CALLING LAKE

FIRESMART

PLAN UPDATE 2008

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WILDFIRE
Consulting

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1. Introduction

The original MD of Opportunity No. 17 Wildland /Urban Interface Plan developed in 2001 included the Hamlet of Calling Lake and the Jean Baptiste Gambler IR # 183.

This 2008 MD of Opportunity No 17 FireSmart Plan includes an update for the Hamlet of Calling Lake and the Jean Baptiste Gambler IR # 183.

The objectives of the update plan were initiated to:

1. Review the original MD 17 Wildland/Urban Interface Plan vegetation management recommendations to capture and assess the FireSmart projects that were completed in the Hamlet of Calling Lake and the Jean Baptiste Gambler IR # 183.
2. Reassess and identify within the hamlet of Calling Lake the remaining FireSmart fuel modification areas to be completed
3. Re-evaluate the current wildfire threat to the community.
4. Develop a vegetation fuel modification and maintenance plan for future projects within the Hamlet of Calling Lake and the Jean Baptiste Gambler IR # 183.

Vegetation management Options

The original plan identified that certain areas required fuel modification to reduce the wildfire threat to the subdivisions within the hamlet of Calling Lake. In recent years a major increase in funding support by the Minister of Sustainable Resource Development and by the MD of Opportunity No 17 for FireSmart initiatives to reduce the wildfire threat to the hamlet of Calling Lake resulted in a number of FireSmart projects being completed within the hamlet of Calling Lake.

Public Education and Communication.

To meet the requirements of the 2001 WUI Plan public education forums and town hall community meets were organized to inform and educate the residents about the FireSmart objectives and principles. FireSmart projects within the hamlet of Calling Lake are supported by the local residents. The MD of Opportunity No 17 has taken on a major role in ensuring the hamlet of Calling Lake meets the FireSmart principles and provides a safe FireSmart community.

To ensure the residents are aware of current and future projects, newsletters were mailed to residents, posters are placed in locations within the community where the public frequents on a regular basis such as post offices, cafes and general stores. The poster includes a map showing which areas are scheduled for fuel modification. Residents are encouraged to contact Alberta Sustainable Resource Development wildfire prevention officers or the MD of Opportunity No 17 if they have any concerns. In 2006 ASRD held a FireSmart public event in the community to display what FireSmart projects were planned, which ones were completed and which ones will be done in the future.

Legislation and Municipal Development Plan Bylaws.

During the 1968 fire season there were a number of large wildfire threats to the Hamlet of Calling Lake. With the anticipated increase in wildfire events as a result of predicted climate change the MD of Opportunity No 17 should insure future subdivision developments meet all the FireSmart criteria to reduce the threat to residential and industrial developments.

Private Land FireSmart Initiatives

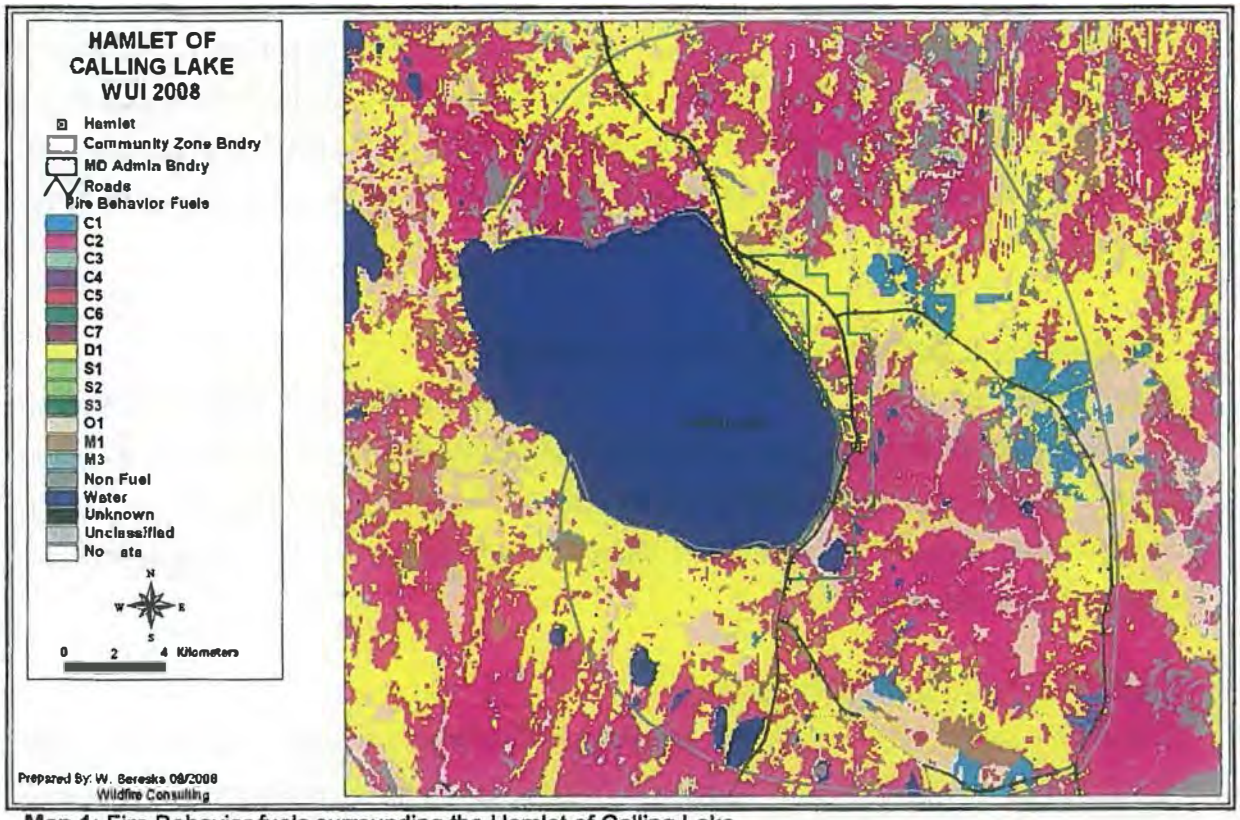
Today the issue of how to deal with the required FireSmart mitigation options on private remains to be addressed. To reduce the wildfire threat In the Hamlet of Calling Lake to the lowest potential possible will require that fuel modification projects in Calling Lake are completed in critical areas on private land.

Potential mitigating options:

1. Convince residential and commercial landowners to complete the require fuel modification to FireSmart standards.

2. Wildfire Threat To The Hamlet of Calling Lake

A. *Fuel Description*



Map 1: Fire Behavior fuels surrounding the Hamlet of Calling Lake.

