WADIN BAY
FIRESMART COMMUNITY
ASSESSMENT REPORT

Assessment Completed June 23, 2014 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 receive maximum protection from wildland fire. The following report is intended as a resource to be used by residents of Wadin Bay 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 community wildfire hazard assessment was performed by Camille Harris and Owen Price, both who are employed with the Ministry of Environment's Wildfire Management Branch as Wildfire Prevention and Mitigation Specialists. We would also like to acknowledge the Wadin Bay Cottage Association and in particular Denis Renaud and Wally Bergsveinson for explaining the history surrounding their application, supplying documentation, and for reviewing their wildland firefighting equipment with staff from Wildfire Management Branch.

2) Determining the Risk from Wildfire

Wadin Bay 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 Wadin Bay. 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 within its surrounding ignition zone which includes the house itself and its immediate surroundings. To avoid a home ignition, homeowner's must create a fire resistant home ignition zone. 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. The reduction of the volume of live vegetation will also decrease the intensity of a wildfire as it nears the home. The home ignition zone includes the home itself and appropriate attention must be made to ensure it cannot sustain ignition from embers that land on the home from a fire burning inside or outside of the home ignition zone.

Included in this assessment are observations made while visiting Wadin Bay. The assessment addresses the potential for which home ignitions may occur and how these ignitions might be avoided or at least minimized. Wadin Bay 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 ignition during a wildfire; it includes a house and its immediate surroundings and up to 100 metres away. Given the extent of this zone, the ignition zones of several homes often overlap, and often spill over onto adjacent public or community land.

Multiple FireSmart home ignition zones will work together to act as a fuel break for any incoming or outgoing wildfires. 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 types 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 moistures 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.

During the week of June 23, 2006 157 wildfires were ignited by lightning from a cold front entering from Alberta moving easterly along the Churchill River System to the Manitoba border. The recreational subdivision of Wadin Bay, along with English Bay, Nemeiben Lake, Sucker River, Grandmother's Bay, Missinipi and Stanley Mission were all threatened. Transportation routes in the area were all affected by road closures and smoke management issues. There were a total of 27 fires within the English Fire Complex which included 9 fires in the immediate area of Wadin Bay and they consumed a total of 69,422 ha of forest. The closest wildfire to Wadin Bay was the English Fire (2050 ha) to the southwest and Lynx Fire (8250 ha) to the northeast, these fires impacted the only transportation route out of town to La Ronge. Most of the fuels surrounding Wadin Bay represent the fuels which were consumed during that fire complex. Fire rates of spread predicted in black spruce (Picea mariana) for the La Ronge area on June 30, 2006 were estimated at 25.5 metres/minute. While performing the assessment some residents of Wadin Bay reflected their recollections of the wildfires of 2006.

4) Site Description

Wadin Bay is a recreational subdivision situated within the Lac La Ronge Provincial Park, 30 km northeast of the Town of La Ronge along highway# 102. This cottage community falls administratively within the Northern Municipal Services Branch and the Northern Saskatchewan Administration District (NSAD) with a population reaching 225 people. There are approximately 75 dwellings within the subdivision of Wadin Bay. In addition there will be newly developed building lots just north of Spruce Street. Fuels present within the subdivision consist of a largely mixed wood stand with hardwoods of white birch (Betula papyrifera); trembling aspen (Populus tremuloides), along with intermixed softwoods of sparse white spruce (Picea glauca) and a small island of black spruce (Picea mariana) located centrally with the subdivision. There is an untreated island of softwood fuels within the subdivision occupying public reserve parks land and parcels of Ministry of Environment land as well.

The community falls within the Churchill River Upland ecoregion where low sandy soils support black spruce and jack pine, (Pinus banksiana) these are the dominant softwood tree species in the area. Black spruce is prone to running crown wildfires due to the abundance of ladder fuels present, size and arrangement, and moisture of the fuels. Note in the table below the estimated rate of spread (distance the wildfire will travel) in black spruce on June 30, 2006 for areas surrounding Wadin Bay.

Table 1: Weather and Fire Behavior Outputs in black spruce for June 30, 2006 Noon Actuals

Noon Actual Weather and Fire Behavior in Black Spruce on June 30, 2006

Weather Station	Temp (C)	RH (%)	Cardinal Direction/Wind Speed	FFMC	ISI	HFI (kW/m)	Rate of Spread (m/min)
La Ronge	25	28	WSW 22 km/hr	92	17	24500	25.5 m/min
Otter Lake	23	27	WSW 13 km/hr	92	11	18000	15.7 m/min

To put this in perspective, Saskatchewan wildfire suppression crew's ability to gain control and suppress a wildfire with Head Fire Intensities (HFI) greater than 4000 kW/m is substantially reduced. The greater the HFI and rate of spread of a wildfire the more difficult it is for fire crews to gain control and meet objectives making fire suppression success very limited.

Note within Table 1 the HFI of 24,500 kW/m and ROS of 25.5m/min in black spruce. With fire weather conditions like this a wildfire can be expected to travel a distance of 1.53 km in 1 hour in the La Ronge area, and roughly 942 m or slightly under 1 km around the Otter Lake area. Slope and aspect can also affect rates of spread. Although not present through-out the entire subdivision, south and west facing aspects coupled with varying slope leading off the lake can substantially increase rates of spread in that particular fuel type.

