

**F i r s t N a t i o n s  
a n d F u e l M a n a g e m e n t**

**2010  
snap shot**



**B . C . F i r s t N a t i o n s F o r e s t r y C o u n c i l**

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## Abbreviations used in this report

**CWPP:** Community Wildfire Protection Plan

**FNESS:** First Nations' Emergency Services Society

**FNFC:** First Nations Forestry Council

**FN-FFMWG:** BC First Nations/Government Forest Fuel Management Working Group

**Prov-FFMWG:** Provincial Forest Fuel Management Working Group

**UBCM:** Union of BC Municipalities

## Conclusion

In closing the program to date has shown a number of successes and in many ways created a blueprint of how working groups can come together from different backgrounds to work together as a collective to achieve their goals. It is hoped that the issues still facing First Nations

communities, as well as non First Nations communities, can be addressed in the near future. Immediate attention is required to maintain the FN-FFMWG much time and energy has been spent to create an effective organization to combat the forest fuel issues of this province.

## Recommendations

There are a number of recommendations that need to be considered and implemented for a successful First Nations Fuel Management Program.

1. Create a combined federal and provincial program to deal with First Nations fuel management concerns, including Fire Smart for all 201 First Nations Communities.
  - Develop a Memorandum of Understanding between the Provincial Government, Federal Government, FNFC and FNESS. Commit to ongoing FN-FFMWG activity that has ability to affect any policy changes that may be required from the working group recommendations.
  - Commit appropriate funding for the streamlined planning, prescription and operational treatment processes required on priority basis, taking into consideration on-reserve (federal) and off reserve (Provincial) jurisdictions.
2. Ensure funding for First Nations involvement with Provincial and Federal Fire Management Planning and Coordination Program(s), with ensuring priority values are protected and agency resources are coordinated.
  - Develop immediately a MOU to ensure First Nations involvement with Fire Management Planning and Coordination Program(s). FNESS is positioned to take a lead role.
3. Develop a Geographic Information System (GIS) process to standardize fuel management maps for all impacted

First Nations Communities, including the ability to integrate all community data with a provincial map. The maps will be utilized by First Nation Communities, as well as the FN-FFMWG and its members.

4. Recognition for on reserve forest fuel planning/prescription/treatments extending on areas outside the 100 meter buffer to be completed in conjunction with off reserve fuel management treatments, considering the 2,000 meter radius around all communities. The project can then be monitored by a member of the joint venture working group, either federal or provincial. Clearly recognize, identify and accomplish both on- and off-reserve forest fuel planning, prescriptions and operational treatments at the same time. Moving beyond a 100m radius on-reserve, as well as extending beyond a 2km radius onto the landscape where appropriate, is without question essential. FNESS is well positioned to accomplish and monitor projects, in full consultation with Federal and Provincial members of the FN-FFMWG.
5. Provide aggressive business development support in heavily impacted areas in order to capture timber values, as well as to reduce forest fuel loads, thus reducing wildfire risk to communities (optimizing fuel treatment locations and methods to create enhanced fire resiliency, at local and landscape levels).

6. Address on-reserve removal of forest fuels by removing stumpage and allowing one cutting permit to help facilitate fiber utilization programs such as:
  - chipping and grinding programs
  - bioenergy business opportunities
  - others to be identified
7. Develop and promote economic opportunities for forest fiber value added opportunities by:
  - Venture capital program for new business development
8. Fund training programs to support:
  - Potential employment in fire fighting and fire management planning activities
  - Potential employment with forest sector support businesses
9. Identify funding to manage post-forest fuel management treatments areas, i.e. grass and vegetation maintenance.
10. Develop a program around First Nations communities that will fund Ecological restoration and silviculture opportunities to reestablish natural habitats and forestlands. Ensure coordinated efforts with existing Ecological Restoration (ER) and silviculture opportunities are maintained, with a primary goal to reestablish natural habitats and forestlands. Work towards development of a First Nations ER program.