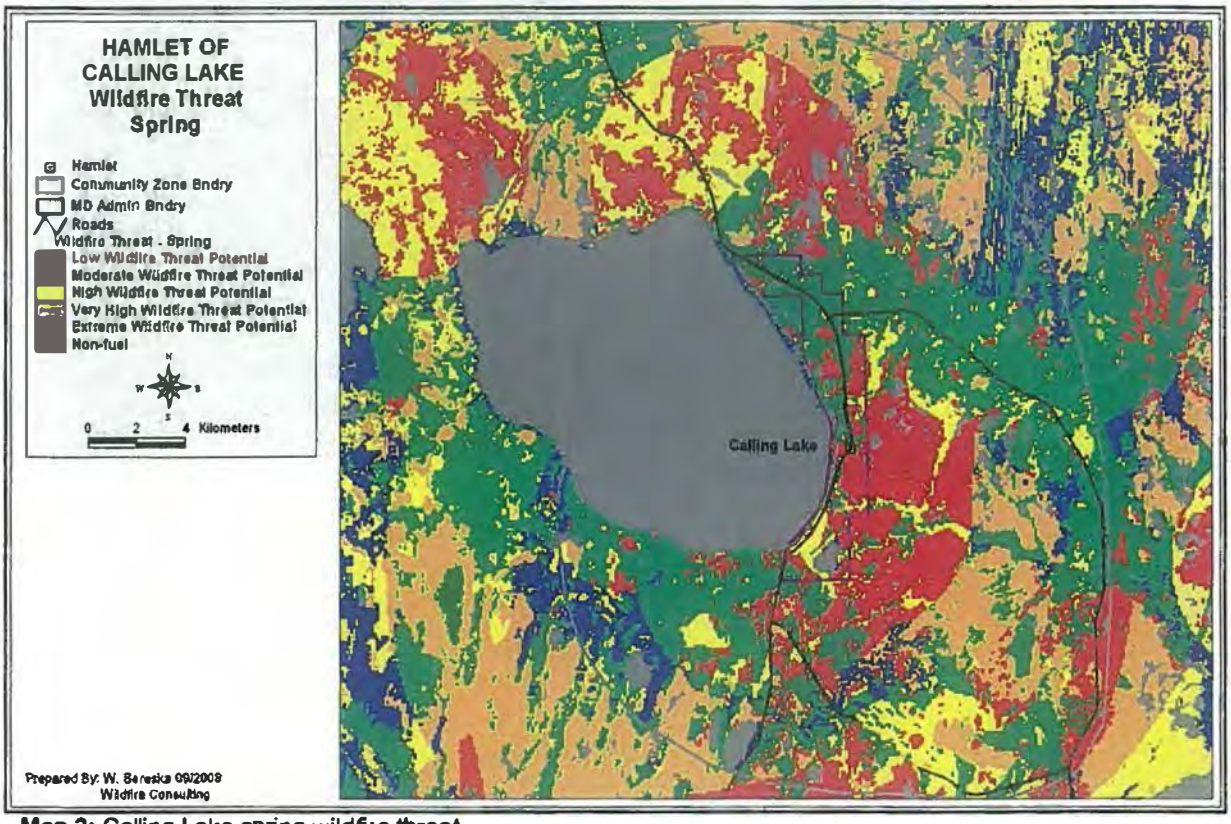
Fire Behavior fuels within the Calling Lake Community Zone (10 Km radius) are predominantly C2 (black spruce), with larger stands of D1 (aspen) to the southwest, east and northeast, the majority of white spruce plantations are to the east and southeast of the community (Map 1). The majority of the plantations can be classed as mixed wood stands (M1) spruce, aspen. The C2 fuels to the southeast combined with the spring southeast winds will pose the greatest wildfire threat to the Hamlet of Calling Lake.

Fuel modification mitigating options have been developed and some have been implemented to reduce the potential wildfire threat to this community.

B. *Spring Wildfire Threat*

The greatest wildfire threat to the community of Calling Lake will come from the southeast and the south. The location and type of forest fuels are the primary factors driving the threat. Fire history shows that the majority of larger fires in this area occur during the spring of the year and they spread from the southeast to the northwest. The lake provides protection to the community from the west. The large 1968 fire just east of Calling Lake has been regenerated with aspen and a number of young white spruce plantations mixed with aspen.

Wildfire Threat - Spring: The wildfire threat model output (Map 2), indicates the greatest wildfire threat to the community of Calling Lake will come form the south and east quadrants during the spring of each year. The threat is high to extreme during the spring fire season.



Map 2: Calling Lake spring wildfire threat.

3. Hamlet of Calling Lake Assessment Areas

To aid with the description of each subdivision the Calling Lake Wildland Urban Interface (WUI) area is broken down into assessment areas.

- Area 1 covers the Sucker Creek subdivision
- Area 2 covers the Jean Baptiste Gambler IR # 183
- Area 3 covers central Calling Lake the main part of Calling Lake
- Area 4 covers 2 Mile Creek and the northern cottage area
- Area 5 covers the Calling River and Memorial Park
- Area 6 covers the southern cottage area, provincial parks and the industrial area
- Area 7 covers the key fuel southeast of Calling Lake.

Map 3: Hamlet of Calling Lake WUI assessment areas 2008

4. Wildland Urban Interface Assessment

A. *Area 1 Sucker Creek*

Map 4: Area 1 mitigating options to reduce potential for a crown fire and long distance ember transport.

i. *2001 WUI Mitigation Options*

In 2001 the overall site hazard rating for the Sucker Creek was described as extreme during the spring fire season. The main reason for the extreme hazard rating within this subdivision was due to the residual logging slash, grass and debris within 10 to 30 meters of residences (photo 1 & 2).

Prescribed mitigating options for zone 1, 2 & 3 included;

1. Total disposal of all logging slash and woody debris within the subdivision to reduce the fire hazard to established residences.
2. Manage the grass hazard on vacant lots and around residences by mowing to reduce the spring hazard.
3. In the mixed wood stands surrounding this subdivision manage the spruce understory by thinning and pruning of white Spruce (Photo 3 & 4).

4. Through education promote the need to maintain a vegetation free zone 1 &2 around residences to reduce the spring grass fuel hazard.
5. Encourage the utility company to remove the hazard trees from along the power lines.
6. Consider the development of an alternate water supply utilizing Sucker Creek that runs through part of the subdivision.