5) Assessment Process

Wildfire Management staff evaluated the wildfire risk in Wadin Bay by visiting the community starting back in May 17, 2006 and again in July 2013. The Community of Wadin Bay acquired fire suppression equipment, homeowner value protection equipment and built a community fire hall in response to the recognition of the risk from wildfire. Discussion occurred with the Wadin Bay Cottage Association regarding becoming a FireSmart Community during the 2013 visit. The data gathering phase continued when on June 23, 2014, Wildfire Prevention & Mitigation Specialists Camille Harris and Owen Price spent the day walking the subdivision performing a site visit and hazard assessment. During this time we gathered photos and rated dwellings within the subdivision. We had a good discussion and tour of the central water suppression system and the electric and gas powered pressure pumps with Wally Bergsveinson and his wife Judy. While walking the subdivision we meet a few more full time residents along with some seasonal cabin owners. It was an excellent time to discuss mitigation options with the landowners.

6) Observations and Primary Issues

When performing the Community Wildfire Hazard Assessment we started by making observations on the subdivision's cabins roofing types and roof cleanliness and worked our way down the buildings exterior which includes rating of siding, windows, decks; ember accumulator features around the building or dwelling and location of nearby combustible materials around the structures. We continue and rate vegetation, topography, infrastructure, fire suppression capability, and the fire ignition potential surrounding the subdivision.
Listed below are the top 3 issues within the community and some photographic evidence that supports the observations.

1. Roofing material in the subdivision was generally constructed from Class A roofing material like metal or asphalt. These materials rate well but untreated shakes provide zero fire protection. Attention should be made to remove combustible debris such as dried twigs, needles and leaf material that has accumulated over time on <u>any</u> roof surface or within the rain gutters/eves trough and down spouts.

Figure 1: (Left) Wooden shake roof with needle & twig accumulation within rain eves trough and on roof surface. (Right) Softwood conifers left too close to cabin with dried tree needles and debris on roof, deck not skirted.

2. Building exterior rating for the entire community scored average with a few exceptions. Most homes had wood board siding, some log or heavy timber construction, and a few with vinyl. Vinyl or untreated shake or shingle siding provides no fire protection where stucco, metal, brick, rock or cement provide best protection for the building. Log or heavy timber provides more fire-resistant protection than normal wood board siding. A major area needing improvement is the combustible wood decks attached to dwellings that are not enclosed, they should be closed in with minimum 12mm sheathing. These non-protected areas serve as ember accumulators. Some cabins rest on raised pilings or cement foundations but are not skirted around the building to keep out potential firebrands from entering and igniting during a wildfire. One area of concern was seasoned firewood or other wood combustibles piled directly against the home or in some cases underneath the home. These hidden areas serve as places dried vegetation and needle litter can blow into and rest, but also serve as a spot that ignition could occur from flying embers even from a simple unattended nearby camp fire.

Figure 2: Firewood stacked too close to structures provides ignition points and fuel during wildfires (ember accumulators)

3. Flammable vegetation within the properties' interface priority zones. Priority zone 1 (vegetation 0 - 10m from structure) requires attention by home/cabin owners. Removal and and/or thinning of volatile coniferous fuels such as black spruce and white spruce within this zone is suggested. Along with the removal of surface fuel accumulations and pruning of ladder fuels. Priority zone 2 or any fuels within 10 - 30 m of a building or structure requires similar treatment. Priority zone 3 is outward from zone 2 another 70 m, or out to 100m from a structure. In this case most home owner's property doesn't go beyond priority zone 2. Again, removal of thick conifers to widen crown spacing of trees, thinning and removing immature spruce and ladder fuels is recommended.

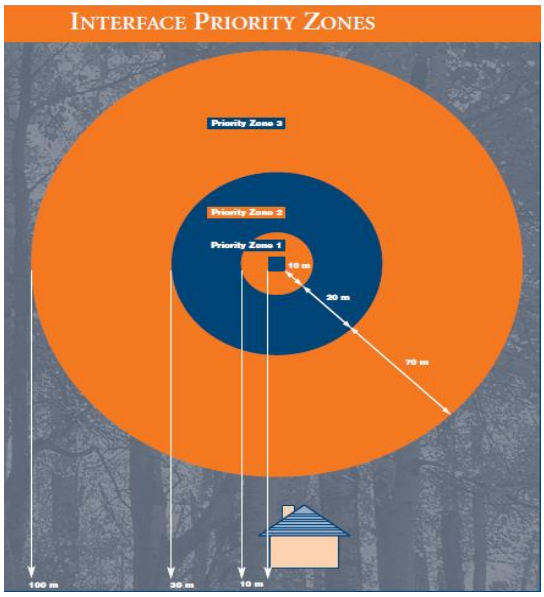

Figure 3: Interface Priority Zones surrounding your home/cabin

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/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 photographs were taken in various Saskatchewan lake country locations and are examples of good FireSmart practices.

Figure 4: Cabins shown with metal and asphalt protected roofs, gravel/crushed rock material up to foundation and fuels removed and/or thinned within home protection zone and outward. No fuels stacked within 10 m of structure. Negative observation is non-enclosed stilt deck on log home constructed of combustible material. Homeowner can either sheath or screen under deck similar to picture on right, or rake any fine fuel accumulations as required to remove the hazard.