## Introduction

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The impact of the mountain pine beetle in British Columbia has affected over 9.2 million hectares of the provinces interior forests and has attacked lodgepole pine (*Pinus contorta*), ponderosa pine (*Pinus ponderosa*) as well as western white pine (*Pinus monticola*). The insect is now threatening the northern boreal forest as infestation has recently been recorded in jack pine (*Pinus banksiana*) stands in northern British Columbia and Alberta.

The purpose of this report is to provide a snapshot of where First Nations Communities are in their Forest Fuel Management efforts as of today. Since the start of the historical infestation of the mountain pine beetle, Forest Fuel Management has become a major part of at least 103 of the 201 First Nations Bands within the province of BC. The majority of the Bands are located within the central part of the province, east of the Coastal mountain range, where the devastation of the mountain pine beetle has caused the greatest impact.

The province has been monitoring the progress of the mountain pine beetle for the last five years and is continuing to improve their predictions on future mountain pine

beetle impacts. Observing the percentage of pine killed to a red/grey stand on a BC map you can see that from 2009 to 2014 the majority of the northern pine will be red and dead. The south will have isolated sections throughout and an increase in percent killed spreading to the eastern portions of the province. To view the 2009 to 2014 infestation go to the provincial website; [http://www.for.gov.bc.ca/hts/rs/ beetle\\_detection.html](http://www.for.gov.bc.ca/hts/rs/ beetle_detection.html).

The ongoing risk of wildland urban interface (WUI) fires that threaten first Nations communities is the primary management issue addressed in this report. The threat of wildfire within and adjacent to First Nations Reserves and communities increases as the stands die and will remain a significant hazard for at least five years and perhaps as much as ten years or longer in some communities. Although identified funding from the past has either ceased or will cease by the end of this fiscal year, the issue of mitigating risks of forest fires needs to be addressed. It will take the cooperation and teamwork of all organizations to reduce the fire threat and prepare the communities.

## Forest Fuel Management Working Group

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The FN-FFMWG was established in 2006 to identify and deliver a coordinated program focused directly on the mountain pine beetle (MPB) areas of the province. The initiation of the FN-FFMWG was intended to combine technical representatives from First Nations, Federal Government, and Provincial Government entities to work together in a mutually cooperative and integrated approach to forest fuel management, particularly in relation to increasing the safety of First Nations communities from wildfire. This approach has allowed this province to effectively integrate the operations of a number of First Nations, provincial and federal agencies in a manner that has retained their appropriate mandates, authorities and responsibilities, while at the same time ensuring that available resources and expertise are available on forest fuel management issues in a coordinated and cooperative way. This approach has also positioned this province so that it can quickly and effectively continue to implement further on-the-ground activities as new funding becomes available. Overall, these 'Purpose' actions are intended to achieve greater wildfire protection for all First Nations communities impacted by the MPB in the shortest time possible.



In the past, the working group was coordinated and chaired by the First Nations Forestry Council (FNFC). However, due to funding restrictions and an increased operational role by the First Nations Emergency Services Society (FNESS), the working group is now co-chaired by both the FNFC and FNESS. From 2006 to 2009 the working group was able to meet quarterly in locations throughout the province. Again, due to funding restrictions and concerns this last year the working group was only able to coordinate one face to face meeting and held the rest via teleconference. All indications are that funding for the management of the Mountain Pine Beetle epidemic and its impact on First Nations is coming to an end in March 31, 2011. It has been stated that both the Federal (NRCan) and Provincial (FNESS) funding programs will have ended. Without programs and funding the future of the working group is in jeopardy and the ongoing risk is left to chance.

It is our hope and expectation that any new program relating to fire and pest management that might come forward from federal or provincial programs will support and reflect this very important approach and build on the existing body of work that has been undertaken by the FN-FFMWG in British Columbia.