Photo 1: Area 1 slash & Grass

Photo 2: Area 1 debris plies

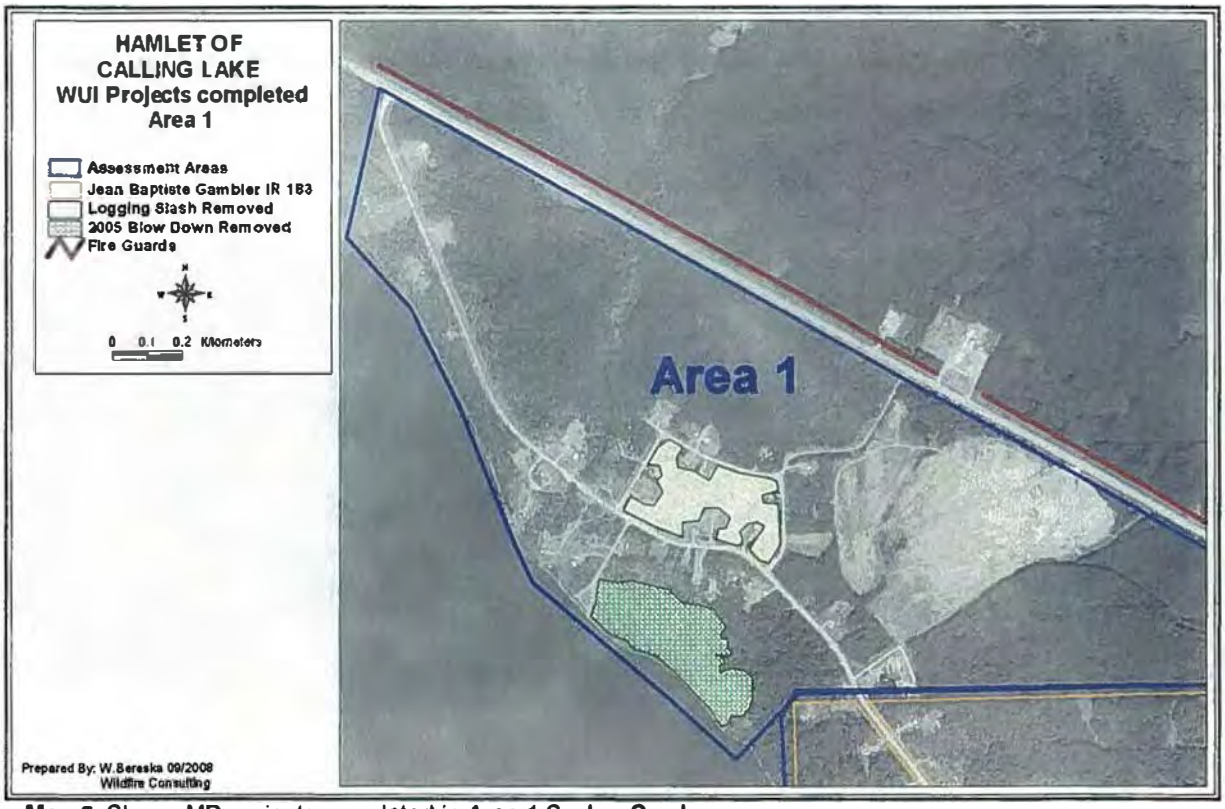
Photo 3: Mixed wood stand in Area 1 along road

Photo 4: Stand understory and ladder fuels

ii. *Projects completed to date*

As of August 2008 the following FireSmart projects have been completed in Area 1(Map 5);

1. The logging slash and debris piles have been removed and burnt (Photo 7).
2. The road way ditches and open areas are being mowed on a regular basis (photo 5).
3. The residential site grass areas are well maintained by mowing (Photo 8)
4. All residual damaged coniferous trees have been removed from within the subdivision (Map 5).
5. A stand of coniferous blow down has been salvaged and the debris has been totally disposed of (Map 5).
6. No thinning and pruning of the surrounding mixed wood stands has taken place due to high risk for blow down in this area associated with summer thunderstorms.



Map 5: Shows MD projects completed in Area 1 Sucker Creek

Photo 5: Ditch grass & vacant lot in excellent condition.

Photo 6: Blow don area totally cleaned up.

Photo 7: Open areas & vacant lots well mowed by MD

Photo 8: Residential lots grass well maintained.

The MD of Opportunity and the residents of Sucker Creek subdivision should be commended for creating a Safe FireSmart Community.

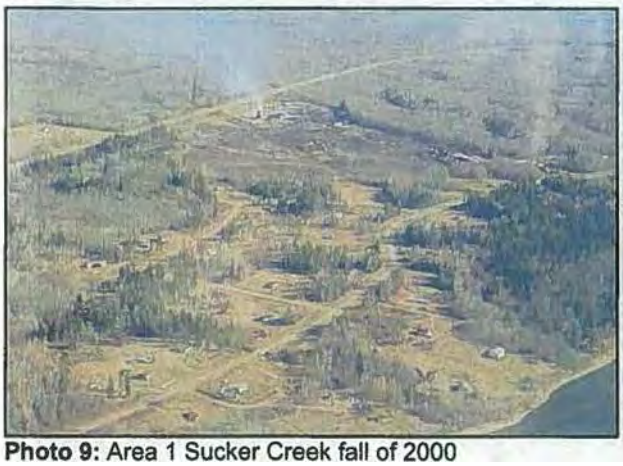
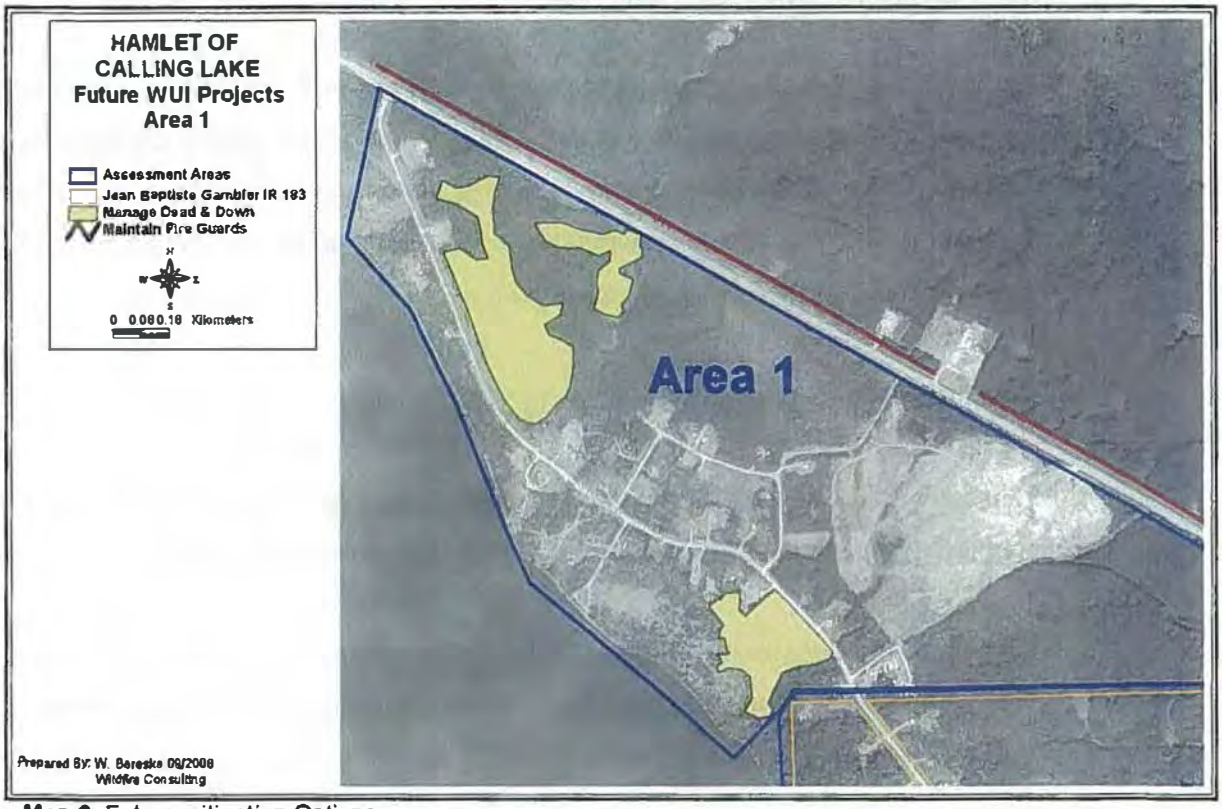


