FireSmart Community Report

Morning Star Road Neighbourhood
Oliver, BC



Testalinden Fire 2015

Prepared for:

Morning Star Road FireSmart Board

Submitted by:

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1) Introduction

The FireSmart Canada Community Recognition Program is designed to provide an effective management approach for preserving wildland living aesthetics while reducing community ignition potential. The program can be tailored for adoption by any community and/or neighborhood association that is committed to ensuring its citizens maximum protection from wildland fire. The following report is intended as a resource to be used by the residents of Morning Star Road for creating a FireSmart Community Plan. The plan developed from this information should be implemented in a collaborative manner, and updated and modified as needed.

The author would like to acknowledge Diane Vaykovich of the Town of Oliver as it was her initiative that brought this project to Oliver with Fire Chief Dan Skaros suggesting the neighbourhood for this project. Additionally, this project would not have been possible without the involvement of the residents of Morning Star Road, especially Patrick Hampson who was paramount in gathering the residents together and disseminating information to them as well as with planning the FireSmart Event day.

2) Definition of the Home Ignition Zone

The neighbourhood of Morning Star Road, Oliver, BC is located in a wildfire environment. Wildfires will happen - exclusion is not a choice. The variables in a wildfire scenario are when the fire will occur, and where. This assessment addresses the wildfire related characteristics of the neighbourhood. It examines the area's exposure to wildfire as it relates to ignition potential. The assessment does not focus on specific homes, but examines the community as a whole



A house burns because of its relationship with everything in its surround home ignition zone - the house and its immediate surroundings. To avoid a home ignition, a homeowner must eliminate the wildfire's potential relationship with his/her house. This can be accomplished by interrupting the natural path a fire takes. Changing a fire's path by clearing the home ignition zone is an easy-to-accomplish task that can prevent home loss. To accomplish this, flammable items such as excessive vegetation must be removed from the area immediately around the structure to prevent flames from contacting it. Also, reducing the volume of live vegetation will affect the intensity of the wildfire as it nears the home.

Included in this assessment are observations made while visiting the neighbourhood. The assessment addresses the ease with which home ignitions can occur under severe wildfire conditions and how these ignitions might be avoided within the home ignition zones of affected residents. The residents can reduce the risk of structure loss during a wildfire by taking actions within their home ignition zones. This zone principally determines the potential for home ignitions during a wildland fire; it includes a house and its immediate surroundings within 100 meters. Given the extent of this zone, the home ignition zones of several homes sometimes overlap, and often spill over onto adjacent public or community land.

The results of the assessment show (under current conditions) that wildfire behavior and subsequent losses will be dominated by the residential characteristics of this area. The good news is that residents will be able to substantially reduce their exposure to loss by addressing community vulnerabilities. Relatively small investments of time and effort will reap great rewards in wildfire safety.

3) Description of the Severe Case Wildland Fire Characteristics that Could Threaten the Area

Fire intensity and spread rate depend on the fuel type and fuel conditions, the weather conditions prior and during ignition, and the topography. Generally the following relationships hold between the fire behavior and the fuel, weather and topography.

- Fine fuels ignite more easily and spread fire faster with higher intensities than coarser fuels. For a given fuel, the more there is and the more continuous it is, the faster the fire spreads and the higher the intensities. Fine fuels take a shorter time to burn out than coarser fuels.

- The weather conditions affect the moisture content of the dead and live vegetative fuels. Dead fine fuel moisture content is highly dependent on the relative humidity and the degree of sun exposure. The lower the relative humidity and the greater the sun exposure, the lower will be the fuel moisture content. Lower fuel moisture produce higher spread rates and fire intensities.

- Wind speed significantly influences the rate of fire spread and fire intensity. The higher the wind, the greater the spread rate, intensity, and ember transport distances.

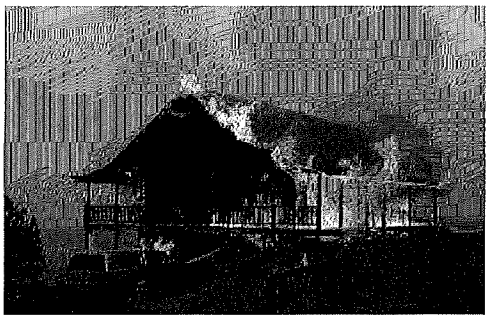
- Topography influences fire behavior principally by the steepness of the slope. However, the configuration of the terrain such as narrow draws, saddles and so forth can influence fire spread and intensity. In general, the steeper the slope, the higher the uphill fire spread and intensity.

Oliver experienced two interface fires in 2015: the Testalinden and Wilson Mountain Fire. Several neighbourhoods were evacuated during these fires. The Town is in the process of completing a Community Wildfire Protection Plan (CWPP) as a means to reduce the risk within the community.