It is important to note that there is a distinct separation between the provincial and the federal programs and funding as they relate to program delivery for First Nation's communities. Federal programs are targeted at federal assets, meaning that, they contribute to the federal Indian Reserve lands only. All fuel management planning, prescription and treatment work under the federal program is for the Indian reserve lands only. Adjacent to the Federal IR lands is typically provincial crown forest land. On these lands, provincial programs are required for funding.

The multi agency FN-FFMWG played a significant role in assisting in the coordination and direction needed for this complex jurisdictional issue.

## Provincial Programs – First Nations Emergency Services Society (FNESS)

Provincial programs have been part of the First Nations fuel management program. The Strategic Wildfire Prevention Initiative (SWPI) is administered by the Union of BC Municipalities (UBCM) and managed through the Provincial Fuel Management Working Group (Prov-FFMWG), which includes representation from the Province of British Columbia, UBCM and the FNESS. As a result, Provincial funding has been made available to BC Bands through the FNESS from the Union of British Columbia Municipalities (UBCM). FNESS is involved in the Prov-FFMWG with First Nations and Federal Representatives and also involved in inter-provincial relationships with UBCM and the Province of BC.

FNESS has used their funding for staffing technicians

in-house combined with forest fuel specialists (consultants). Their increase in staff and expertise has allowed them to complete the following work this past year:

- Work with 115 First Nations communities.
- As of September 2010, using information collected at the planning stage, 12,962 hectares of off reserve treatments identified on 33 communities (fuel management plans identified treatment)
- 3,055 hectares of needed treatment identified in prescriptions. To date, 27 prescriptions have been completed.
- 2010-2011 is the first year of significant operational treatments with 1,218 hectares planned to be treated with 21 projects in progress with 17 First Nations Communities.

	Number of Communities			Hectares		
	Federal	Provincial	Total	Federal	Provincial	Total
<b>CWPPs Needed</b>		201	201			
<b>CWPPs Initiated</b>		91	91			
<b>CWPPs Completed</b>		59	59			
<b>Prescriptions Prepared</b>		28	28		3055	3055
<b>Operational Treatments Commenced</b>		21	21		1218	1218

We are now in the transition from planning and prescription development to the on-the-ground operational treatment work. Significant funding is required in order for all First Nations communities to ensure planning, prescribing and treatments to occur.

The FNESS Forest Fuel Management Department is heavily engaged in meeting directly with the communities, and has included this form of relationship building and technical support as a stand-alone performance measurement, thus emphasizing its importance. As

FNESS is a Provincial organization it has made Community Relationships one of its highest priorities and has established numerous local government synergies in BC. The original intent of the working group was to address only the identified First Nations that were impacted by mountain pine beetle. In recent years FNESS has expanded their program to include all BC First Nations Communities, to date, FNESS have engaged and worked directly with 115 First Nations communities in BC. 30 communities are in the prescription stage with 27 of the 30 prescriptions