Photo 9: Area 1 Sucker Creek fall of 2000

Photo 10: Area 1 Sucker Creek Aug 2008

B. *Future WUI Mitigation Options*



Map 6: Future mitigation Options.

i. *Area 1 Maintenance Plan (Map 6)*

The overall WUI site hazard rating for Area 1 is low to moderate in spring and low during the summer.

The Sucker Creek subdivision FireSmart maintenance Plan should include the following:

a.) Continue to have the residents and the MD manage the grass fuel loading along the ditches, in open areas and around residential structures by mowing.

b.) Manage the dead and down woody material by removing accumulations and disposing of the of the materials

c.) Ensure water access points to Sucker Creek or the lake are well marked for fire crews during a potential suppression incident.

d.) Encourage the utility company to complete a hazard tree removal program.

C. *Area 2 Jean Baptiste Gambler Indian Reserve # 183*

i. *2001 WUI Mitigation Options*

In 2001 the overall site hazard rating for Jean Baptiste Gambler was described as high during the spring fire season and low to moderate during the summer. The main reason for the high hazard is due to the grass fuels within the 10 to 30 meter zone surrounding the residences and site clearing windrows of woody debris within 30 meters of some residences.

Prescribed mitigating options for zone 1, 2 & 3 included;

1. In the mature dense M1 stands, remove some of the larger coniferous trees and thin the white spruce understory to promote the growth of aspen.

2. Manage the dry grass in the clearings with the use of mechanical equipment or with hazard reduction bums in the early spring before the snow melts in the surrounding forest stands.

3. Encourage the First Nations Band Administration to develop a program, for total disposal of all debris piles within 100 meters of structures in the developed subdivisions. On new sites, total disposal of woody debris should be encouraged at the time of initial clearing.

4. Encourage the utility company to remove the hazard trees from along the power lines.

5. Through education of residences, promote the need to maintain a vegetation free zone 1 by moving the grass on a regular basis.

Map 7: Area 2 mitigating options to reduce fire behavior potential and crown fires.

Photo 11: White spruce understory in M1 Stand

Photo 12: Heavy grass & windrowed debris.

ii. *Projects completed to date*

Projects completed to date include the removal of some old windrowed debris near residential structures.

A new residential subdivision under development has all the debris totally disposed off before trailers are placed on site.

Some residents are doing an excellent job of maintaining the grass accumulation by mowing on a regular basis (photo 14).

Photo 13: New subdivision with total disposal of debris

Photo 14: Well managed grass.

iii. *Future WUI Mitigation Options*

a) Continue to work on removing old debris piles from residential sites.

b) Encourage residents to manage the grass by mowing on a regular basis.

c) Manage the dead and down fuel loading within the coniferous and deciduous stands.

d) Encourage utility companies to remove hazard trees from conductors.

Map 8: Area 2 future WUI mitigating options and maintenance plan to reduce high fire behavior potential.

Photo 15: Debris pile and tall grass on new lot coniferous

Photo 16: Manage dead & down in

Photo 17: Hazard trees in community.

iv. *Maintenance Plan (Map 8)*

To ensure the long term spring wildfire threat is reduced to a safe level encourage the management of the grass fuel loading within the residential sites and manage the dead and down fuels in the coniferous and deciduous stands to reduce the potential wildfire behavior should a wildfire start (Map 8).

D. *Area 3 Central Calling Lake*

i. *2001 WUI Mitigation Options*

Map 9: 2001 mitigating options for Central Calling Lake

In the 2001 WUI document the overall site hazard assessment rating is described as moderate mainly due to isolated pockets of dense white spruce understory and there is a coniferous stand on the east and north of one subdivision (photo 18 & 19). The higher hazard comes from the risk that potential wildfires drive by south or east winds could pose a threat to this subdivision.

Photo 18: Coniferous stand north & east of SD

Photo 19: White spruce ladder fuels

Prescribed mitigating options for zone 1, 2 & 3 included

1. Two potential options for remove of the coniferous fuels on the north and east side of this area were proposed.

2. One is to totally remove the majority of the conifers in one pass, then live with the spring grass hazard until the aspen regeneration will block out the sunlight and reduce the grass.

3. The second option is to develop a two or three pass harvest system that will coincide with the re-growth of aspen. A species conversion plan for this area that will span multiple years. In the first phase selectively harvest the coniferous stands that border the subdivision developments by opening the forest canopy slightly to encourage aspen suckering. Removal of to many trees will allow too much sunlight on the forest floor and promote the grass growth.

4. In the present deciduous stands manage the dead and down fuels and the spruce understory to reduce fuel loads with 100 meters of the structures.

5. Treat the dense understory of white spruce by thinning and pruning to reduce the threat for potential rapid fire spread.

