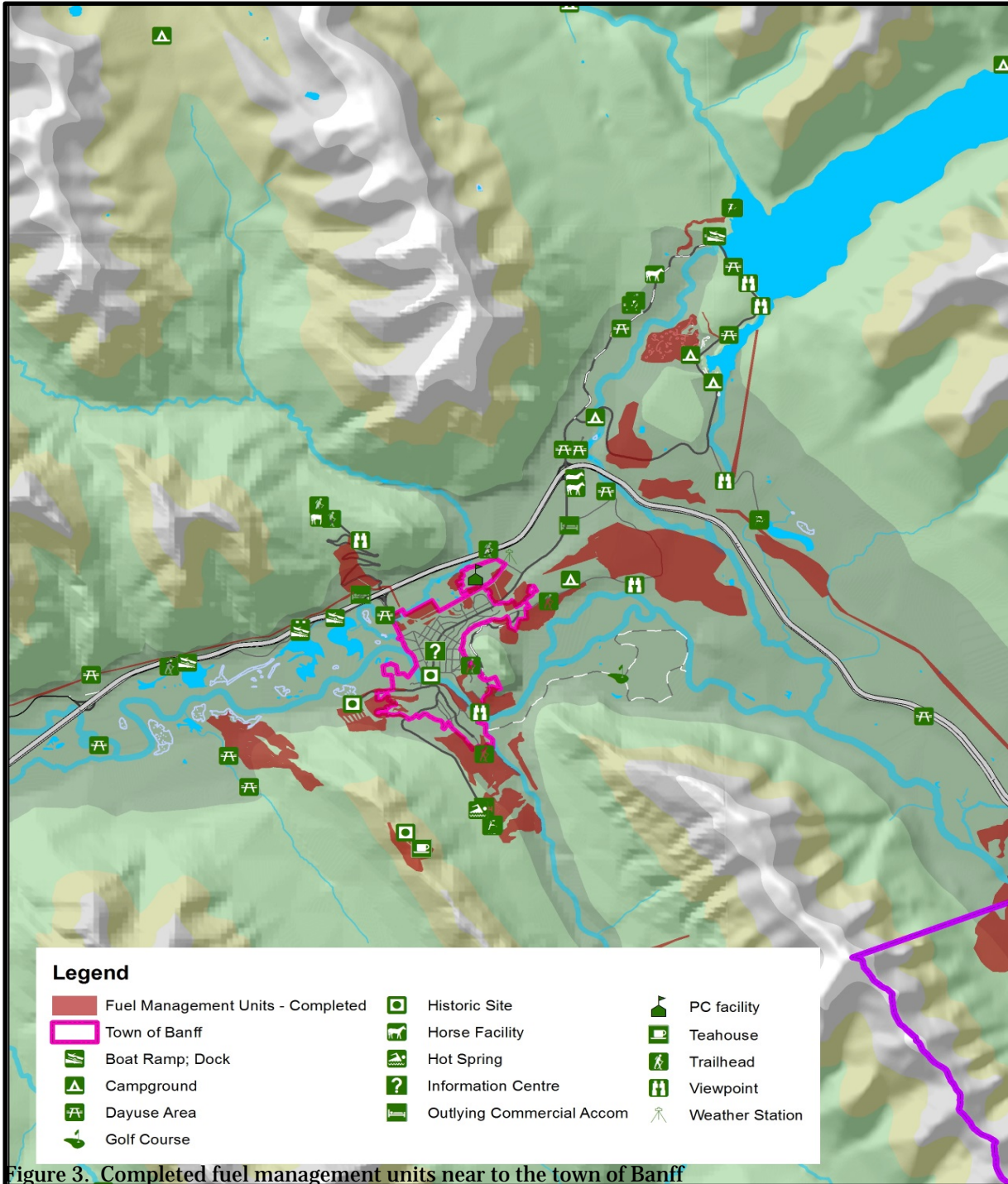


Figure 3. Completed fuel management units near to the town of Banff

## **Considerations**

Using prescribed fire and/or forest fuel modification to enhance grizzly bear habitat in areas away from transportation corridors (roads and rails) was one of two key priority actions identified in the joint Parks Canada/CP Rail Grizzly Bear Study. With the WRR area located away from the railway tracks, implementation of the fuel management project will support the goal of improved, secure habitat for this species.

Work on the multi-year project will only take place in the fall and winter, when the soil is frozen, to reduce potential ground and wildlife disturbance.

Parks Canada will model the visual impacts on the landscape from key viewpoints to better inform discussions on the project.

Starting the engagement program this spring will enable the impacts raised by stakeholders and Indigenous groups to be fully considered by Parks Canada in the environmental review and detailed project planning phases.

The safety of the public, our crews, park infrastructure and neighbouring lands is always Parks Canada's first priority. Through safe and effective wildfire risk reduction projects, Parks Canada's objective is to mitigate the potential impacts of wildfire, while improving the ecological health of the forests.

## **For more information**

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