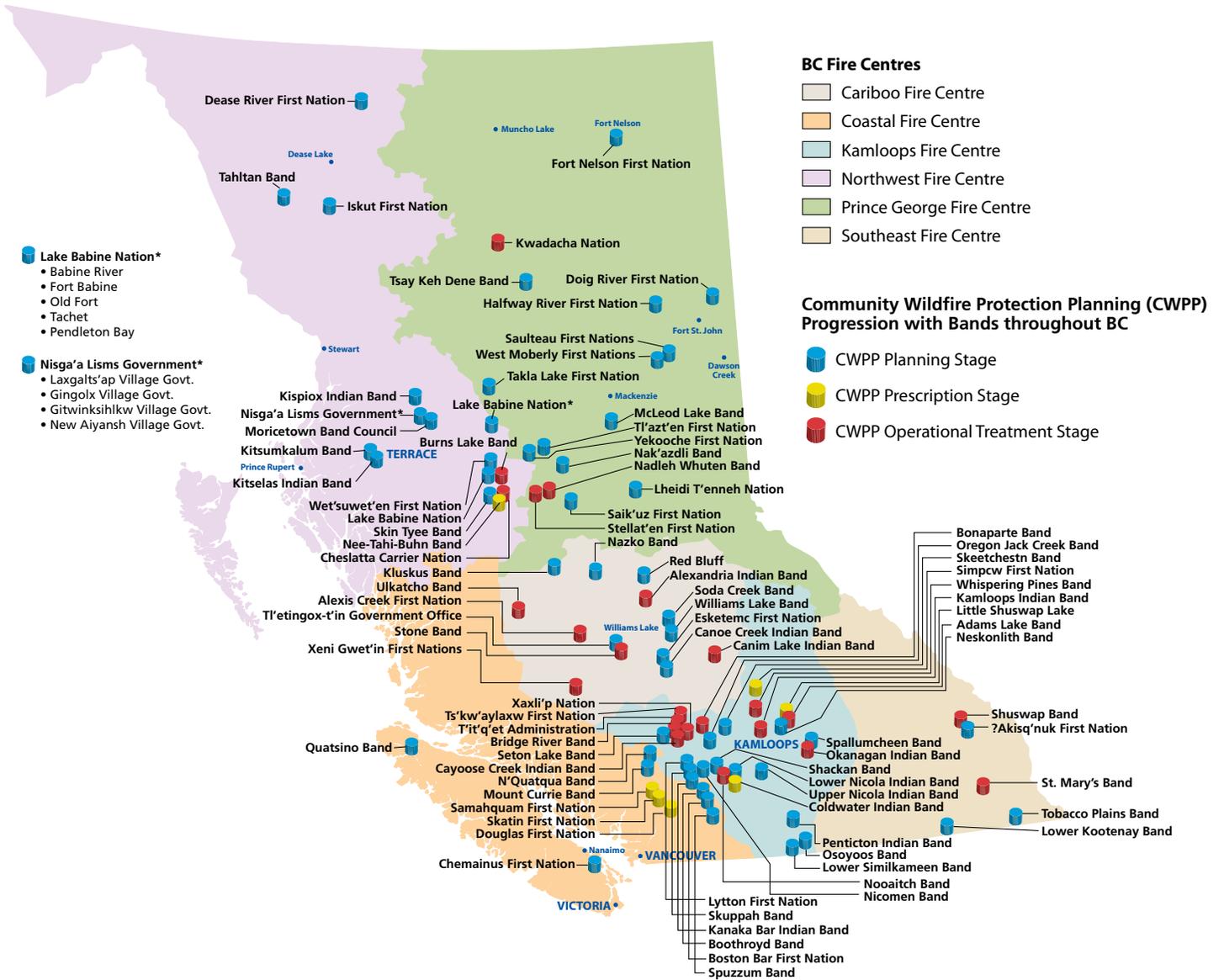
completed. There are 17 communities in the Operational Treatment stage, 3 of these projects are in Phase 2 stages. There is an effort to have full engagement with 100% of the affected Bands by the end of the 2010 field season, pre-2011 forest fire season.

FNESS has recently forwarded a document indicating that the applications received under the Strategic Wildfire Preventions Initiative (SWPI) have exceeded the available funding, and as of December 1, 2010 that UBCM will no longer accept applications for the SWPI programs. This

follows a March 2010 'Program Changes' release that aimed to ensure remaining resources were allocated to the highest priority activities, as limited funding was already a concern at that point in time. There have been many successes, but much more needs to be done. Funding discussions with the Province are on-going. Should further funding be provided, UBCM will be working with the funder(s) to develop and/or revise SWPI programs, contacting eligible applicants in a timely fashion to provide these details.

