

SILVER CITY COMMUNITY FUEL ABATEMENT PLAN

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SILVER CITY COMMUNITY FUEL ABATEMENT PLAN

EXECUTIVE SUMMARY

Fire risk is a major concern in the Silver City community. The community meeting held in June 2007 expressed urgency in developing an action plan for addressing the high level of spruce bark beetle infestation in their area.

A fuel abatement strategy and an implementation plan are proposed to assist in reducing that risk. If a fire does start, an emergency response plan is proposed to minimize any potential damage from the fire. Each of these plans and its application is discussed in this document.

The highest priority fuel abatement areas are within the community zone, and then in the integrated zone adjacent to the community zone. The landscape zone is to be addressed by the Yukon Forest Management branch.

The Kluane Park area adjacent to Haines Junction is being reviewed with the Yukon Wildland Fire Management to coordinate fire risk management application.

The Introduction and Background Sections provide information to recognize some of the investment that the Yukon Government (YG), the Champagne Aishihik First Nation (CAFN), and the Silver City community have made to date towards making their community safer.

The forests surrounding Silver City have been assessed in detail for such things as stand composition and fire behaviour characteristics. The assessment was the basis for deciding where to focus attention and efforts. This plan sets guidelines to be considered while conducting future treatment activities.

Community members can work with the Yukon Wildland Fire Management (YWFM) and CAFN to prepare ahead of time to reduce risk in the most critical areas. They can change their activities during the peak fire season in areas that have a high or moderate risk. They can implement an emergency response plan to address fires should they occur in the community or interface zones.

1.0 INTRODUCTION

1.1 Silver City Community Concerns

Silver City is a small community located at Kilometre 1697 on the Alaska Highway (Map 1). The threat of wildfire to any community surrounded by forest is a growing concern at Silver City and in most communities in the Champagne Aishihik Traditional Territory (CATT) in the Yukon. There have been several large forest fires in the region. Some areas, especially where the spruce bark beetle is killing a large number of trees, continue to add to the fire hazard.

The Silver City community wants to reduce the risk of the possibility that fire may threaten their community. Being informed and aware of the level of risk and having a plan of action to reduce the risk of any particular building or area is important in reducing risk. This plan is designed to assist the community to be safer by reducing the possibility of fire and by preparing to deal with a wildfire should one start.

Fire prevention starts with awareness of the critical elements for fire to be successful. It then proceeds to assessment of the elements and a plan for removing, or at least reducing, them in a strategy to reduce risk. The next step is to identify critical areas of fire risk. Assessing the forest fuels in the critical areas is the basis for creating a fuel abatement plan. Fuel abatement is the removing or reducing of forest vegetation such as standing or down dead trees, or forest litter, shrubs and other plants, that are ignitable. Treatments designed for removing ignitable fuels within and surrounding the community will reduce the destructive potential should a wildfire occur.

Since it is unlikely that all fuels can be removed from the whole community area, a strategy of reducing the risk of fire starting and having an emergency response to fires must be included. The strategy will incorporate guidelines set out in the Strategic Forest Management Plan (SFMP) and the Integrated Landscape Plan (ILP).

1.2. Forests and Fire Behaviour

A general discussion to highlight important fuel abatement characteristics and strategies provides some background for the fire hazard abatement plan development.

The fire triangle in Figure 1(a) shows fire needs fuel, heat, and air to burn. If one of these three elements is removed, a fire cannot start or will be extinguished.

Figure 1(b) shows that wildfire behaviour is dependant on fuel, weather, and slope of the land. The key factors that influence fire behaviour most are summarized as:

- a) Fuel: Moisture content, type (species and size), and closeness (continuity)
- b) Weather: Wind, air moisture (humidity and precipitation), and temperature
- c) Topography: Slope, aspect, and terrain

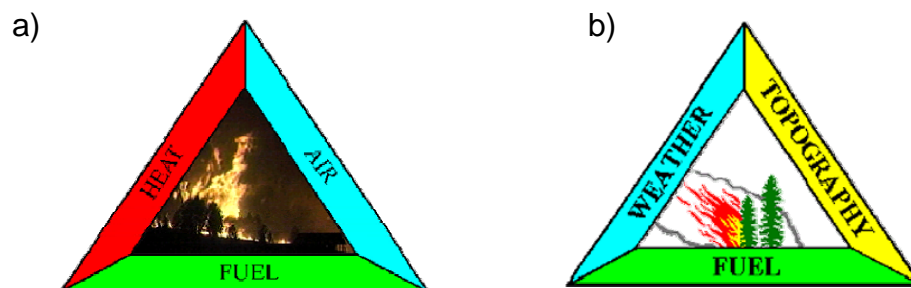


Figure 1 Fire Behaviour Triangle

In all cases, we have the most influence on available fuel, and then on heat (e.g., through the addition of water).

There are three principle kinds of wildfires (see Figure 2):

1. Ground fire: A ground fire burns forest litter: needles, leaves, grasses, dead branches that have fallen to the forest floor. A ground fire is not very hot and can be suppressed with quick action.
2. Surface fire: A surface fire moves up to the next layer of a forest, to include the smaller trees, shrubs and branches. It is hotter than a ground fire because there is heat from below and air moving through the branches. This fire can still be suppressed, with more effort, to prevent it from moving to the upper layer of the forest or the crown layer.
3. Crown fire: A crown fire burns very hot and can spread very quickly from tree top to tree top. It is usually very difficult to put out a crown fire. With high winds, it can jump large distances.