6. Through public education encourage residences to maintain a vegetation free zone 1 all year round but in particular during spring dry grass hazard.

7. On the sites that require considerable work to remove woody debris, shrubs and grass the MD should be encouraged to provide a onetime program to clean up these sites mechanically and dispose of all debris.

8. Encourage the utility company to remove the hazard trees from along the power lines.

9. Develop an alternate water supply by constructing a dug out on the south end of the east subdivision.

ii. *Projects completed to date*

Map 10: Projects completed as of 08/2008

1. The MD harvested the large stands of spruce in one pass (Photo 20).

2. The MD Cleaned up all the sites with debris in the east part of this subdivision and prepared the sites for mowing (photo 22 & 23).

3. The MD provided a hydrant water supply for the east subdivisions.

4. The MD has done a commendable job in mowing the grass in open areas and along the ditch lines.

5. The local resident's maintaining a vegetation free space around their homes by mowing the grass (photo 21).

6. SRD is managing the grass along two mile creek by annually conducting hazard reduction burns and maintaining the fireguards.

7. The highway and mowed ditches provide an adequate fuel break on the east side of this subdivision.

Areas that were identified in 2001 for fuel modification in the northwest of Area 3 and one site in the southeast bordering the prescribed burn have not been thinned. From a FireSmart point of view these sites should be thinned and pruned but they are on private land and it is up to the landowner to complete these projects (photos 26 & 27). With all the fuel modification completed and grass mowing the site hazard assessment of this area can be classed as low.

Photo 20:

Photo 21: MD cleaned up debris on lots.

Photo 22: Debris removed area disked

Photo 23: Area prepared for mowing

Photo 24: ASRD prescribed burn area

Photo 25: Hazard reduction and fireguard.

Photo 26: Dense understory of spruce private land.

Photo 27: Ladder fuels on private land.

iii. *Future WUI Mitigation Options*

Map 11: Future mitigation options in Area 3

1. Develop a fire access road along the west side of the logged area

iv. *Maintenance Plan (Map 11)*

a) Continue with the annual prescribed burn program in Area 3.

b) Maintain the fireguards

c) Continue with the mowing of grass in open areas, vacant lots and in the ditches.

d) Maintain a fire access road on the west side of logged area and allow the aspen to grow to a closed canopy reducing the amount of sunlight that reaches the forest floor which will reduce the grass growth over the long term 5 to 10 years or

e) Manage the grass growth on an annual basis in this large open block. Recommendation d) would be least expensive over the long term.

E. *Area 4; 2 mile creek*

i. *2001 WUI Mitigation Options*

Map 12: 2001 mitigation options for Area 4.

In 2001 WUI document the overall site hazard assessment rating was described as low in the single residential subdivisions and in the cottage subdivision. These subdivisions are located in a D1 fuel complex with a willow grass fuel along the creek on the lakeside.

There is a large area of black spruce (C2) bordering the access roads to the south and east of the subdivisions and with a southeast wind could pose a high wildfire threat to the cottage and residential subdivision (photo 28 & 28a)

Prescribed mitigating options for zone 1, 2 & 3 included

1. The grass, dead willow fuel hazard along the creek should be removed using a low intensity fire in early spring.

2. A fuel modification plan needs to be developed to reduce the coniferous fuels and create a vegetation free zone around the east side of this subdivision along the edges of C2 and

3. M1 fuel types. In the M1 fuels harvesting is an option to remove select conifers and promote species conversion by encouraging aspen suckering.

4. In the C2 fuel type create a vegetation free zone along the highway, from the east edge 100 to 200 meters wide with mechanical mulchers.

5. In the C2 fuel type between the highway and SE of the subdivision there are two options. One, totally remove the C2 by mechanical means or two create a second fireguard along the edge of the C2 between the Subdivision and the C2 fuel type.

6. In the D1 fuel types remove the dead and down fuels for 100 meters on each side of the highway.

7. Through public education, stress the need for cottage owners to remove the flammable material from their sites.

8. Encourage the utility company to remove the hazard trees from along the power lines and totally dispose of all debris resulting from removal of hazard trees from under the power lines.

9. The MD fire Chief should enforce absentee landowners to maintain their sites, or the MD should do the maintenance and bill the landowner through the property tax system.

Photo 28: C2 fuels SE of Developed areas

Photo 28a: Aerial view of C2 looking south

ii. *Projects completed to date*

Map 13: Projects completed in Area 4 as of 08/2008.

1. Rather then totally remove C2 as was recommended in 2001, ASRD thinned an area of black spruce (C2) on both sides of the highway providing a wide area of fuel modification.

2. Additional fireguards were constructed on the east side of the road.

3. The MD removed a mature stand of spruce by harvesting the area and cleaned up the logging debris.

4. The hazard reduction burn in the northwest corner of Area 4 was not completed due to habitat concerns.

The C2 fuels were not removed as recommended in the 2001 WUI plan because of some opposition by local residents. The areas were thinned and pruned reducing the crown fire potential and encourage the growth of deciduous shrubs as a result of additional light on the forest floor.

The overall hazard assessment rating on 08/2008 is low, and the wildfire threat will be reduce considerably when the C2 fuel modification projects are completed east of these subdivisions.