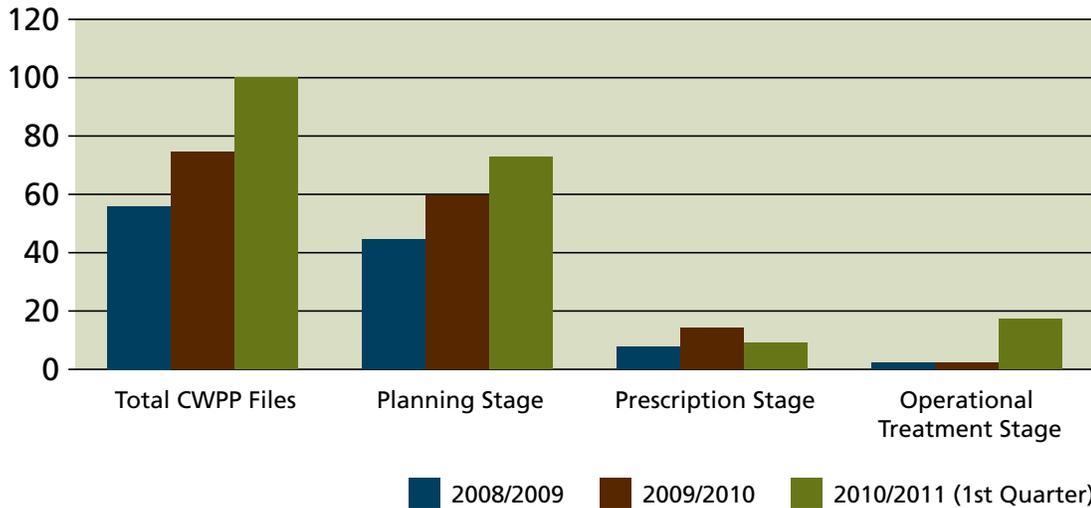


# Current Provincial First Nations CWPP Engagement (FNESS Administration)

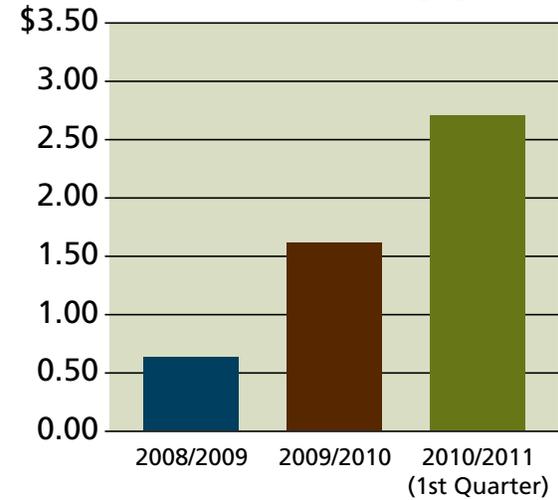


Number of  
First Nations  
Communities

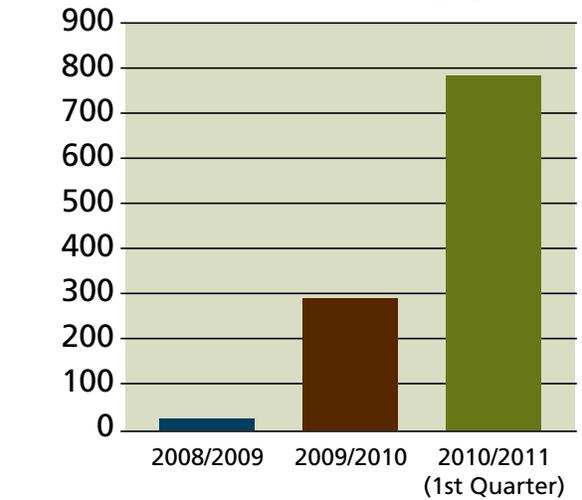
### Provincial First Nations CWPP Engagement (FNESS Administration)