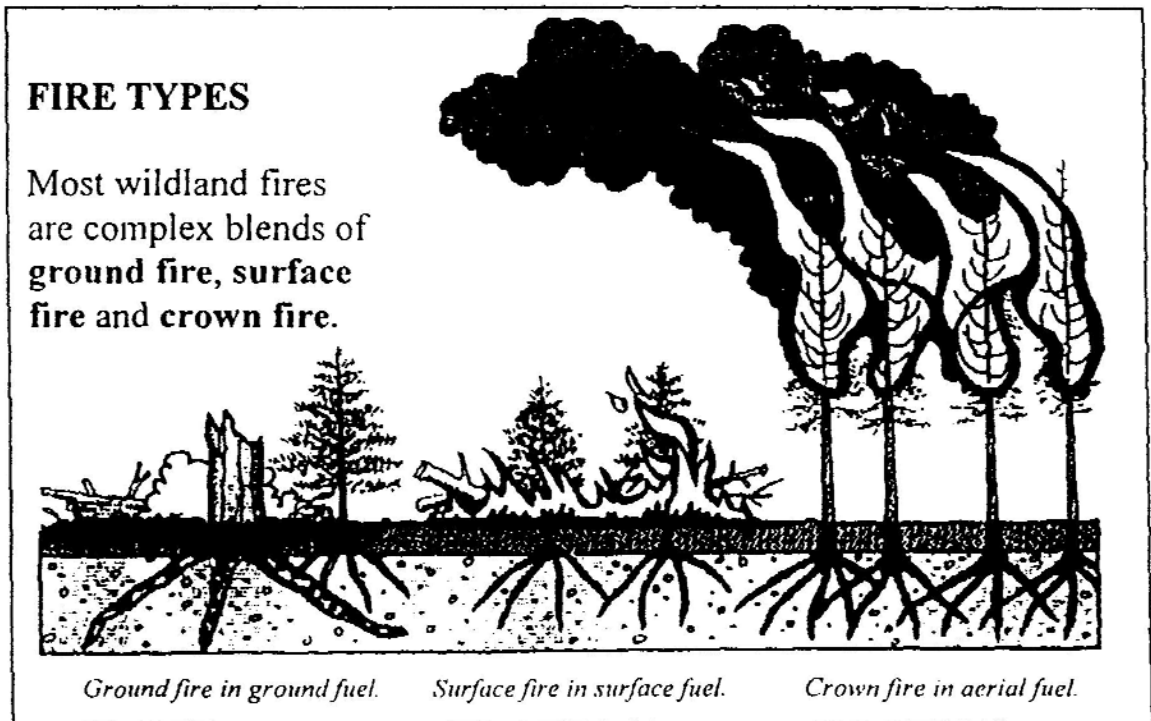


Figure 2 Fire Types

The condition of the forest, the terrain, and the weather, will determine the severity of the fire hazard. Dry forest litter, combined with old, dying or dead trees can be fuel for a high intensity wildfire. Coniferous trees, especially the beetle-killed spruce trees, are more flammable than deciduous trees such as trembling aspen. The structure of the forest may support a crown fire if trees are spaced too close together or if there are many branches adding to the understory, or a mixture of tall and short trees that creates a ladder of fuel to the crown (Figure 3).

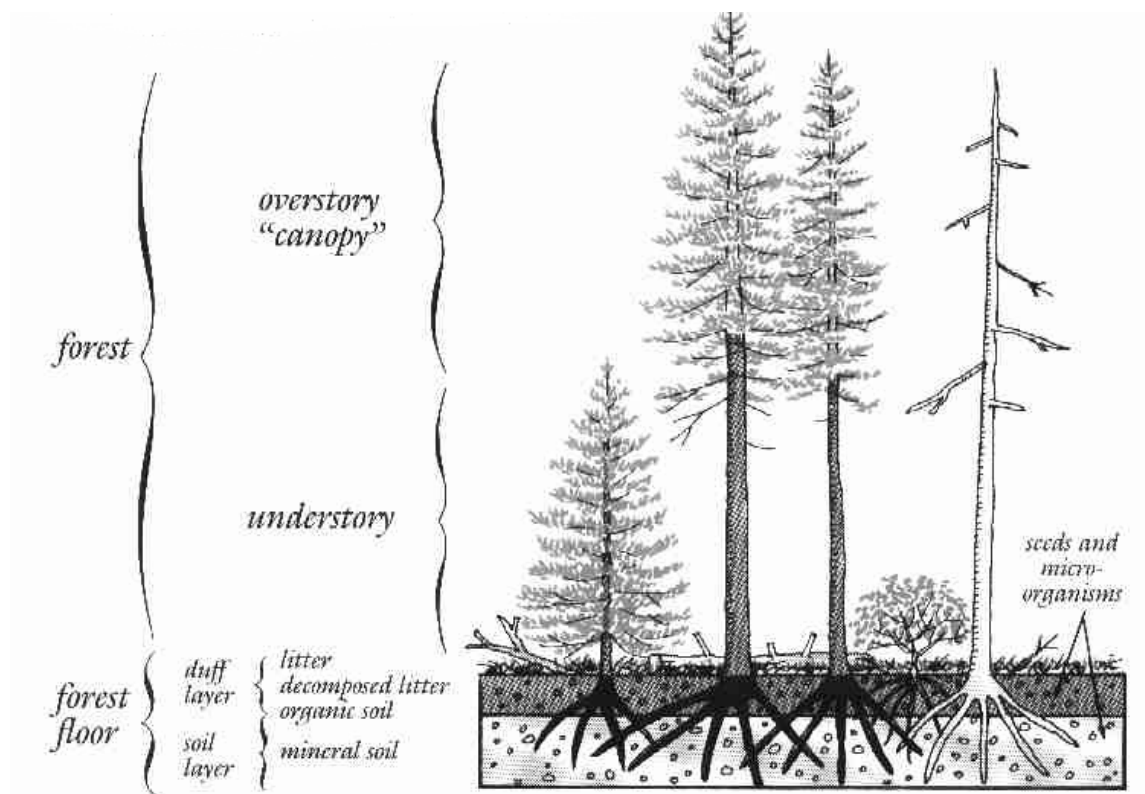


Figure 3 Forest Layers

In recent decades, Yukon forests may have experienced up to one degree of warming. This can mean more insect and disease outbreaks and a higher risk of wildfire. Warming is expected to continue to increase over the next century (Ogden 2008). The fire hazard abatement plan needs to consider the long term effects of climate change on the forest and the fire hazard abatement plan.

2.0 BACKGROUND

The Strategic Forest Management Plan, the Implementation Agreement, and the Integrated Landscape Plan identified community fire risk management as one of its highest priorities. The Champagne and Aishihik First Nations and the Yukon government agree to manage their respective lands within Champagne and Aishihik Traditional Territory following the intent and guiding principles of the SFMP and the ILP.

The SFMP for the CATT has the goal to keep the forest healthy, productive and dependable as a resource for the people. The ILP was drafted to help the SFMP reach its goals. The ILP identified management zones which provide direction as to what activities can occur where, and present planning guidelines for setting priorities for fire hazard abatement (see Section 2.0 Table 1).

There is a cost to fire hazard abatement and fire response preparation. Funding of these projects will be enhanced by the community's plan being consistent with the guiding principles of the SFMP and the ILP, and being fundamentally sound. Since Silver City is connected to other neighbouring forest users in CATT and along the Alaska Highway, it can further enhance the plan by coordination with those other communities.

A multi-agency Fuel Abatement Technical Working Group (FATWG) has been working to help carry out the SFMP objectives. The FATWG developed fuel abatement priority zones for the ILP to assist the development of fire hazard abatement plans and strategies for communities of the CATT. Treatment guidelines have been developed which were to assist developing treatment prescriptions. The guidelines are:

1. To reduce fuels at or near the forest floor to levels to reduce ground fire potential and intensity.
2. To prevent ladders of fuel that the fire can climb to reach the crown level of the forest.
3. To reduce closely spaced coniferous tree tops to an acceptable level, so that crown fire potential is significantly reduced.
4. To encourage development of a vigorous forest that is less likely to be attacked by the spruce bark beetle.
5. To keep a forest structure and composition that will respect values for wildlife, ecosystem function, scenic beauty, and cultural aspects as much as possible without giving up community safety.

The application of these guidelines is to be focussed first on areas that are in the community zone closest to values at risk (homes and special buildings, heritage areas or structures) and next on adjacent areas (the interface zone) with higher risk for fires to start. Application into the landscape zone will be primarily to address specific high risk areas identified by the YFM.

The Integrated Landscape Plan identified priority zones for fuel abatement based on recommendations of the Resource Assessment Technical Working Group. The ILP also suggested methods for fuel abatement treatment. Table 1 summarizes the recommendations of the ILP.

In Silver City plan area, most of the community and more than half of the interface zones are within high wildlife zones as shown in Map 2. The balance of the area is outside high wildlife zones. The priority ranking for addressing fuel abatement plans and responses are outlined below.

Kluane Park is included in the southwest portion of the plan area. A separate plan is being drafted by the Federal Parks with input from the Yukon government.