Figure 5: FireSmart home with enclosed deck, maintained lawn up to the structure and only deciduous shrubs nearby.

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 community of Wadin Bay during the assessment.

- Stacked firewood or wooden building material piled directly against home or structure or under structure should be moved a minimum of 10 metres away from any structure.
- Cabins should be skirted to prevent embers from igniting fine fuels and other combustibles under the building and decks. Make a point during spring yard cleaning to rake and remove any accumulations of fuels such as dried leaves, needles and twigs from under your wooden decks and structures. Best protection would also be to screen decks and cabin skirting with 3 mm wire mesh or minimum 12mm wood sheathing.
- Remove hazardous fuels within the “home priority zones”. Removal of dead and down woody debris, along with pruning and thinning of coniferous trees within this zone is recommended.
- Approach Ministry of Parks, Culture and Sport to see if the island of flammable fuels between the subdivision and the lake can be cleaned up. The removal of dead and downed trees within this area would help to prevent a high intensity wildfire from burning close to the structures.
- Keep roofs and rain gutters/eves trough free from leaves, dried needles and twigs. Incorporate yearly cleaning of gutters when performing spring yard cleaning.

8) Successful FireSmart Mitigations

When adequately prepared, a house can likely withstand a wildfire without the intervention of the fire service. 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.

Figure 6: (Left) Well-maintained yard with spruce & surface fuels removed from home ignition zone. (Center and Right) Permanent sprinklers attached to homes complimenting FireSmart principles within the properties.

9) Next Steps

After reviewing the contents of this assessment and its recommendations, the Wadin Bay FireSmart Board in consultation with its advisors will determine whether or not it wishes to continue seeking FireSmart Community recognition status. The assessors of this document are available upon invitation to deliver the results of the assessment to the community FireSmart board.

If the report and recommendations are accepted and recognition will be sought, the Wadin Bay 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 Wadin Bay 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 that purpose).
- Hold a FireSmart Event (e.g. 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) Signature of Local FireSmart Representative

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Figure 7: Map of Wadin Bay

Appendix 1
FCCRP COMMUNITY WILDFIRE HAZARD ASSESSMENT FORM

This hazard assessment form provides a point rating score of community wildfire hazard – the condition of structures, adjacent vegetation and other factors affecting the FireSmart status of a small community or neighbourhood. The Community Wildfire Hazard Assessment form is based on criteria from the Partners in Protection manual *FireSmart: Protecting Your Community from Wildfire* and will assist the Local FireSmart Representative in preparing the FireSmart Community Assessment Report. NOTE: Where a range of point values are shown – assessors select from within that range.

FACTOR	POINTS	SCORE	NOTES
1. Roofing Assembly	(Choose one of 'a' to 'b'; add 'c' if applicable)		
a. Rated roof (metal, tile, asphalt, ULC rated shakes)	0	0	Few unrated roofs remain
b. Un-rated roof (unrated wood shakes)	30	0	
c. Roof cleanliness (combustible litter)	0 - 5	2	>50% cabins had litter <1cm
2. Building Exterior			
2.1 Materials	(Choose one of 'a' to 'c'; add 'd' to 'f' if applicable)		
a. Non-combustible/fire resistant siding, eaves, deck	0		
b. Non-combustible/fire resistant siding - combust deck	5	5	Generally the case here
c. Combustible siding and deck	10		
d. Window and Door Glazing	0 - 5	0	Some single pane witnessed
e. Ember Accumulator Features (scarce to abundant)	0 - 5	5	Most cabins have some areas
f. Nearby Combustibles – firewood, fences, outbuildings	0 - 5	5	Numerous locations on properties
3. Vegetation			
3.1 **PZ-1:** Vegetation - 0 - 10m from residence	(Select within the point range for each of 'a' to 'c')		
a. Forest vegetation (overstory) - treated vs untreated	0 - 10	3	75% deciduous -25% coniferous
b. Ladder fuels - treated vs untreated	0 - 10	2	Requires attention on properties
c. Surface fuels - treated vs untreated	0 - 10	1	Most properties have removed
3.2 **PZ-2:** Vegetation - 10 - 30m from residence	(Select within the point range for each of 'a' to 'c')		
a. Forest vegetation (overstory) - treated vs untreated	0 - 10	0	
b. Ladder fuels - treated vs untreated	0 - 10	0	Some properties untreated to date
c. Surface fuels – treated vs untreated	0 - 10	2	Some properties untreated to date
3.3 **PZ-3:** Vegetation - 30 - 100m from residence	(Choose one of 'a' to 'e'; add 'f' if applicable)		
a. Light fuel - deciduous – grass, shrubs	5		
b. Moderate fuel - mixed wood – light to moderate surface and ladder fuels, shrubs	15	15	Spruce regen and small softwood island centrally within subdivision
c. Heavy fuel - coniferous - moderate to heavy surface and ladder fuels, shrubs	30		
d. Logging slash, dead/down fuel accumulations	30		
e. Diseased forest – without foliage vs with foliage	15 - 30		
f. Fuel islands within community - treated vs untreated	15 - 30	0	