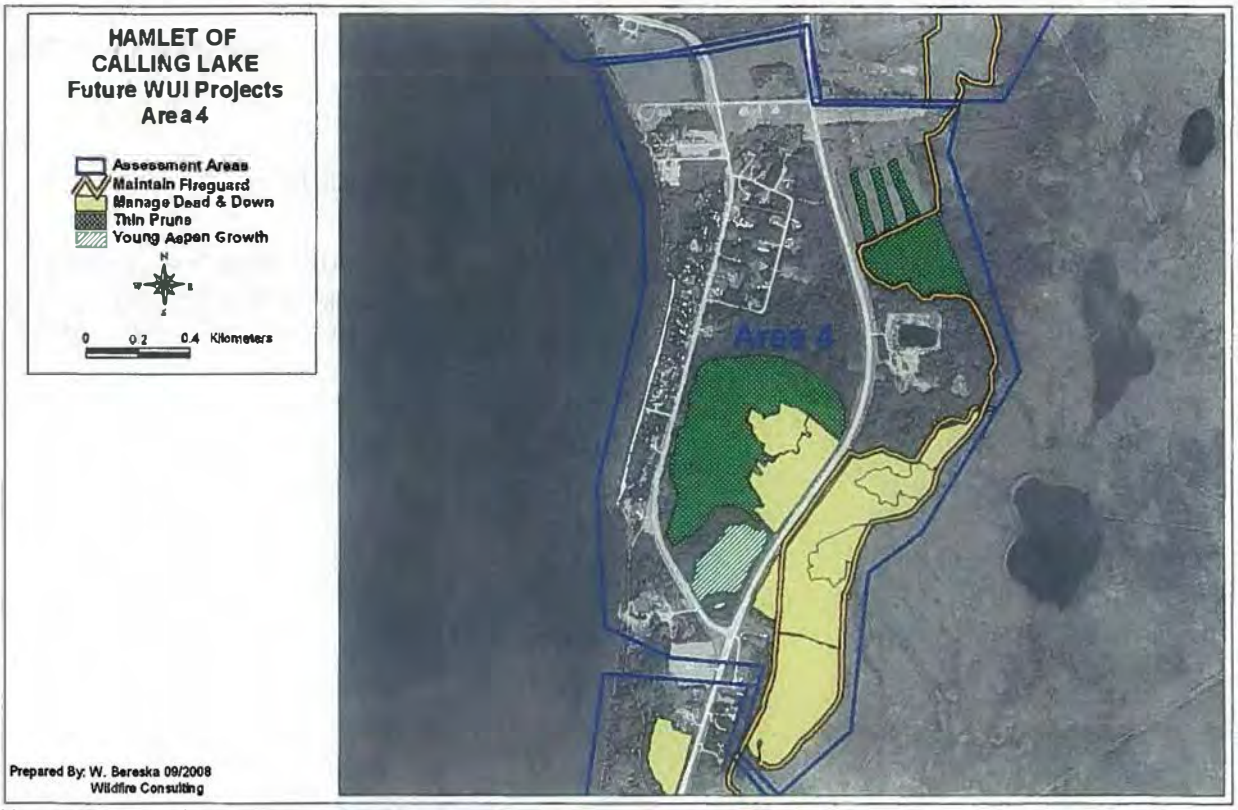
Photo 29: C2 thinned and pruned east of highway

Photo 30: C2 thinned & pruned east of Subdivision

Photo 31: Aspen suckering in harvested area

Photo 32: Fuel break along highway east of SD

iii. *Future WUI Mitigation Options*



Map 14: Area 4 future mitigation options.

1. Complete the fuel modification of Area 4 by thinning and pruning the black spruce (C2) (photo 33).

Photo 33: C2 fuels east of cottage area in Area 4.

iv. *Maintenance Plan (Map 14)*

a) Manage the dead and down materials in the areas already thinned.

b) Maintain the fireguards grass fuel loading by mowing at least once in late summer or early fall.

c) Continue with mowing of the grass in the highway ditches

d) Over the next three years in the logged area across from the old ranger station allow the aspen to grow into a closed canopy which will reduce the amount of sunlight on the forest floor which in turn will reduce the grass growth (map 14).

F. *Area 5 Calling River*

i. *2001 WUI Mitigation Options*

Map 15: Area 5 2001 mitigation options.

In 2001 the overall site and area hazard assessment was rated as moderate in zone 1 and surrounding area due to the heavy grass and coniferous forest stands along the Calling River and on the east side of the highway. Large C2 stands border this subdivision to the south and east increasing the risk of a wildfire threat during the spring with southeast winds.

Prescribed mitigating options for zone 1, 2 & 3 included

1. Remove or thin and prune all coniferous fuels that are within 100 meters of any structure.
2. On the perimeter of the subdivision harvest all merchantable trees that are within 200 meters and promote a species conversion to aspen. In the C2 fuel complex use mechanical mulchers to create a vegetation free zone

around the subdivision in the C2 fuel type, minimum of 100 meters wide to 200 to 300 meters from the structures.

3. With the use of prescribed fire in the early spring reduce the fuel loads in the open areas north and east along the Calling River.

4. Reduce the spring grass fuel loads in the Memorial Park.

5. For the residents that do not have an adequate vegetation free zone 1 & 2 encourage them to remove the coniferous trees and develop an adequate zone1 that consists of mowed grass.

6. Encourage the utility company to remove the hazard trees from along the power lines.

7. Develop a hazard reduction program to reduce the heavy grass areas on vacant lots and the areas surrounding the residential lots along the river.

Photo 34: Calling River C2 fuels south & east

Photo 35: Calling River residences

ii. *Projects completed to date*

Map 16: Area 5 projects completed to 08/2008.

1. ASRD constructed fireguards south and northeast of the Calling River subdivision.

2. ASRD thinned and pruned Coniferous stands south of the Calling River residences and west of the highway at the north end of Area 5 and these areas have a moderate growth of deciduous tree growth.

3. ASRD thinned an area of approximately 75 meters on the south side of the fireguard.

4. MD cleaned up and reduced the grass fuel loading in Memorial Park.

The C2 stands west of the highway were not removed. They were thinned and pruned and should reduce any potential wildfire threat in that area. The grass north of the Calling River is mostly on private land and no prescribed fire is planned for this area. The present site hazard rating is low to moderate with the highest rating during the spring cured grass stage.

Photo 36: C2 west of highway thinned & pruned

Photo 37: C2 west of highway thinned & pruned.

Photo 38: MD Memorial Park well maintained

Photo 39: Aspen suckering in coniferous stand

Photo 40 Looking south. View of Calling River Area 5

iii. *Future WUI Mitigation Options*

Map 17: Area 5 Future WUI mitigation options.

1. Dispose of one debris pile at the east end of the residential area.

Photo 41: Dispose of debris pile.

iv. *Maintenance Plan (Map 17)*

a) Manage dead and down accumulation in the fuel modified areas.

b) Continue with the grass mowing in Memorial Park and along the highway ditches.

c) Maintain vegetation on wet fireguards by blading the grass off with a dozer in March during frozen ground conditions.

G. *Area 6 South Cottage Area, Provincial Park and Industrial Area*

i. *2001 WUI Mitigation Options*

Map 18: Area 6 Calling Lake south cottage area, Provincial Park and Industrial area

In 2001 the overall hazard rating for Area 6 was described as extreme in the north half of the area because some of the structures were built within a C2 fuel complex, plus the building density per hectare is very high.

The south half of this subdivision is located within a D1 fuel complex and is rated as low.

The zone 1 is not well maintained on some sites (photo 42 north end), and very well maintained on other sites (photo 43 central).

The hazard rating in the surrounding area was rated as low to moderate to the east and south with two areas of extreme which included C2 stands north and south of the cottage development.

Photo 42: Inadequate zone 1 in C2

Photo 43: Well maintain zone 1

Prescribed mitigating options for zone 1, 2 & 3 included

1. Develop a long-term species conversion plan to convert the C2 & C3 fuel types to a deciduous species. Selectively removing black spruce and jack pine and planting a highbred aspen that can survive on sandy soils.