Table 1 Forest Resource Management Zone: Rank of Area Priorities

Fuel abatement and timber harvesting should be planned according to the following scale of priorities to address fire risk. Map 2 depicts the priority ranking of where treatments should occur first in relation to fuel abatement zones.

Zone	Rank Priority	Priority/Strategy
Fuel Abatement area: Community Zone	1st	Priority: Fire hazard reduction through fuel management. Strategy: Community Plan to determine the activities used to reduce fire hazards. Options include activities like Fire Smart and logging including firewood collection.
Fuel Abatement area: Interface Zone outside High Wildlife Values area	2nd	Priority: Fire hazard reduction through fuel management is the priority in this zone. Strategy: Focus on intensive and extensive management of fuels within 2 kilometres of a community. Primary option includes logging. Site plan may include partial retention.
Fuel Abatement area: Interface Zone inside High Wildlife Values area	3rd	Priority: Fire hazard reduction through fuel management in surrounding High Wildlife Value areas is the priority in this zone. Strategy: High Wildlife Value Areas not treatable. Focus on intensive and extensive management of fuels surrounding High Wildlife Values within 2 kilometres of a community. Primary option includes logging. Site plan may include partial retention.

The first priority is to make the community zone safe.

3.0 COMMUNITY DESCRIPTION

3.1 Location

The community of Silver City is located on the southern shores of Kluane Lake at Kilometre 1697 of the Alaska Highway. This is a small community with several private lots, a bed-and-breakfast, and an airstrip. The University of Alberta has a facility to support research activities being conducted in the area surrounding Silver City.

3.2 Forest Environment

Map 3 gives a good overview of the forest environment in relation to the community of Silver City. It shows the private lot lines, the buildings and the transportation infrastructures, small power lines, and creeks which pass through and near the community.

The RATWG provided input to the SFMP and the ILP identified most of the forested area in the Silver City area as having high wildlife values. These forests are more important for their contribution to wildlife habitat and thus should receive less tree removal in prescriptions than other non-high wildlife areas.

The key forest factors that influence fire risk are:

a. The Fuel

The forest around Silver City is largely comprised of mature, even-aged white spruce stands. Beetle (*Dendroctonus rufipennis*) activity has been prolific in the area for some time now, resulting in a high degree of mortality among overstory trees. The timber with the highest fire risk is the spruce leading species types. The predominantly spruce forests show as darker zones on the orthophotographs.

There is a relatively high to moderate incidence of spruce bark beetle-killed timber in the Silver City community and interface zone area, therefore the incremental fire risk caused by a high component of spruce bark beetle-killed spruce trees within the conifer timber areas is relatively high.

The largest influence that the Silver City community members can have on fuel abatement is to reduce the fuel on the areas around their homes (see Section 5.2 a).

b. The Weather

The Silver City community is located on the shores of Lake Kluane. Historically, Silver City has few days during the fire season that are high fire hazard. Still, it only takes one day with a high fire hazard to cause concern about this kind of event.

c. The Topography

The terrain in the community zone is relatively flat. There are steep banks rising out of Christmas Creek to the east, but these features do present a huge fire momentum risk, but there are no buildings in the area. Where houses are built on slopes, there is a potentially increased risk as shown in Figure 4.

Figure 4 Steep Slopes with more fuels increase risk

3.3 Fire History

Silver City has had only a few fires in the last forty years. Still, with climate changes and the forest fuel from increased spruce bark beetle infestations, the wildfire risk is higher.

The cause of fire is generally from one of a few sources. One is human, a second is nature (as in lightning strikes), and a third is from infrastructure breach incidents in or near the community.

3.3.1 Human

Residents have the greatest potential for causing a fire through their own activities – such as careless handling of cigarettes, welding, operation of equipment, etc. – within the community zone.

Tourist camping in unofficial campsites such as abandoned gravel pits along the Alaska Highway presents a significant risk of wildfire ignitions; (e.g., the recent large fire on the Kenai Peninsula in Alaska and the RV burning incident near Silver City). Campfires located near flammable fuels must have buffer pits. The travelling public's confusion about fire danger levels and compliance with campfire restrictions tourists must be warned of any high fire hazard conditions in the area and be advised about appropriate precautions when camping.

3.3.2 Nature

The greatest natural hazard may be lightning striking a target like a dead spruce tree that protrudes above the rest of the forest and acts like a lightning rod. This event could happen in any zone, but removal of these tall dead trees within the community and interface zones are the highest priority to reduce the risk significantly.

3.3.3 Infrastructure

Resident service power lines can be a significant wildfire ignition risks in the Silver City area, especially where dead trees at the edge of the power line can fall over and cause the line to break and cause a fire. Power lines to homes are susceptible to shorting when overgrown by vegetation. Wildfires have occurred in recent years (1999) in Marshall Creek to the east due to trees being blown over power lines. Resident power lines and right-of-ways must be actively cleared and/or maintained.

In the interface and the landscape zone, a main power line runs west to east through the south side of Silver City. This line should be the focus of regular vegetation maintenance to reduce risk.

Regular burning of waste in waste disposal sites poses a hazard, especially if it is not monitored during high fire hazard periods. Burning pits should have a 30-metre clearance around them (Ember 2000).

3.4 Fire Suppression Capability

The Silver City community has some capability to fight fires in the community zone. It has no volunteer fire department but some residents have fire pumps and hoses that they will use if needed.

Fire suppression water supply needs to be identified in all areas of the community and interface zones, including those focussed on natural sources of ground or creek water. No hydrant system exists in the interface zone in Silver City. The lake and creeks are the best source of water. Supply points must be documented on a map for ease of use.

There is a system of trails and rough track roads throughout the area that will facilitate movement of some fire fighting equipment. The access for emergency vehicles varies but is generally poor for conventional structural fire response vehicles outside of the community zone.

Whitehorse and Haines Junction have wildfire response centres run by Yukon Wildland Fire Management (YWFM) that will come to the aid of the Silver City community if fire suppression requires air tankers or additional ground fire suppression crews and equipment.

4.0 FUEL ABATEMENT APPLICATION

The fuel abatement area surrounding Silver City has been broken into three zones, consistent with the Integrated Landscape Plan. The zones are intended to assist prioritizing assessments and treatments based on values at risk to the community and fire hazard risk. Table 1 describes the zones, while Map2 shows where they are in relation to the community. The fuel abatement part of this plan focuses on the forests in the community zone and the interface zone. These forests have been inspected and assessed to determine their stand composition and fire behaviour characteristics. Map 4 highlights the areas identified for treatment as a result of these assessments. The prescriptions for treatments need to be created in those areas that have the highest values at risk and have the greatest risk of having a fire start. The treatment prescriptions need to follow the guidelines in this document to meet the objectives outlined in Section 2 above.

Community zone fire hazard assessments should be organized through the FireSmart Partnerships in Protection program. The objectives would be to match the first three objectives of the FATWG guidelines – reduce fire hazard.

Interface zone assessments and treatments will be focused on reducing fire hazard, but also focus on providing improved forest health and wildlife habitat. This zone will focus more on objectives 4 and 5 of the FATWG guidelines.

In the landscape zone, beyond the interface zone, fuel abatement is best carried out with logging the dead timber stands.