4. Topography			
4.1 Slope (within 100m of structures)			(Choose one of 'a' to 'c')
a. Slope - Flat or < 10 %	0	0	A few lake fronts have varying slope
b. Slope - 10 – 30 %	5		
c. Slope - >30 %	10		
4.2 Building setback on slopes >30 %, position on slope			(Choose one of 'a' to 'c')
a. Setback from top of slope > 10m, bottom of slope	0	0	
b. Buildings located mid-slope	5		
c. Setback from top of slope <10m, upper slope	10		

FACTOR	POINTS	SCORE	NOTES
5. Infrastructure – Access / Egress, Signage			
5.1 Access Routes			(Choose one of 'a' to 'b')
a. Two or more roads in/out	0		
b. One road in/out	5	5	1 location -Access to Hwy#102
5.2 Road Width			(Choose one of 'a' to 'b')
a. > 6.1m	0	0	No issues
b. < 6.1m	5		
5.3 Road Condition – Grade, Curves, Bridges & Turnarounds			(Choose one of 'a' to 'b')
a. To FireSmart standard	0	0	Adequate w traffic management
b. Not to FireSmart standard	1 - 5		
5.4 Fire Service Access / Driveways - Grade, Width/Length, Turnarounds			(Choose one of 'a' to 'b')
a. To FireSmart standard	0	0	Majority adequate
b. Not to FireSmart standard	1 - 5		
5.5 Street Signs / House Numbers			(Choose one of 'a' to 'b')
a. To FireSmart standard	0		
b. Not to FireSmart standard	1 - 5	1	Some civic addresses & some L&B
6. Fire Suppression - Water Supply, Fire Service, Homeowner Capability			
6.1 Water Supply			(Choose one of 'a' to 'd')
a. Fire Service water supply - hydrants	0		
b. Fire Service water supply – static source	5	5	Indiv, tanks & central location
c. Fire Service water supply – tender	10		
d. No Water	15		
6.2 Fire Service			(Choose one of 'a' to 'c')
a. Fire Service < 10 minutes	0		
b. Fire Service > 10 minutes	5	5	Response time 20 min- La Ronge
c. No fire service	10		
6.3 Homeowner Suppression Equipment			(Choose one of 'a' to 'b')
a. To FireSmart standard	0	0	
b. Not to FireSmart standard	1 - 5	1	Seasonal properties lacking equip
7.0 Fire Ignition and Prevention – Utilities, Chimneys, Burn Barrel / Fire Pit, Ignition Potential			
7.1 Utilities			(Choose one of 'a' to 'b')
a. To FireSmart standard	0	0	Some lines to structures need clearing
b. Not to FireSmart standard	1 - 5		
7.2 Chimneys, Burn Barrel / Fire Pit			(Choose one of 'a' to 'b')
a. To FireSmart standard	0	0	A few barrels/pits require screens

b. Not to FireSmart standard	1 - 5		
7.3 Ignition Potential			(Choose any factors that apply)
a. Topographic features adversely affect fire behavior	0 - 5	0	
b. Elevated probability of human or natural ignitions	0 - 5	1	Hwy#102 traffic, provincial park
c. Periodic exposure to extreme fire weather or winds	0 - 5	1	Historical event, lake winds
d. Other	0 - 5		
Community Wildfire Hazard Assessment Total: ***Total Points*** **(add all factor point scores)**			
Low < 20			
Moderate 21 – 30			
High 31 – 50			Refer to following recommendations
Extreme 51 – 75+	59		to reduce community points total.

FireSmart Canada Community Recognition Program
Community Wildfire Hazard Assessment Form
June 23, 2014

Factor 1: Roofing Assembly

- (a) 67 out of 75 cabin/home structures rated roofs constructed from asphalt or metal.
  0 points allocated
- (b) Un-rated roof (unrated wood shakes)
  0 points allocated (8 cabins roofs require some attention, some constructed with wood shakes, but generally community rates well for roofing material)
- (c) Roof cleanliness: >50% of cabins had leaves, twigs and mossy debris on roof or within rain gutter (<1cm in depth)
  2 points allocated

Factor 2: Building Exterior

- (b) Majority of structures rated- Non-combustible/fire resistant siding-combustible deck
  5 points allocated (wood decks not closed off or screened in to stop dried leaves, needles and twig accumulation)
- (e) Is applicable- Ember Accumulator Features (scarce to abundant) - >50% of cabins had no skirting around cabin and decks not closed off resulting in “abundant” amount of area for embers to accumulate during a potential wildfire. Also high amounts of residents/cabin owners store burnable materials under their cabin, including firewood.
  5 points allocated.
- (f) Is applicable- Nearby Combustibles-firewood, fences, outbuildings. Homes and properties with firewood and woody debris stacked against/under the structure or within 3 metres of building.
  5 points allocated