2. An early spring hazard reduction burn should be initiated to reduce the fuel loading in the grassy willow (map 17) area east of the highway.

3. Reduce the down and dead fuels on the reserve lands between the lots

4. A very strong educational program needs to be developed to inform the cottage owners of their liability should they accidentally start a fire, and it spreads to other properties.

5. The northern cottage owners should be encouraged to develop a species conversion program on their property. Selectively remove coniferous trees and plant deciduous highbred.

6. Cottage owners that do not adequately maintain a vegetation free zone 1 like in (Photo 44), should be given an order for removal of fire hazard by the local Municipal Fire Chief.

7. Encourage the utility company to remove the hazard trees from along the power lines.

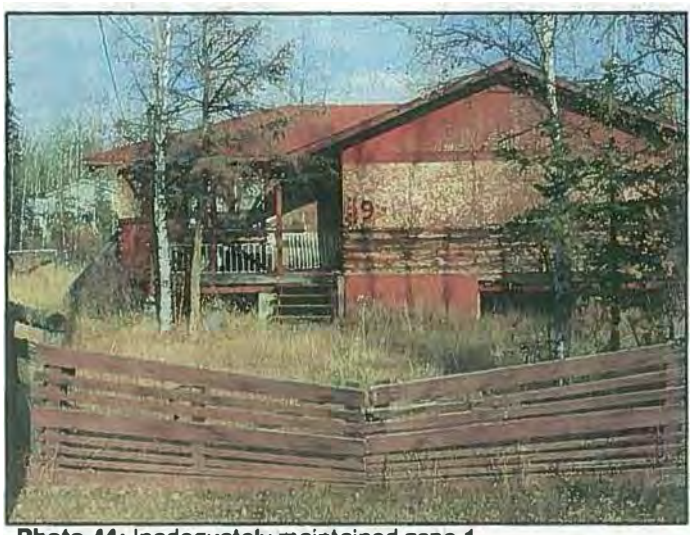


Photo 44: Inadequately maintained zone 1

ii. *Projects completed to date*

Map 19: Area 6 2001 mitigation options. Calling Lake south, Provincial Park and Industrial area.

1. ASRD constructed fireguards in area 6 and conducts an annual hazard reduction burn to reduce the grass fuel loading to a minimum.

2. Blow down resulting from severe winds in 2005 areas were salvaged and the logging debris were totally disposed off. This took place on MD lands, Provincial Parks and on provincial crown lands.

3. ASRD thinned and pruned an area around a residential and industrial site then also salvaged the blow down.

iii. *Future WUI Mitigation Options*

Map 20: Area 6 Future WUI mitigation options.

1. Thin and prune a small stand of C2 southeast of the cottage area.
2. Remove and totally dispose of dead and down woody debris south of the access road to Ward Chemical (This project started on Sept 22/08 and will be completed by end of Oct/08.
3. Burn the logging debris piles east of the highways maintenance shop.

Photo 45: Debris piles in harvested block

Photo 46: C2 southeast of cottage area

Photo 47: Area with Dead & Down debris

Photo 48: Dead & Down in aspen stand.

iv. *Maintenance Plan (Map 20)*

a) Manage dead and down accumulations where fuel modifications have taken place.

b) Maintain grass vegetation on fireguards.

c) Conduct hazard reduction burns as required to reduce the grass fuel loads in the willow grass area east of the highway (reference map 20 for all the above).

5. Community Zone

A. *2004 CPZ Mitigation Options*

The Hamlet of Calling Lake was seriously threatened by wildfires in 1968 and narrowly missed any damage to residential property. As a result of continuous coniferous stands to the southeast of Calling Lake combined with dry southeast wind patterns during the spring fire season, a wildfire threat to the community exists today. ASRD has developed a strategic FireSmart plan to mitigate the wildfire threat to this community. A number of initiatives have been started to modify fuels and impact fire behavior in a way that will aid fire suppression should an imminent wildfire threat exist. A community protection zone plan has been developed for the short (5 to 10 years) and long term (10 to 20 years). The current 20 year plan may have been slightly disrupted by the large amount of merchantable trees that were damaged by strong wind storms in 2005. The damaged merchantable stands were salvaged and some areas scheduled for earlier harvest to aid the long term fuel modification, may have to be delayed.

Map 21: Calling Lake community zone short term plan.

The 2004 Community Zone plan identified the following short term mitigation options

CZ Area 1

1. Review and adjust DFMP and operational logging plans to accommodate short and long term fuel modification within the Calling Lake Community Zone.

2. Harvest all coniferous stands on east side of "C" roads, with plans to convert to deciduous dominated land base.

3. Continue to harvest and thin white spruce stands on east and west side of "C" road.

4. Burn all debris piles within the old harvested areas.

5. Totally dispose of all new logging slash within the Community Zone.

CZ Area 2

1. Harvest all coniferous stands on the south side of 1000 road and north of the lakes west of S.R. 813.

2. Burn all debris piles within the old harvest areas.

3. Totally dispose of all new logging slash within the Community Zone.

CZ Area 3

1. Develop a prescribed burn plan for an early spring hazard reduction burn to remove the buildup of dead willow and grass fuels between the small lake and to the east to the "C" road .

2. Harvest a small area east of highway 813 just south of the cottage subdivision.

3. Thin and prune east of the highway to reduce the density of the coniferous fuels.

4. Remove coniferous fuels just east of the small lake along proposed containment line to allow for a wider coniferous fuel free zone.

The salvage logging of the 2005 blow down area and total disposal of all logging debris south of Calling Lake along the highway has greatly reduce the fuel loading. This area is now converting to a mixed wood stand and in 3 to 5 years will provide enough shade to the soil surface to reduce grass growth drastically.

B. *Community Zone Projects completed to date*

Map 22: Shows projects completed south and east of the hamlet of Calling Lake.

The following Community Zone projects have been completed.