Isolated small patches of coniferous trees surrounded by aspen groves or non-flammable vegetation offer a lower risk of a fire spreading beyond those patches. The vegetation forms a firebreak of inflammable material to contain the fire. These patches would be treated later than higher priority areas, especially if there are no values at risk identified.

The assessment detail within each priority zone must match the fire hazard risk, the cost of the application, and the funding available, but still must meet the fire hazard reduction target. Areas with lower risk will need less survey and assessment detail.

5.0 STRATEGY

The information above provides the basis for a strategy for Silver City to reduce fire hazard based on a risk assessment of the areas of the community. Priorities are assigned to each area in the community zone and then the interface zone to determine which should be done first since time and money resources will not allow all risk areas to be treated concurrently.

5.1 Community Zone Strategy

The Community Zone strategy is largely based on the application of the FireSmart program. FireSmart's aim is to prevent or reduce fire hazards near the home and within the community. Community members whose homes have had a FireSmart assessment learned what the fire hazards around their homes are and what they needed to do to remove or manage the risk. From this, they have a better understanding of the hazards in the larger community and the need to reduce these hazards. Keep in mind that some measures may not be suitable or may need to be modified for each property.

Priority of treatment should be based on values at risk, level of fuel loading, and risk of ignition. A higher priority should be placed on treating areas easily reached by roads or trails that are well-used by people, as people can be the biggest risk for ignition.

a) Fuel Abatement Around Structures in the Community Zone

A building will not burn if fires are prevented from getting near them. Removing ground fuel such as needles, leaf litter, and branches, which burn very quickly and very hot will reduce the risk that a fire will cause the building to burn. As long as larger fuels such as logs and tree trunks are removed from the areas surrounding the building, the fire will not spread from the ground to the trees.

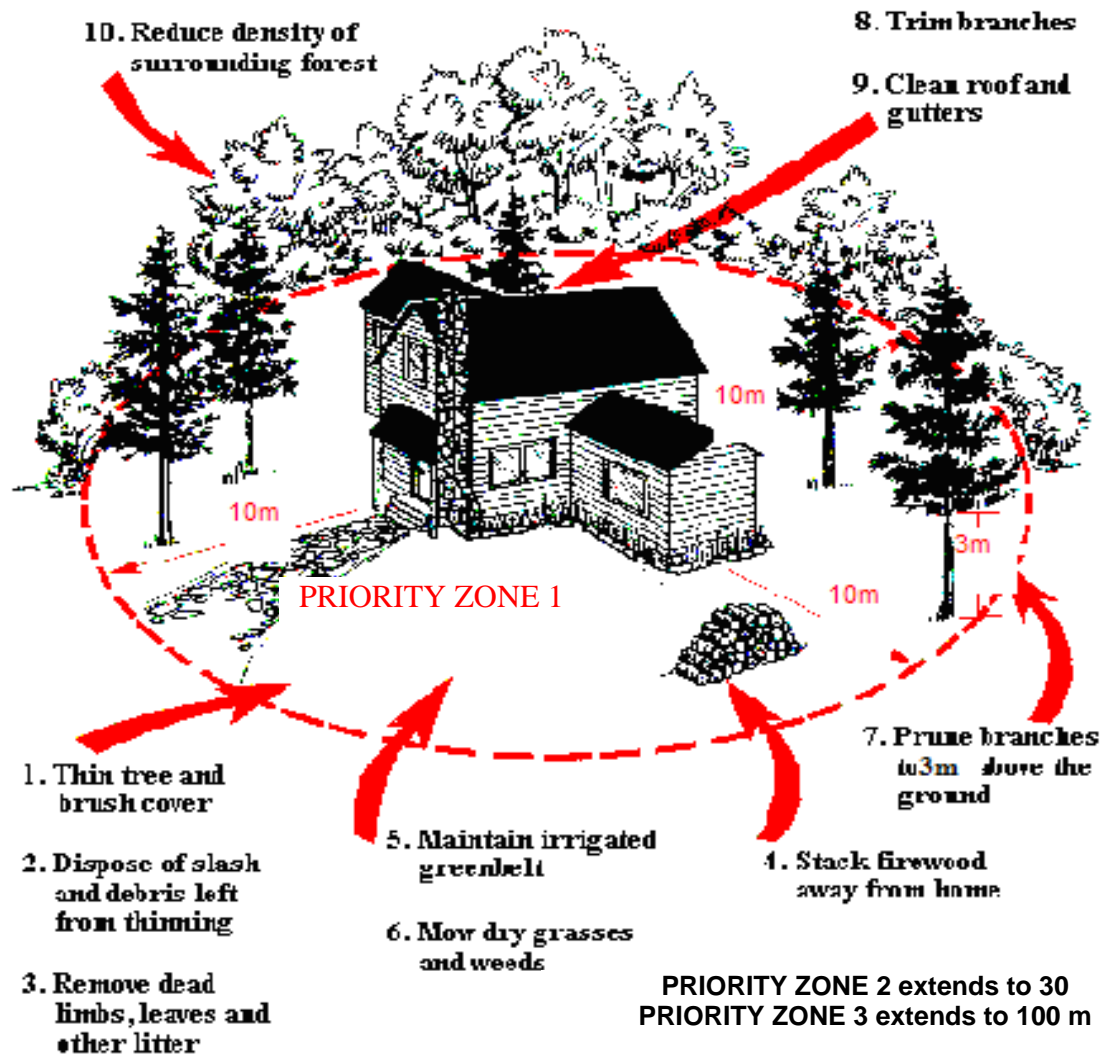


Figure 5 Home Ignition Zone/Priority Zones 1 and 2

There are three Priority Zones (PZ) around each building. Priority Zones 1 and 2 are illustrated in Figure 5. The recommended Fuel Hazard Abatement treatments for each are:

- **Priority Zone 1**

This applies to the area immediately beside a building extending outwards in all directions up to 10 metres on flat ground. This can increase to 30 metres or more on steep slopes. This zone will ideally be fuel free with a defensible space that firefighters can prevent fires spreading between buildings and the tree line.

Vegetation management practices include:

- 1) Remove all flammable plants within 10 metres of home or convert to fire resistant species [deciduous trees (aspen), low shrubs, annuals, etc.
- 2) Space plants to three metres apart.
- 3) Remove deadfall, dry brush and ground litter.
- 4) Remove very old, dead, and dying trees with potential to fall over or ignite. Remove or cut stumps level with the ground.
- 5) Steep slopes (i.e., greater than 15%) with trees increase the hazard to structures (i.e., placement at top of slopes), so increase the space of plants to 30 metres (see Figure 5).
- 6) Prune any evergreen trees remaining within this zone to three metres above the ground with pruning shears and remove the cuttings.

- **Priority Zone 2**

The area circling a building starting at the end of Zone 1, at 10 metres and extending out to 30 metres. This zone will become an area that should not support crown fires. Surface fires may spread across this zone but will be of low intensity and easily extinguished. Fuel reduction rather than removal is the main strategy. Suggested plant management practices:

- 1) Thin forest tree crowns to tree crown separation of at least three metres. Leave larger deciduous trees and thin less at edges of wind-exposed stand faces.
- 2) Remove older, dead and dying coniferous trees.
- 3) Prune conifers to a height of at least two metres. If some are to be left they should not be grouped or in contact with mature trees.