Factor 3: Vegetation

- (3.1 a) Priority Zone 1 (Vegetation 0-10 metres from residence) Forest vegetation (overstory) - treated vs untreated- estimated 75% deciduous- 25% coniferous was applicable for majority of community. Removal or thinning of some conifer fuels within this zone is required.
  3 points allocated
- (3.1 b) Ladder fuels- treated vs untreated- pruning of trees to reduce amount of ladder fuels reaching the crown was evident on some, but more attention is required.
  2 points allocated
- (3.1 c) Surface fuels- treated vs untreated- some residents have maintained lawns or gravel mixtures up to the buildings, but some property owners require removal of some small conifers or burnable fuels around their cabin.
  1 point allocated
- (3.2 c) Priority Zone 2 (Vegetation 10 - 30m from residence)- Surface Fuels treated vs untreated
  2 points allocated

- (3.3 b) Priority Zone 3 (Vegetation 30 – 100 m from residence) Moderate fuel- mixed woods- light to moderate surface and ladder fuels, shrubs. There are pockets of conifers within community, but generally untreated deciduous trees.
  15 points allocated

Factor 4: Topography

- 4.1 Slope (within 100m of structures) (a) Slope –Flat or <10%
  0 points allocated Majority of land base in community has relatively flat ground except for a few lake front/view properties where there is a rise in elevation from lake shore to cabin.

Factor 5: Infrastructure- Access / Egress, Signage

- 5.1 Access Routes- (b) One road in/out
  5 points allocated
- 5.2 Road Width- (a) >6.1m
  0 points allocated
- 5.3 Road Condition- Grade, Width, Curves, Bridges, Turnarounds- (a) To FireSmart Standard
  O points allocated
- 5.4 Fire Service Access / Driveways- Grade, Width/Length, Turnarounds- (a) To FireSmart Standard
  O points allocated
- 5.5 Street Signs / House Numbers- (b) Not to FireSmart Standard
  1 point allocated (Streets signage was marked accordingly and visible, but some cabins had lot & block numbers, some had civic address numbers, some labelled both and a few cabins had nothing)

Factor 6: Fire Suppression- Water Supply, Fire Service, Homeowner Capability

- 6.1 Water Supply- (b) Fire Service water supply- static source
  5 points allocated
- 6.2 Fire Service- (b) Fire Service > 10 minutes
  5 points allocated
- 6.3 Homeowner Suppression Equipment- (b) Not to FireSmart Standard
  1 point allocated

Factor 7: Fire Ignition & Prevention–Utilities, Chimney, Burn Barrel/Fire Pit, Ignition Potential

- 7.1 Utilities- (a) To FireSmart Standards
  0 points allocated
- 7.2 Chimneys, Burn Barrel/ Fire Pit- To FireSmart Standards
  0 points allocated
- 7.3 Ignition Potential- (b) Elevated probability of human or natural ignitions
  1 point allocated
- 7.3 ignition Potential- (c) Periodic exposure to extreme fire weather or winds
  1 point allocated

Recommendations

- Cleaning your rain gutters and removing combustible litter from your roof yearly will reduce your point score by 2.

- Home/cabin owners should skirt around your dwelling, reducing your exposure to flying embers during a wildfire, thus reducing the ignition potential. Your rating would be reduced by 5 points.

- When touring the community a number of structures had dried stacked firewood stored directly against their cabin, underneath the building, or within 10 metres of the building.

We recommend re-locating firewood or any other combustible fuels a minimum of 10 metres away from structures if possible, reducing your rating by 5 points.

- Homeowners with decks that are not enclosed or screened in should consider doing so, this will lower points by 5

- Reduce some of the vegetation around your cabin by thinning or removing of the conifers and ladder fuels. Also reducing surface vegetation such as logs, branches and twigs (including immature conifers up to 2.5 m in height) will reduce a potential fire's intensity. Managing zone 1 (outwards 10 m from buildings) to create a fire resistant zone will reduce the subdivision rating by 5 points.
- Integrating FireSmart discussion into your cottage owner meetings (AGM) will help to raise awareness of wildfire potential and kick start the work required to reduce the risk of wildfire to the community.

The assessment team recommends the establishment of a "fire resistant zone", allowing no fire to burn with any intensity within ten metres of a house by managing fuels located there. Remember that, while wildfire often cannot be eliminated from a property, it can be reduced in intensity.

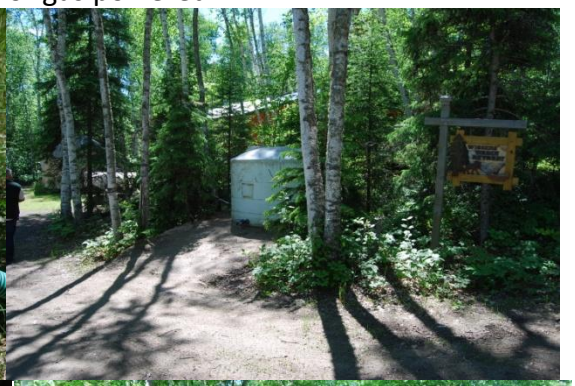
Homeowners are reminded that street signs, addresses, road widths and fire hydrants do not keep a house from igniting. Proper attention to their home ignition zone – does. They should identify the things that will ignite their homes and address those as priorities.