### Funds Committed for Provincial First Nations CWPP Engagement



### Hectares Treated for Provincial First Nations CWPP Engagement



### Employment Opportunities – FNESS Strategic Wildfire Prevention Initiative 2011

Community	Hectares Treated	Crew Size	Average Hectares Per Day	Funds Allocated	Days of Employment
Band	50.9 ha	5 persons	.27 ha/day	\$296,245.5	182 days
Current Operational* Treatments	Hectares	Crews Size Average	Average Hectares Per Day with 5 Person Crew	Funds Allocated	Days of Employment
17	1004.25 ha	5 persons	.25 ha	\$3,010,744.40	4017 days

\*Based on current projects and average production

## 2010 Fire Season

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The 2010 fire season once again exceeded the provincial budget in cost and manpower. Due to the dry winter of 2009 and the early spring the severity of the fires increased in the north and spread over vast regions of the province. There were 1,673 forest fires in BC this past year, of these 179 fires were 10 hectares or larger. While this number is less than average the total hectares burned was at least three times the average with approximately 330,000 hectares burned. Total cost of fire fighting in the province of BC was \$220,000,000, the third highest cost

in BC history. Currently the cost of fighting fires is becoming unsustainable as provincial revenue from forestry continues to dwindle. In the past BC was the major exporter of Fire fighters throughout Canada and the world. In 2003 BC boasted approximately 7,600 firefighters. This past year we had approximately 4,500 firefighters.

Many of the fires were located within the mountain pine beetle impact zone. Of these fires there were 11 evacuation orders and 16 evacuation alerts. The majority of these fires impacted First Nations communities.

### N o t a b l e 2 0 1 0 F i r e s

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*(<http://bcwildfire.ca/History/Summary.htm>)*

#### **Kamloops Fire Centre**

- 2,000 hectare fire at Jade Mountain, Yalakom Valley
- 650 hectare fire at Tweddle Creek, west of Keremeos
- 130 hectare fire at Mayson Lake, Southeast of Bonaparte Lake

#### **Cariboo Fire Centre**

- The Pelican Lake complex of fires north of Nazko covered a combined area of 35,506 hectares
- The Meldrum Creek complex of fires covered a combined area of 47,293 hectares
- The Bull Canyon complex of fires near Alexis Creek covered a combined area of 35,000 hectares.
- 3,086 hectare fire at Heckman Pass near Tweedsmuir Park; closed Highway 20

#### **Coastal Fire Centre**

- 9,635 hectare fire at Dean River, north of Bella Coola

#### **Northwest Fire Centre**

- 40,000 hectare fire at Binta Lake, south of Burns Lake; the largest single fire in the province
- The Houston complex of four fires southwest of Houston burned a combined 8,500 hectares
- 35,000 hectare fire at the Cassiar Highway near the Yukon border

#### **Prince George Fire Centre**

- 6,102 hectare fire at Greer Creek, southwest of Vanderhoof
- 13,087 hectare fire at Tsacha Lake, west of Tweedsmuir Park

## Federal Programs

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The federal program was initiated in 2002 by developing the Mountain Pine Beetle Initiative (MPBI) and directed \$26.7 million towards mitigating this upcoming epidemic. Of the allocated funds, 33% were targeted towards Federal Forestlands Rehabilitation Program, which had three elements:

- (1) Federal Parks Element;
- (2) First Nations Beetle Element; and
- (3) Other Federal Forestlands.

Of the \$8.8 million under the Federal Forestlands Rehabilitation Program \$3.4 million of the funds went towards First Nations lands in BC and Alberta between 2003 and 2007. The activities included mountain pine beetle control, rehabilitation and forest fuel management activities.

In 2004 NRCAN began funding Forest Fuel Management and Hazardous Tree Removal projects for First Nations in Mountain Pine Beetle impacted areas. Many First Nations communities accessed this program to address wildfire threat risk areas in the areas defined as the community core. The program was administered through Natural Resources Canada main office in Victoria with satellite offices in Kamloops and Prince George. The program addressed areas identified as the community core out to 100 meters following the fire smart manual principles. As the program progressed areas showing potential wildfire threat and risk based on forests other than pine leading were considered for funding.