- **Priority Zone 3**

This area starts where Zone 2 ends, extending out to one hundred metres and beyond if needed. Fuel management actions would only be applied if there were high hazard levels resulting from significant fuel loading and steep topography, and fuel management in Zone 2 does not reduce the hazard. Fuel management options would be the same as Zone 2.

b) **Fuel Abatement Away from Buildings within the Community Zone and in the Interface Zone**

The areas away from buildings have fewer valuable items that could be lost, and have less exposure to people, and are at less risk for fire starting. Thus, they are second priority for fire hazard abatement procedures. They are more important than the more remote forested areas because of a greater exposure to risk of ignition by people and have potentially more significant impact on the Community Zone values at risk.

The Partners in Protection FireSmart recommends vegetation management should be done by the homeowner to minimize fire risk. Each resident must decide what level of treatment they feel is desirable.

5.2 Interface Zone Strategy

The interface zone for Silver City is broken into two distinct administrative sub-zones as shown on Map 4.

- Sub-zone A is closest to the community and is of higher priority. This is where fuel abatement treatment contracts should be considered.
- Sub-zone B, further east from the community, is of lower priority for treatment. Long term treatment strategies should be applied here and the area is intended to act as a fuelwood supply area for local and small volume operators.

The interface zone fuel abatement treatments will be prescribed using the inventory assessment to identify which areas have the highest risk and are the easiest to control if a fire was to start. Those areas (Sub-Zone A) will be treated first. Highest priority treatment sub-zones will be those that have:

- a. Higher values at risk
- b. Frequency of use by people
- c. More spruce bark beetle-infested timber
- d. More ground fuels including evergreen understory vegetation
- e. Accessibility by vehicle or equipment
- f. Access to water

The priority ranking in the ILP notes that high wildlife value areas in the interface zone should be set as a lower priority for treatment than other interface zone areas. High wildlife forests are more important for their contribution to wildlife habitat and thus should consider these values during prescription development. The FATWG fifth guideline in Section 2 states that high wildlife areas are:

“To keep a forest structure and composition that will respect values for wildlife, ecosystem function, scenic beauty and cultural aspects as much as possible without giving up community safety.”

Most treatments will include some form of logging. Treatments will include fuel abatement by:

- a) Thinning dense stands of trees: Changing the horizontal and vertical structure of the forest stand to a more open condition by removing all the large trees leaving only the smaller healthy trees or by removing all the small trees leaving only the larger healthy trees, or spacing trees three to five metres apart. In all cases the remaining trees must be able to withstand increased wind thus avoiding timber being blowdown.
- b) Patch cutting and thinning: Removing all conifers in a selected area, varying in size from 0.2 ha to 10+ hectares, with the objective of breaking up the continuity of canopy cover and leaving small patches of well-spaced trees within these patches.
- c) Clear-cutting with reserves: Removing a strip of larger trees leaving only small islands of trees so that fire is less likely to jump across to start a new fire inside the protected area.

5.3 Landscape Zone Strategy

The landscape zone strategy will be similar to the interface zone strategy. Harvesting areas will be selected based primarily on incidence of spruce bark beetle-infested and killed timber being near ready access or near features such as power lines where the likelihood of fire starting is a concern. Harvest patterns will fit integrated resource management objectives as set out in the SFMP, the ILP, and the Timber Harvesting Planning and Operations Guidelines (THPOG).

Landscape zone treatment within the Kluane Park area will be managed with the additional constraint of meeting park objectives.

6.0 EMERGENCY RESPONSE PLAN

All fuels and risks will not be removed from any area in Silver City. There is not the money or the capacity to reduce the fire hazard to zero.

The previous sections focussed on a strategy of reducing the risk of fire starting and fuel abatement strategies. The community also needs an emergency response plan (ERP) to suppress a fire if one has started in the community or the interface zone. Any fire in the landscape zone will be addressed by the YWFM. Any Kluane Park fires will be addressed by the Federal Parks with the assistance of YWFM.

The primary mutual aid partner in the event of wildfire is Yukon Fire Management. Silver City is located within the Critical Fire Management Zone and would receive immediate response from YWFM. Average flight time for air tanker response from Whitehorse in high hazard conditions would be anticipated to be approximately 100 minutes. Ground crews in rotor wing aircraft would support from either Haines Junction and/or Whitehorse.

Getting the full force of the YWFM team onto the fire is expensive. It is not necessary if a community force can suppress the fire before a larger force is necessary. An appropriately equipped and trained community team with a well-constructed emergency response plan can save damage and cost of suppression.

The ERP implementation needs an organization structure, basic fire fighting tools and equipment, and a communication system to be effective.

6.1 Organization

The organization of the ERP would include Silver City community's local residents, with equipment available, capable of responding to local fire emergencies. Activities and preparation should be under the guidance of the YWFM manager in Haines Junction.

Silver City needs to have one community fire coordinator and central contact. There needs to be an approved plan – preferably provided through guidance by YWFM – and a communication protocol established. Volunteers would be trained and supported by the YWFM. The CAFN could maintain the hall and equipment.

Wildfire suppression capabilities would be focussed on initial attack response procedures. They would have to know when to call the YWFM coordinator and when to call for major help if they cannot control the blaze. All effort should be made to control wildfires by 10:00 a.m. of the morning following discovery. Controlling a fire after this time is less likely to succeed because increasing winds and heat of the day will add energy to the wildfire.

6.2 Communication

Silver City community members need to know current contact numbers in the event of a fire. Anyone in the community should be able to alert the Silver City Fire Coordinator, or an alternate person, and the YWFM authorities of the fire, and initiate the fire response system.

YWFM provides Fire Danger rating signs at the entrance to Burwash Landing and in the village of Haines Junction. The fire danger rating can be found at <http://www.community.gov.yk.ca/firemanagement>.

Fires can be reported at:



7.0 IMPLEMENTATION

Once the strategy is approved, the community needs commitment from all members and agencies involved for the fuel abatement plan to succeed. Commitment can be achieved through:

- Awareness of the need for everyone to be involved in the plan.
- Participation in the promotion of the plan.
- Completion of fuel abatement on private properties. Individual property owners need to do as much as they can to protect their own spaces and, at the same time, protect neighbouring areas.
- Awareness of critical weather conditions.
- Participation in the implementation of any joint initial fire suppression action.

The community needs to work with CAFN and the YG agencies. YWFM is the key government agency in fire protection. Their assistance and experience working with community participation is critical. Together, their combined efforts will make the whole community much safer.

The implementation of the fuel abatement plan will require the reviewing of fuel load information in the community zone and the interface zones. It will require the application of the fuel abatement strategies identified to meet the goals set out in the ILP and FATWG guidelines. It will also require the establishment of an emergency response plan and organization to respond to fire incidents.

In the community zone, as recommended by the Partners in Protection FireSmart, vegetation management should be done by the property owner to minimize fire risk. Each owner must decide what level of treatment they feel is desirable.

In the interface zone, community leaders need to select and organize people to be in charge of carrying out the work needed to be done to implement the plan. They will need to work with YWFM to decide how to carry out their list of activities to activate the fuel abatement plan.

In the landscape zone, YWFM and CAFN will take the lead role, but will coordinate plans with community leaders.