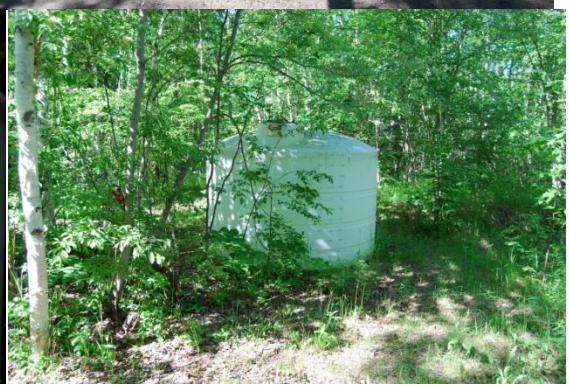
Weather is a great concern during wildfire season. When fire weather is severe, or the home is unoccupied, homeowners should remember not to leave flammable items outside that are within their home ignition zone. This includes rattan doormats, flammable patio furniture, and firewood stacked next to the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

Noteworthy Items:

- Very positive to witness some cabin/home owners invest in sprinkler system home protection.

- With the lack of quick available water in case of wildfire it was great to see all the proactive work with water storage tanks place around the community, a well-equipped fire hall with wildfire suppression equipment and a water tender/fire engine fill location supplied water by either electrical pumps or gas powered.





Wadin Bay

Community Threat Ranking Findings

Potential Fire Behaviour	Historical Ignitions	FireSmart & Preparedness	Overall Threat Ranking
VERY HIGH Risk	MODERATE Risk	EXTREME Risk	VERY HIGH Risk

Risk Legend
- Extreme
- Very High
- High
- Moderate
- Low

Community FireSmart and Preparedness Findings

Infrastructure	Access: two paths of egress	N
	Access: Well-marked street signs	Y
	Access: Roadways wider than 6.1m	Y
	Water: Municipal system	Y
	Water: Independant power supply	Y
	Electrical line clearance > 1 tree length	N
	Vac. Land w/ volatile fuels > 20% in comm.	Y
	Garbage dump within 20km	N
	Campground / Picnic site within 20km	Y
Structure	FireSmart participation >25% of households	N
	Houses have unique house numbers	Y
	Distance between houses > 10m	N
Preparedness	Community Fuel Management Plan	N
	Community Emergency Response Plan	N
	Fire Danger sign posted	N
	Regulation of open burning	Y
Suppression and Detection	FMFP fire base within 20km	N
	Lake suitable for waterbombers within 20km	Y
	Water suitable for helicopter bucketing	Y
	Volunteer Fire Department	N
	Dedicated form of detection	N
Inventory	Less than 100 permanent residents	Y
	Assessed value of community < $1m	N

There is a Volunteer Fire Department in the community.

Hazard Abatement Notes

Waden Bay - West Flank - Recommended

The HAT recommends constructing a fuel break that would follow highway 102 on the west side of the community and tie into Lac la Ronge Lake north and south of the community.

Note: The hazard abatement suggestions are based on fire behaviour potential only and are not meant to be fuel management plans. Fuel management plans must examine site-specific social, ecological and economic issues associated with the proposed fuel treatment and require extensive stakeholder consultation.

Original Production Date: 06/02/2005

SaskCAP Sponsors

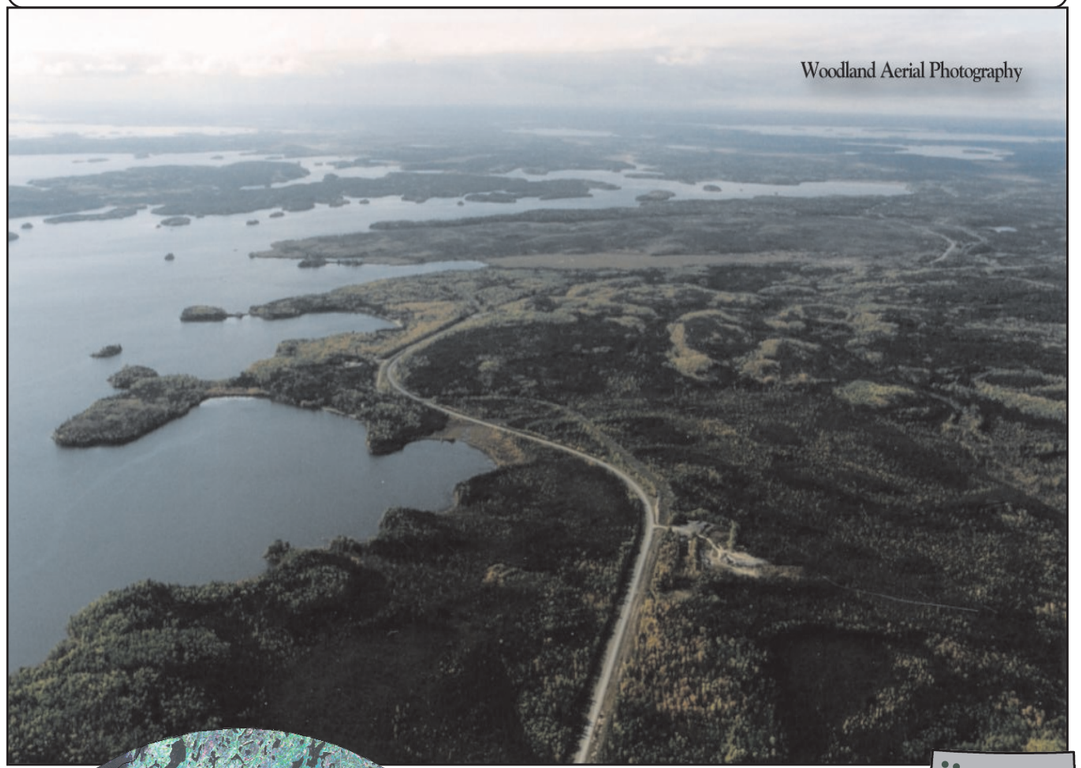
FireSmart Canada Community Recognition Program (Saskatchewan)