1. With the exception of a few blocks, all the old debris piles within the previously harvested blocks have been burnt.

2. All 2005 blow down areas have been salvaged logged and debris disposed of except for one block.

3. An area around Ward Chemical and the transportation shop has been thinned and pruned.

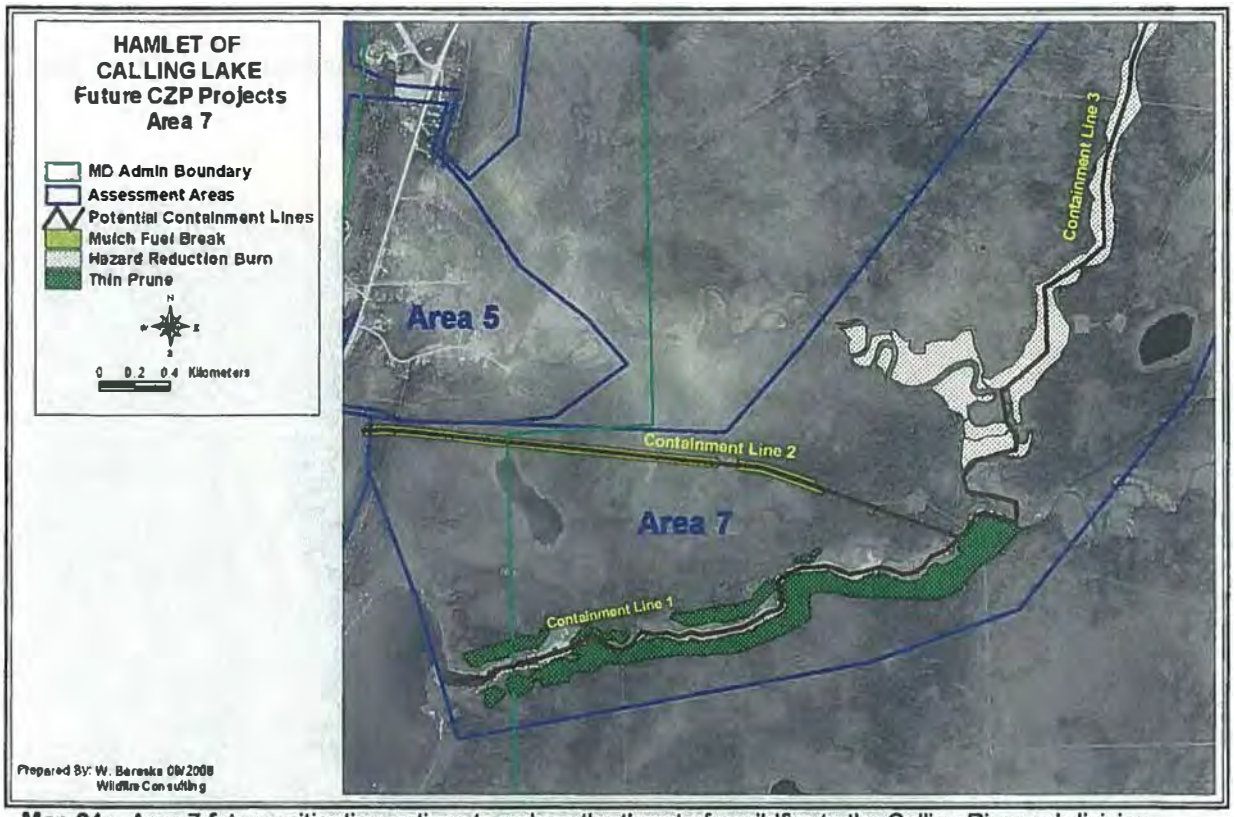
4. Prescribed hazard reduction burns have been completed on part of the area identified in the 2004 CZP. The north portion of the area identified for

prescribed burning has dense willow growth and will not lend itself to burning at this time. The overall burn area was reduced to the south portion.

5. Logging slash on any new blocks within the Community Zone is being totally disposed off.

Map 23: Shows community zone projects completed on the south and eastern boundary of the Hamlet of Calling Lake WUI zone.

C. *Area 7: Future Community Zone Mitigation Options*



Map 24 : Area 7 future mitigation options to reduce the threat of a wildfire to the Calling River subdivision.

To create a potential fuel break that can be used to contain a wildfire threat from the southeast to the Calling River subdivision there are two options.

1. In the area of Containment line 1 use the natural fuel break already on the landscape created by the water course. To widen and improve the natural fuel break thin and prune the coniferous understory in the aspen stands and the black spruce stands. This will provide an area where an advancing wildfire behavior can be reduced to a surface fire or a intermittent crown fire instead of a crowning fire. and can be easier to contain. Potentially a total of 50 ha would have to be fuel modified. The advantage of using containment line 1 is that there would be virtually no future maintenance and there would be a water supply for fire suppression along the entire width of this containment line. Except for two or three small black spruce stands this area has more aspen stands along the water course. Some of the aspen has an understory of black spruce that would have to

be thinned to reduce the potential for candling and increasing the potential for ember transport. The priority for thinning would be to start with the C2 stands along the water course.

2. In the area of containment line 2 use an existing access trail that goes to a wellsite and widen this access trail through the black spruce by mulching a width of at least 20 meters on each side of the existing access trail. The biggest disadvantage of containment line 2 is that almost the entire length of the line except the extreme east end goes through a C2 stand which is highly susceptible to a crown fire. Even with creating additional width to 40 or 50 meters this fuel break could very easily be breached by airborne embers. An estimated 8.0 ha would require mulching to provide a 40 to 50 meter fuel break. To support potential wildfire suppression water sources will have to be developed along this containment line. In the future this line would also require long term maintenance.

D. *Community Zone Future Mitigation Options.*

Continue with the short and long term vegetation management strategies along "C" road and 1000 road identified in the 2004 Calling Lake Community Zone Plan.

a. The short-term plan includes the harvesting of coniferous fuels for creating fireguards and modifying the continuous fuels in high wildfire threat areas identified in Area 1 and, 2 as shown on map 25.
b. The 2004 Calling Lake community zone plan identified in area 3 east of the small lakes, two stands that should be harvested to provide a wider coniferous free fuel break. These stands contain minimal merchantable trees and under Area 7 future mitigation options new fuel modification options are proposed.

Map 25: Calling Lake community zone short term plan

c. Long-term (20 to 60 year time frame) plans, must include the management of lands (200 to 400 meters) next to "1000" and "C" roads as a deciduous vegetation zone. This will reinforce the roads as fireguards and ensure they are effective fuel breaks for years to come (Map 26, Long-Term Fuel Modifications). To ensure the deciduous stands are very effective as fuel breaks, they should be managed on a sixty(60) to seventy(70) year harvest rotation with minimal surface fuel loading.

Map 26: Calling Lake community Zone long term fuel modification.

E. *Maintenance Plan (Map 24)*

a) Continue with hazard reduction as required along containment line 3.

b) If a fuel break is developed along containment line 2 then annual grass mowing in early fall or blading with a dozer in early spring would be required to reduce the grass fuel loading on this fuel break (Map 24).

c) Manage dead and down fuels in all areas that were thinned around Ward Chemical and the transportation maintenance yard.