To ensure full coordination of the fuel abatement strategies:

- All plans must be referred to local CATT and Yukon government resource managers. The guidelines set out in the THPOG are suitable for referral to other resource agencies with mandates in the CATT area.
- Yukon government (Wildfire Management and Forest Management Branch and Environment) and CAFN will evaluate the proposed activity plans.

8.0 MONITORING AND MAINTENANCE

The Fire Hazard Abatement Program needs to be monitored and maintained to ensure its maximum effectiveness. The community, CAFN, and the YWFM should have active parts in this part of the plan.

The annual report should include:

- Monitoring plan: Treated areas need to be recorded on maps and monitored for success and failures.
- The Research and Monitoring Technical Working Group have designed monitoring protocols which should be instituted.
- Community representatives must be involved.

All plans should be referred to local CATT and Yukon government resource managers to benefit from their experience.

9.0 FUNDING

Funding is unlikely to provide for treating all the community's needs at once. Silver City members will need to work with the YG and CAFN to find funding to implement the plans.

Community zone FireSmart treatments can cost \$7000/ha and should be coordinated through community associations. Private property remains the responsibility of the property owner.

Interface zone treatments should be more extensive and cost less per hectare. The treatments are most likely to be done in specific high through FireSmart operations at high Value at Risk locations.

Landscape zone areas should primarily be completed by commercial operations such as logging for fire wood or sawmill timber. These operations could provide some or all of the treatment funding where that is done.

Non-commercial treatments will have to be funded from other sources.

ACRONYMS

CATT	Champagne and Aishihik Traditional Territory
CAFN	Champagne Aishihik First Nation
CFB	Crown Fraction Burned
CS	Community Services
CZ	Community Zone
ER	Emergency Response Plan
FAP	Fuel Abatement Plan
FATWG	Fuel Abatement Technical Working Group
FBP	Fire Behaviour Prediction
FMB	Forest Management Branch
FWI	Fire Weather Index
ILP	Integrated Landscape Plan
IZ	Interface Zone
LZ	Landscape Zone
RATWG	Research and Technical Working Group
SFMP	Strategic Forest Management Plan
THPOG	Timber Harvest Planning and Operating Guidebook
YG	Yukon Government
YWFM	Yukon Wildland Fire Management

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Map 1, Overview: Fuel Abatement Zones. Community Fuel Abatement Plan, May 2007. CATT (FAZonesOverview.pdf) map (HJworking.pdf) Fuel Abatement Zones. CATT (Haynes Junction=HJ).

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Champagne Community Fire Risk Planning Zones, Yukon Government, CAFN, Government of Canada and others.

Haines Junction and area Community Fire Risk Planning Zones, Yukon Government, CAFN, Government of Canada and others.

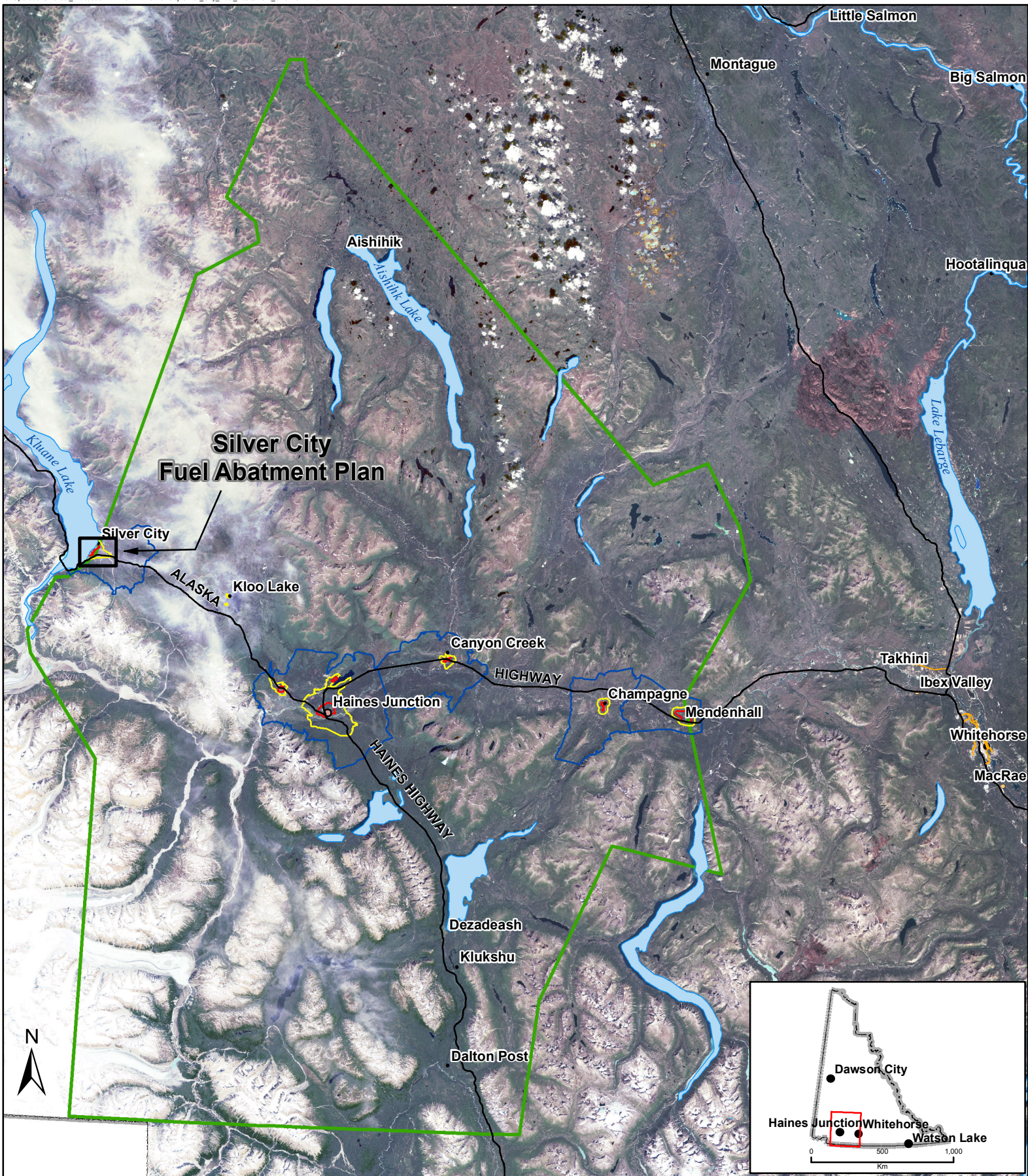
APPENDICES

Map 1: Overview map showing geographical location of Silver City and the corresponding fuel abatement zones.

Map 2: Map depicting the location in which activities should be prioritized in relation to fuel abatement zones.

Map 3: Detailed map of Silver City community zone showing roads, infrastructure, lot lines, and settlement lands.

Map 4: Priority areas map showing stands identified for treatment.