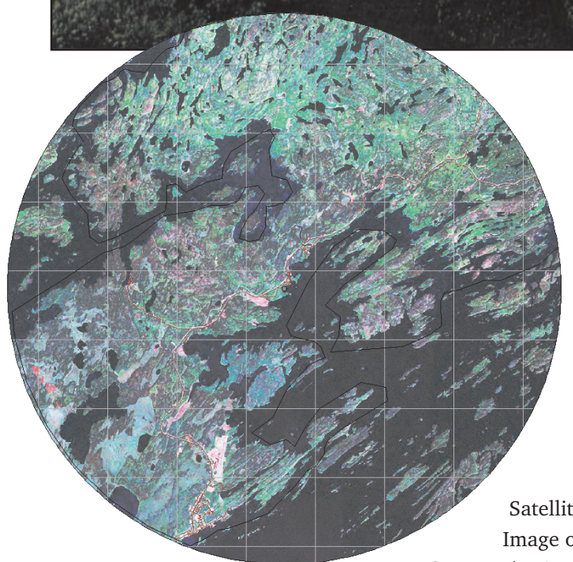
For more information on:
- options to reduce wildfire risks to your home or community
- how to prepare for a wildfire event
- the community wildfire risk assessment process

Contact the Provincial Fire Centre
(306) 953 - 3245
http://www.se.gov.sk.ca/fire/

1-800-667-9660 Report a wildfire

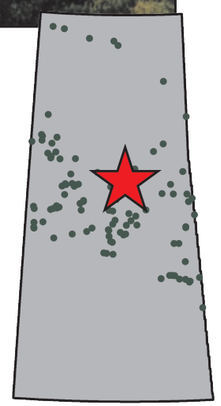
Wadin Bay





Satellite Image of Community Area

Community Wildfire Risk Assessment Project

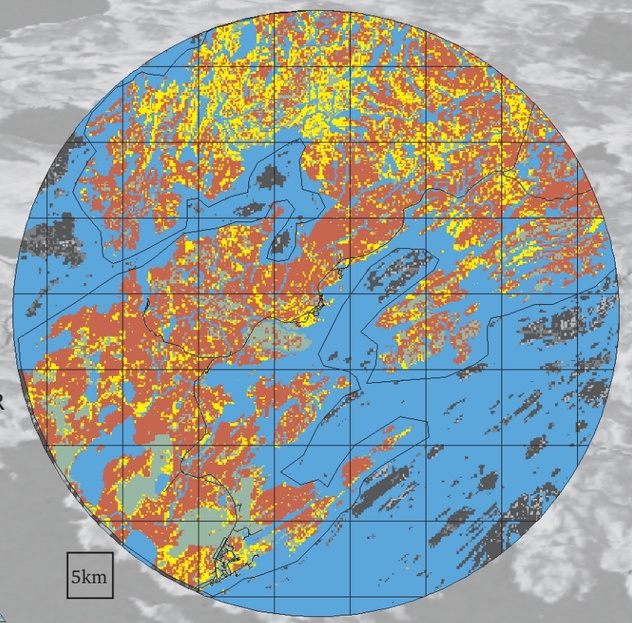


This document summarizes the relative risk posed by wildfire to the community of Waden Bay. It is part of a strategic review & ranking of Saskatchewan communities in the boreal forest.

VERY HIGH Risk

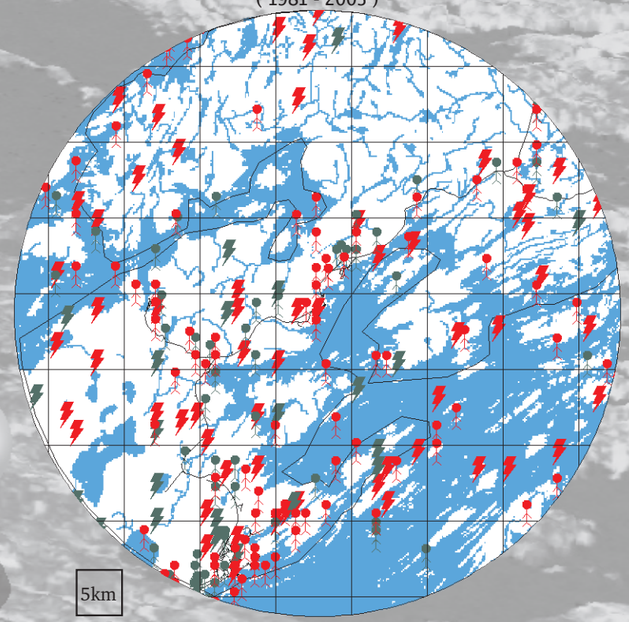
Forest Volatility

Volatility of Forest
- High- Jack Pine, Boreal Spruce, Slash
- Moderate- Lichen Spruce, Boreal Mixedwood
- Low- Deciduous Forest, Grass
- Non-Fuel
- Water