Any fire that would occur on the private properties in the subject neighbourhood would be restricted to isolated fuel sources that consisted of cedar hedging, juniper bushes, bark mulch, etc. Most of the homes are constructed of non combustible materials and all have asphalt roofs.

4) Site Description

The neighbourhood consists of 35homes located on the western boundary of the Town.



The yards are all landscaped with agronomic grasses and other ornamental shrubs. Cedar hedging is prevalent between the homes as are juniper bushes and bark mulch.

There are no stands of trees internal to the neighbourhood. But there are individual ornamental trees that are adjacent to the homes, sometime in contact with them or over topping roofs or porches.

Immediately behind the homes is a steep slope leading up from the homes that has a grass/sage vegetation complex on it as exposed bed rock. In some places, yard waste has been thrown behind the properties onto crown land.

5) Assessment Process

An initial site visit was conducted that consisted of a general walk through of the neighbourhood undertaking an overview of the neighbourhood as a whole, looking for vulnerabilities and determining the overall need and potential of success for FireSmart work.

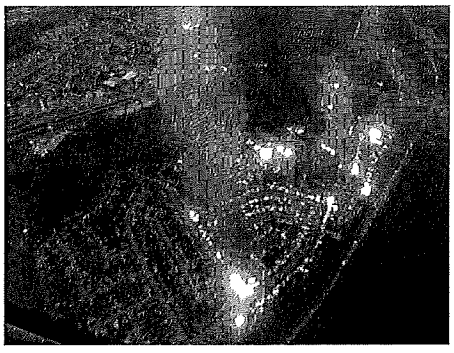
Next, an information letter was hand delivered to the residents explaining the FireSmart program and process and inquiring of their interest. After a positive reply, a Community Champion came forward and was established as the contact. A second site visit was conducted and the Community Wildfire Hazard Assessment Form was completed. The Community Champion was contacted to set up a meeting with the FireSmart board to review the FireSmart program.

A FireSmart Event day was planned with the Fire Department in attendance. The author gave a short presentation on how and why homes ignite, how the FireSmart program works and how residents can reduce the risk of home ignition. A walk through of several properties was then conducted with the land owners of those properties to discus with them any vulnerabilities on their property and also to promote any positive attributes on their property. A short social was held at the end of the event where pamphlets on FireSmart, landscaping and evacuation preparation were available.

6) Observations and Issues

- All roofs are asphalt and had very little, if any, needle litter on them (viewed from the street).
- Home siding is mostly stucco with some wood paneling; windows are mostly double-paned and metal gutters are rarely over topped by conifers or cedar hedging.
- Priority Zone 1 (10m out from structures) vegetation overlaps onto adjacent properties. Vegetation is primarily agronomic grasses, cedar hedging, junipers and other non native shrubbery; bark mulch exists in some yards and there are some occurrences of flammable vegetation being in direct contact with homes.
- Priority Zone 2 (10-30m out) exists almost entirely outside each individual property and on the neighbour's property or on the crown land slope behind the homes. Vegetation is consistent with that in Priority Zone 1 within the neighbourhood and consists of grass and sage on the steep slope behind the homes.

7) Recommendations



The FireSmart Canada Community Recognition Program seeks to create a sustainable balance that will allow communities to live safely while maintaining environmental harmony in a wildland urban interface (WUI) setting. Homeowners already balance their decisions about fire protection measures against their desire for certain flammable components on their properties. It is important for them to understand the implications of the choices they are making. These choices directly relate to the ignitability of their home ignition zones during a wildfire.

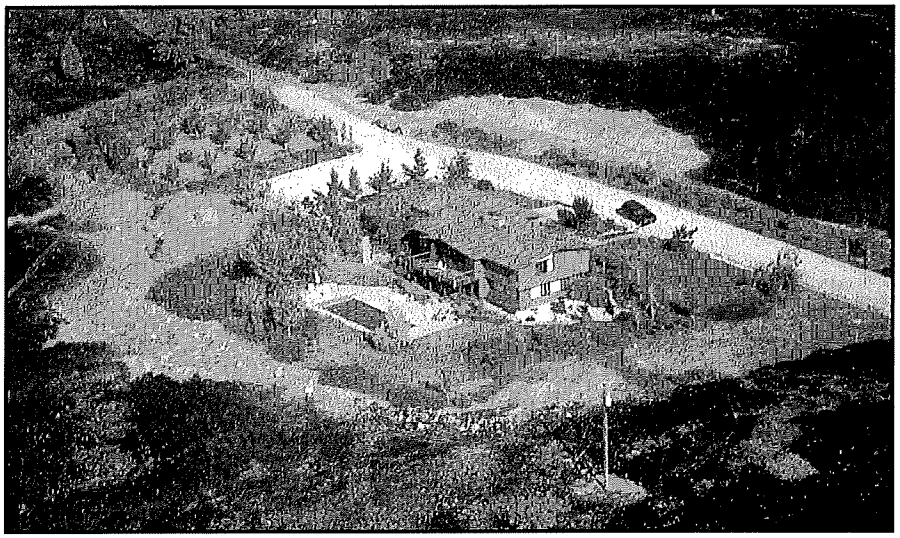
A homeowner/community must focus attention on the home and surrounding area and eliminate the fire's potential relationship with the house. This can be accomplished by disconnecting the house from high and/or low-intensity fire that could occur around it, and by being conscious of the devastating effects of wind-driven embers.