MAP 1 OVERVIEW MAP

Silver City Fuel Abatement Plan

Updated: May 2011

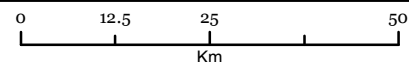
Legend

Administrative Boundaries

- CATT Boundary
- Fuel Abatement Zones
- Community Zone
- Interface Zone
- Landscape Zone

Topographic

- Waterbody
- Highway
- Primary Roads

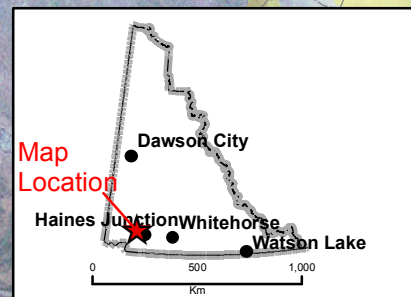
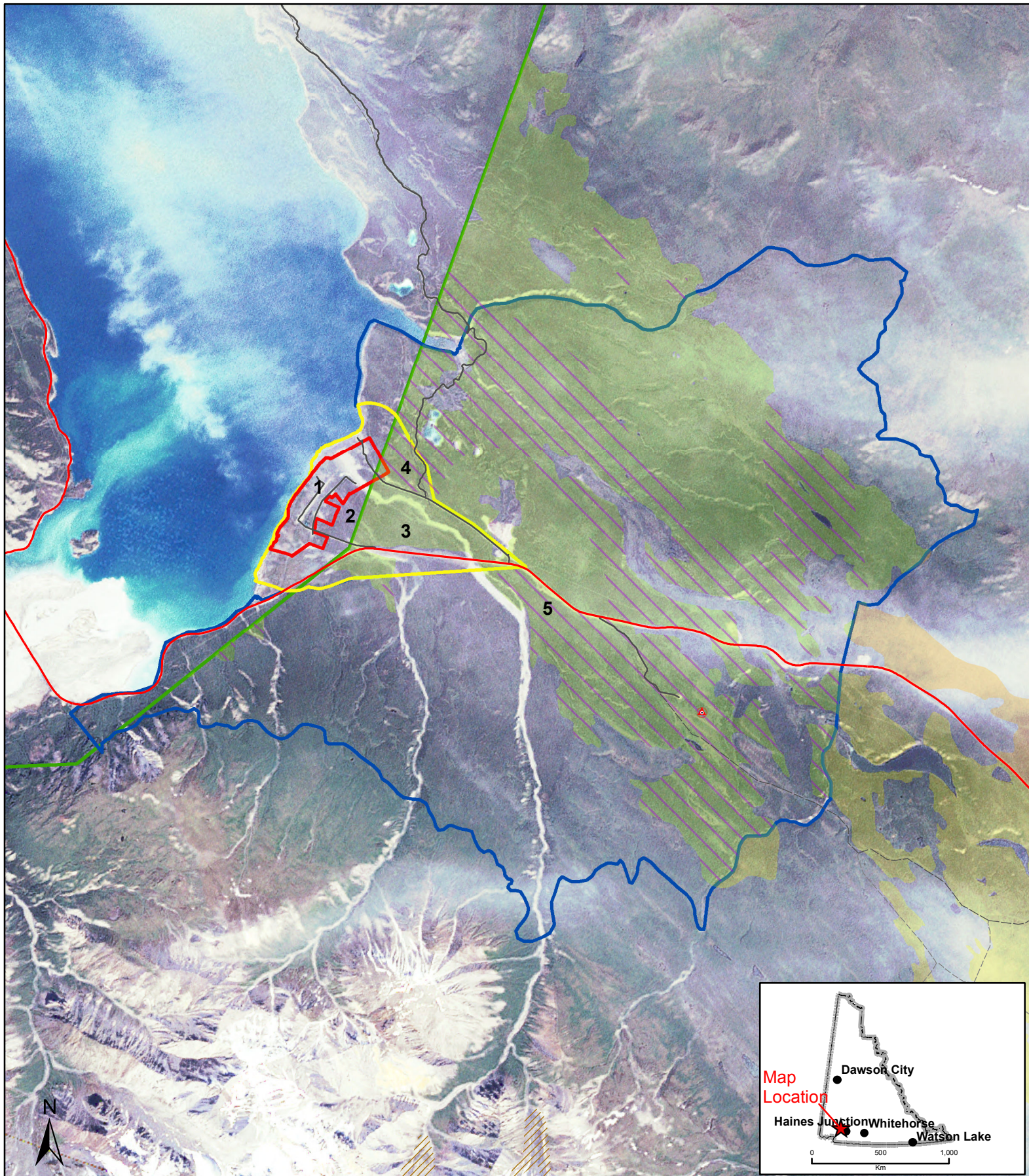


Yukon Albers Equal Area Projection
North American Datum 1983

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Forest Management Branch
Yukon Territory



MAP 2 PRIORITY AREAS

Silver City Fuel Abatement Plan 2008

Map Updated: 2011

Legend

Fuel Abatement Zones

- Community Zone
- Interface Zone
- Landscape Zone

Administrative Bdry

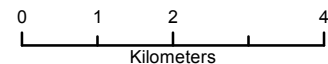
- CATT Boundary

Resource Assessment Zones

- Forest Resource Management Zone
- Conservation Forest Management Zone
- Provisional Forest Management Zone
- Wildlife Value Areas

Transportation

- Highway
- Primary Roads
- Local Roads
- Resource

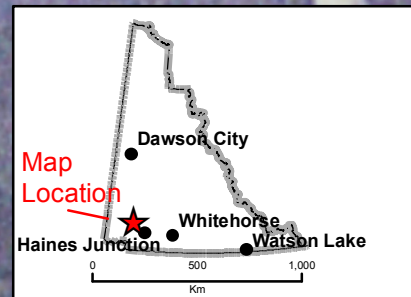
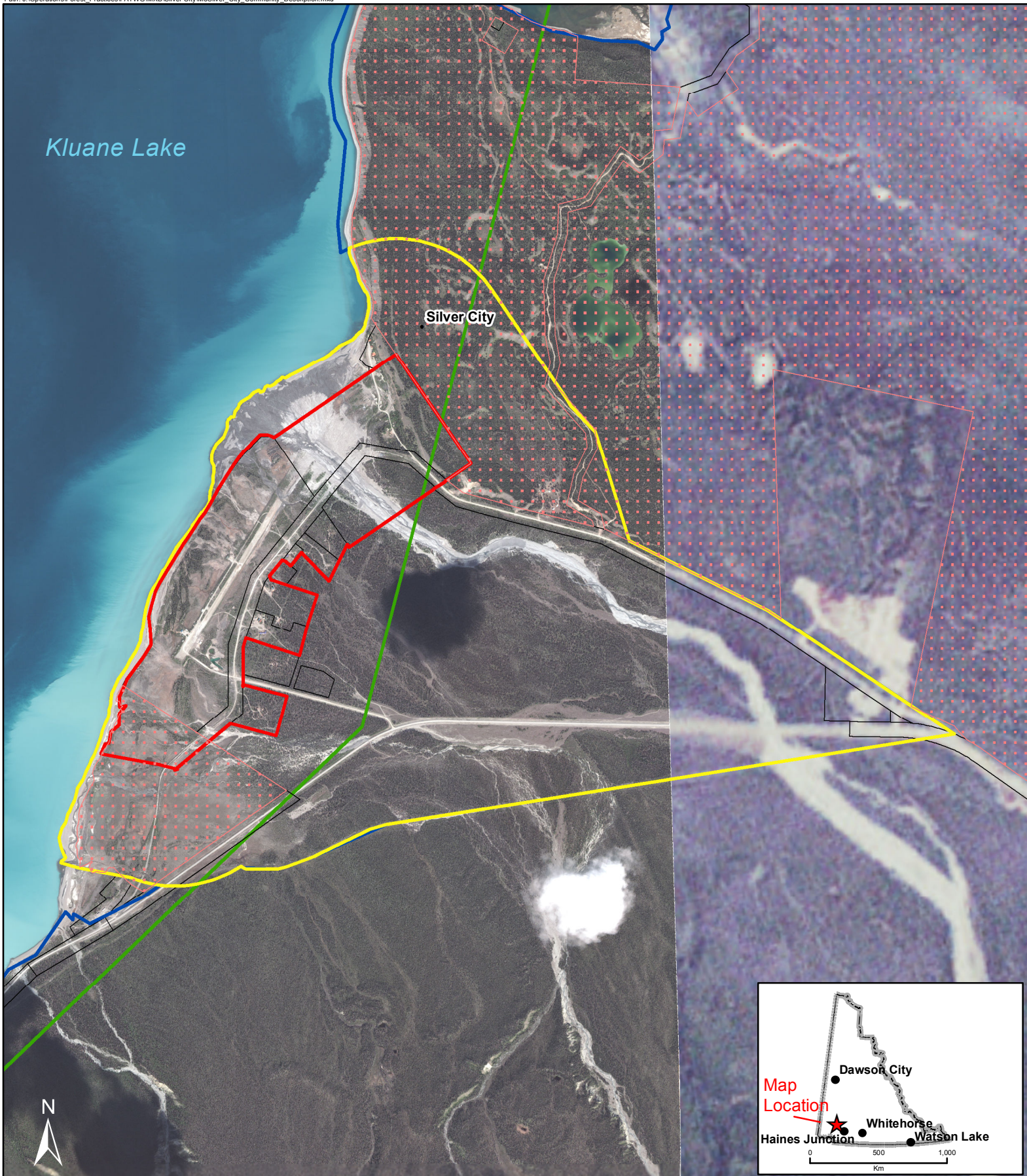