Fire Ignitions by Cause and Season

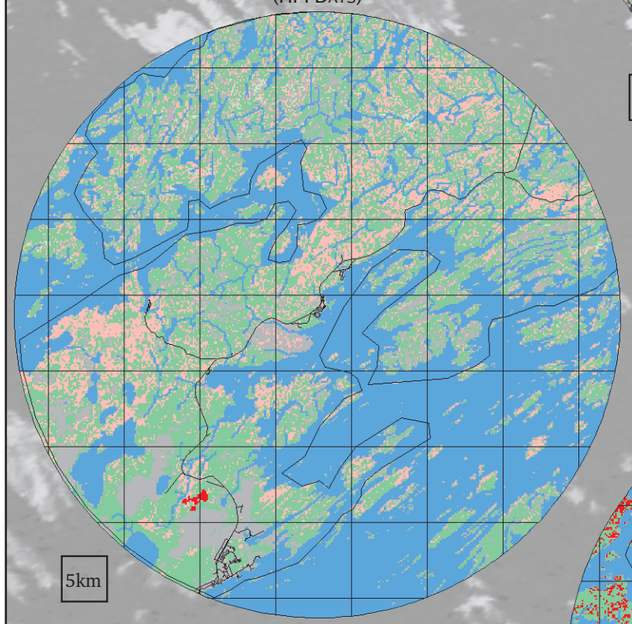
(1981 - 2003)



Fire Ignitions
- Spring Human
- Spring Lightning
- Summer Human
- Summer Lightning

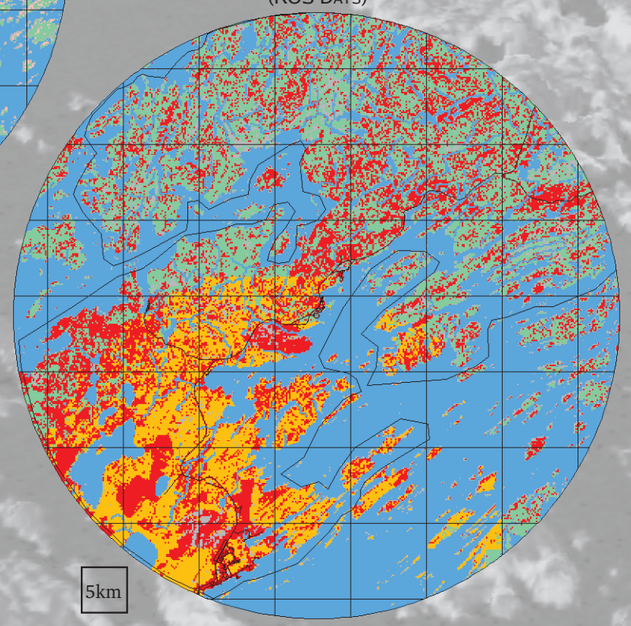
Days Where Potential Fire Behaviour Exceeds Suppression Confidence

(HFI Days)



Days where Fire Rate of Spread exceeds 1 km/h

(ROS Days)



HFI Days	ROS Days
< 9	< 1.5
9	1.5
10 - 24	1.6 - 3.4
25 - 39	3.5 - 5.4
40 - 55	5.5 - 7.4
56 - 100	7.5 - 20.2

Suggestions for Fuel Management Opportunities

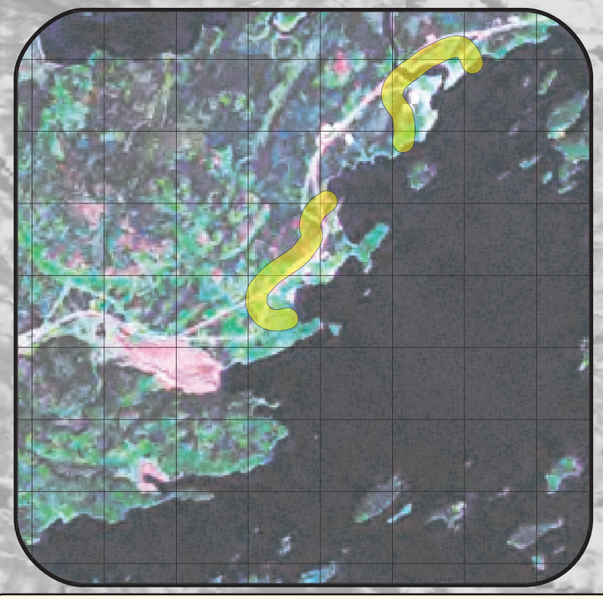


Image Legend
- Conifer Forest
- Hardwood Forest
- Recently Harvested Forest
- Recently Burned Forest
- Farmland
- Wetland
- Water
- Fuel Management Opp.

Area of recommended hazard abatement by forest type

Grass	20 Ha	Mature Pine	12 Ha
Deciduous	3 Ha	Immature Pine	5 Ha
Spruce-Lichen Woodland	1 Ha	Slash	0 Ha
Boreal Spruce	7 Ha	Boreal Mixedwood	30 Ha
Total		78 Ha	