The following section of this report provides recommendations for consideration by the FireSmart Board concerning wildfire safety issues that were identified as priorities in the neighbourhood during the assessment.

1. Remove all flammable vegetation (junipers, cedar hedging) bark mulch, etc) that is in direct contact with homes or within 3m of homes and all flammable landscaping material (bark mulch, wood chips) within 10m of homes;
2. Consider removing all the vegetation from item #1 within 10m of homes with the exception of cedar hedging where it forms a 'fence' between homes;
3. Ensure the dead material on the ground beneath cedar hedging and juniper shrubs are removed prior to the fire season and maintained in this condition throughout the fire season;
4. This cedar hedging should not be in contact with any combustible buildings or fencing and should be separated from it where this exists;
5. Ensure roofs and eaves are kept clean of any needles prior to the fire season;
6. Do not dump yard waste onto the private land along the northern boundary of the development. Remove any yard waste previously dumped in this area.

8) Successful FireSmart Mitigation

When adequately prepared, a house can likely withstand a wildfire without the intervention of the fire services as seen in the photo below.



Further, a house and its surrounding community can be both FireSmart and compatible with the area's ecosystem. The FireSmart Communities Program is designed to enable communities to achieve a high level of protection against wildfire loss even as a sustainable ecosystem balance is maintained.

9) Next Steps

After reviewing the contents of this assessment and its recommendations, the FireSmart Board will determine whether or not it wishes to continue seeking FireSmart community recognition status.

If the report and recommendations are accepted and recognition will be sought, the FireSmart board will create agreed-upon, area-specific solutions to the FireSmart Community Assessment report recommendations and prepare a FireSmart Community Plan in cooperation with their Local FireSmart Representative and local fire agency personnel who may be acting as advisors.

Assuming the residents seeks to achieve national recognition as a FireSmart Community, it will integrate the following standards into its FireSmart Community Plan:

- Sponsor a local FireSmart Board that maintains the FireSmart Community program and recognition status.

- Continue to work with the Local FireSmart Representative or enlist the assistance of a WUI specialist to complete a FireSmart Community Plan which identifies agreed-upon, achievable local solutions.

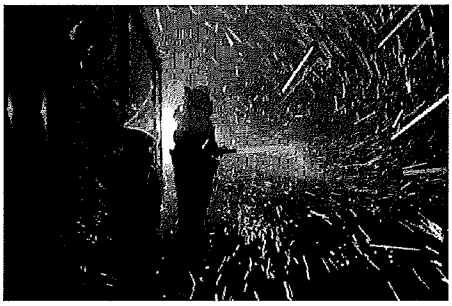
- Invest a minimum of $2.00 annually per capita in its local FireSmart Events and activities (work done by municipal employees or volunteers, using municipal or other equipment, can be included, as can provincial/territorial grants dedicated to this purpose).

- Hold a FireSmart Event (eg. FireSmart Day) each year that is dedicated to a local FireSmart project.

- Submit an application form or annual renewal application form with supporting information to FireSmart Canada. This application or renewal process documents continuing participation in the FireSmart Communities Program with respect to the above criteria.

10) Conclusion

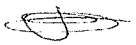
Residents are reminded to be conscious of keeping high-intensity fire more than 30 meters from their homes. It is important for them to avoid fire contact with their structures. This includes firebrands. The assessment team recommends the establishment of a 'fire free zone', allowing no fire to burn within three meters of a house by removing fuels located there. It is a bad idea for fire to touch a house during a wildfire. Remember that, while wildfire cannot be eliminated from a property, it can be reduced in intensity.



Homeowners are reminded that street signs, addresses, road widths and fire hydrants do not keep a house from igniting. Proper attention to their home ignition zones - does. They should identify the things that will ignite their homes and address those as priorities.

Weather is of great concern during wildfire season. When fire weather is severe, or the home is unoccupied, homeowners should remember not to leave flammable items outside. This includes rattan doormats, flammable patio furniture, and firewood stacked next to the house.

10) Signature of Local FireSmart Representative



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Appendix 1: Community Wildfire Hazard Assessment Form

Attached as a separate document.