Communities could apply throughout the year until the allocated funds for that year were exhausted. In 2009 NRCAN ended the program and since has not been active, outside of some funds available through the First Nations Forestry Program. In this program communities could access up to \$25,000.00 to assist in Forest Fuel Management and Hazardous Tree Removal projects.

In early 2009 the FN-FFMWG responded to a request from NR Canada, Ottawa to make recommen-

dations on the proposed potential NRCAN/CFS Fire and Pest Management Program. The FNFC made seven recommendations for the federal government to consider and incorporate into the proposed program. The main recommendations were to have direct engagement with First Nations and to utilize the expertise of both the federal and provincial partners of the working group, as well as, to streamline the process between the provincial and federal programs. There was a recommendation to include ecosystem management, as well as the need to review the federal stumpage system to make treatment more feasible.

The federal mountain pine beetle program was brought to a close in last fiscal year; there have not been any indications of future funding for on-reserve fuel treatments, with no funds available for 2010-11. Since the program funding ended we have not been given any indications Federally for what the future holds for on-reserve funding. Some Bands were successful in securing up to \$25,000 under NR Canada's First Nations Forestry Program (FNFP); however, that program has also been terminated effective March 31, 2011. Recent meetings with the FFMWG over the past year have indicated that future federally funded programs will have an Economic Development and capacity building focus, and not be specifically targeted to issues like MPB.

With little to no federal funding, the fuel management program on reserves has come to a halt. It is not for a lack of identified issues, including the plans and prescriptions already done to identify the risks and treatments required.

Many of the First Nations communities brought up the issue that the provincial and the federal programs were not streamlined. Many of the bands simply did not have the capacity to pursue the full benefits of both programs. The federal program required a Forest Fuel Management Report to be completed and then a Forest

fuel Plan and prescription were completed before on reserve treatments could be funded. The areas adjacent to the reserve required a Community Wildfire Protection Plan (CWPP). The two processes required the band to work with two separate agencies for applications and guidelines. The result was that many of the Bands did not pursue the funding. Many just didn't have the capacity to do the work.

Other issues that arose are that many of the First Nations communities once had forestry operations but, due to the decrease in the forestry sector, they had either reduced staff or had disbanded the forestry departments.

The majority of the funding allocated was to complete the Forest Fuel Management Plan (FFMP) and the Fuel Management Prescriptions (FMP). These steps

were completed for the majority of the First Nations Communities, however, the on-the-ground treatments work has not been done for most of these communities as funding challenges developed and prevented the more expensive work to be completed. Therefore it must be stated that by the end of the Federal On-Reserve Program there is a significant of unfinished work needed to reduce the threat of wildfire and damages to the impacted communities.

Throughout the program the FN-FFMWG has brought up a need to utilize the GIS expertise of both the federal and provincial programs. To date the Federal program has not provided any such service. Bands have requested orthophotos and overview maps of their areas. Many of the bands do not have the capacity to make their own maps.

## Additional Funding – Programs

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The FN-FFMWG did work with Western Economic Diversification (WD) on a Job Opportunities Program (JOP) awareness program in 2009, and sent application information, as well as technical assistance to the 103 First Nations bands that were impacted by the mountain pine beetle. In 2010, the FN-FFMWG worked together to submit an application under the Community Adjustment Fund (CAF). The budget was formulated using the previous year's treatment costs to find a mean average cost. The funding application went through a review and comment process, and was revised to meet the CAF requirements. All 'Q and A' requirements were met and all efforts proved to be unsuccessful as the application was denied funding.

Other First Nations did apply for CAF funding as their own proponents. Although it is unsure what the total funding was. Many of the programs used multiple funding sources such as CAF and JOP funding.