Yukon Albers Equal Area Projection
North American Datum 1983

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MAP 3 COMMUNITY DESCRIPTION

Silver City Fuel Abatement Plan 2008

Map updated: May 2011

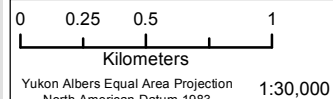
Legend

Administrative Boundaries

- First Nation Settlement Lands
- Surveyed Land Parcels
- CATT Boundary

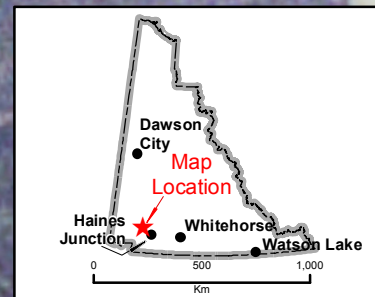
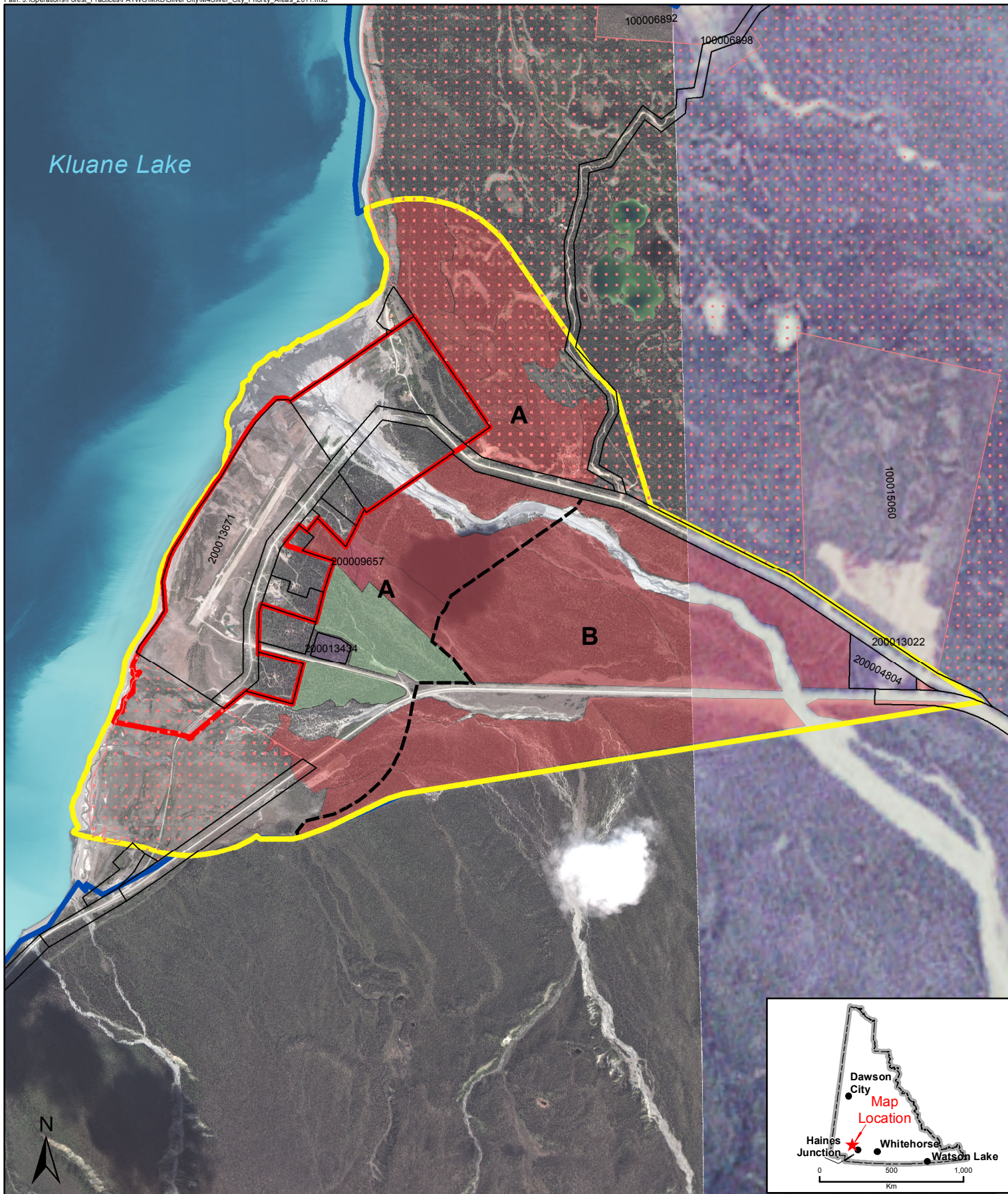
Fuel Abatement Zones

- Community Zone
- Interface Zone
- Landscape Zone



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**STANDS IDENTIFIED
for
TREATMENT**

**Silver City
Fuel Abatement Plan
2008**

Map updated: May 2011

Fuel Abatement Zones

- Community Zone
 - Interface Zone
 - Landscape Zone
- Fuel Abatement Areas**
- Proposed
 - Treated

Land Administration

- Surveyed Parcels
- Agreement for Sale
- Lease
- Reservation
- First Nation Settlement Lands

0 0.25 0.5 1
Kilometers

Yukon Albers Equal Area Projection 1:30,000
North American Datum 1983

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