Western Silviculture Contractors Association had submitted a similar proposal and it was awarded \$1,010,000.

The only other successful First Nation CAF applicant, to our knowledge was the Neskonlith Indian Band who received \$986,498 in direct CAF funding to enhance on-reserve range and farmland and remove wildfire fuel.

In many cases, First Nations were able to combine the CAF funding with JOP funding. In total, ten Nations or Bands were able to secure funding to a total of \$2,103,583 of which \$1,405,112 was derived directly from WD. It should be noted that a number of the Bands that were chosen were also on the FNFC list.



## Economics

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An issue brought up by many First Nations Bands has been the requirement to pay a stumpage rate on timber volume harvested on reserve land. The main issue was the stumpage rate of Ponderosa Pine (*Pinus Ponderosa*). In the past year the stumpage for pine permits ranged from \$1.00/m<sup>3</sup> for pulp and grindings up to \$6.50/m<sup>3</sup> for Ponderosa pine saw log. Douglas-fir and spruce stumpage was slightly higher at \$14-\$16/m<sup>3</sup>. In a meeting held in early December 2010 INAC indicated that if a Band indicated that there would be no economic gain from forest programs then stumpage would not be required on timber harvested and removed from the reserve lands. INAC also proposed that if timber was removed from reserve lands as well as adjacent Crown lands the stumpage from the crown land could also be used on the crown land. This resolution to the problem may be too late as the majority of on reserve pine is non merchantable red or grey attack pine.

In the 2010 year INAC approved 17 permits that spread from Central BC (Fraser Lake) to the south interior (Merritt/Kamloops). No totals were given, only averages. It was reported that the average size of the permits were 41 ha's and a total of 650 cubic meters of timber estimated per permit. The permits ranged from 20 cubic meters to 2,800 cubic meters. Yellow pine (*Pinus ponderosa*) was the main spe-

cies removed in the south. It was noted that the commercial viability of the permits was limited and that none of the permits were marketed for a profit. It was unclear on whether the bands paid full stumpage or not to harvest the permits.

Although there is very little value in sawlogs, there still is an opportunity to utilize on reserve fiber for chipping and grinding operations. If there is enough volume then it is feasible for chipping and grinding operations to incur the cost of development and permit applications, harvesting, grinding, and hauling. The cost to the Band would be negligible and the Bands may have an opportunity to make up to \$0.25 to \$1.25 per bone dry ton of fiber. Also other value added opportunities may arise with new forms of energy being derived from wood fiber such as bio-diesel, wood pellets, and fortified wood.

One recommendation is to assist in the facilitation of fiber removal from Indian Reserve lands as the harvesting and removal of the fiber reduces the threat of wildfire and the removal is also done without burning, which is more environmentally friendly. The fiber is now being sought after by co-generation programs as well as chipping programs. In order to do this INAC will need to be proactive in getting a program developed and then implement it on the ground through an effective communication program.

## Summary

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Regardless of the jurisdiction or land survey lines, the risk of fuel management to communities is based on forest fuel loading adjacent to each of the affected communities. The mitigation of this risk is based on measuring the amount of fuel loading and risk associated fuels within a 2km radius of each community. As you get closer to the community the risk is higher, and the associated treatment cost to reduce risks is generally higher.

The method that has been developed for dealing with the fuel management risk follows:

1. Community Wildfire protection plan(CWPP) needed
2. CWPP initiated

3. CWPP completed
4. Treatment prescription prepared
5. Treatment prescription implemented
6. Treatment prescription completed.

Funding and jurisdictional issues have made this process complex due to funding and programs affecting either provincial lands or federal Indian reserve lands. The treatment work that ultimately needs to be done to make communities safe includes a radius of 2000 meters from each community and covers varying degrees of federal or provincial jurisdiction. Fire resiliency efforts beyond 2 km need to in the near future, also receive attention.