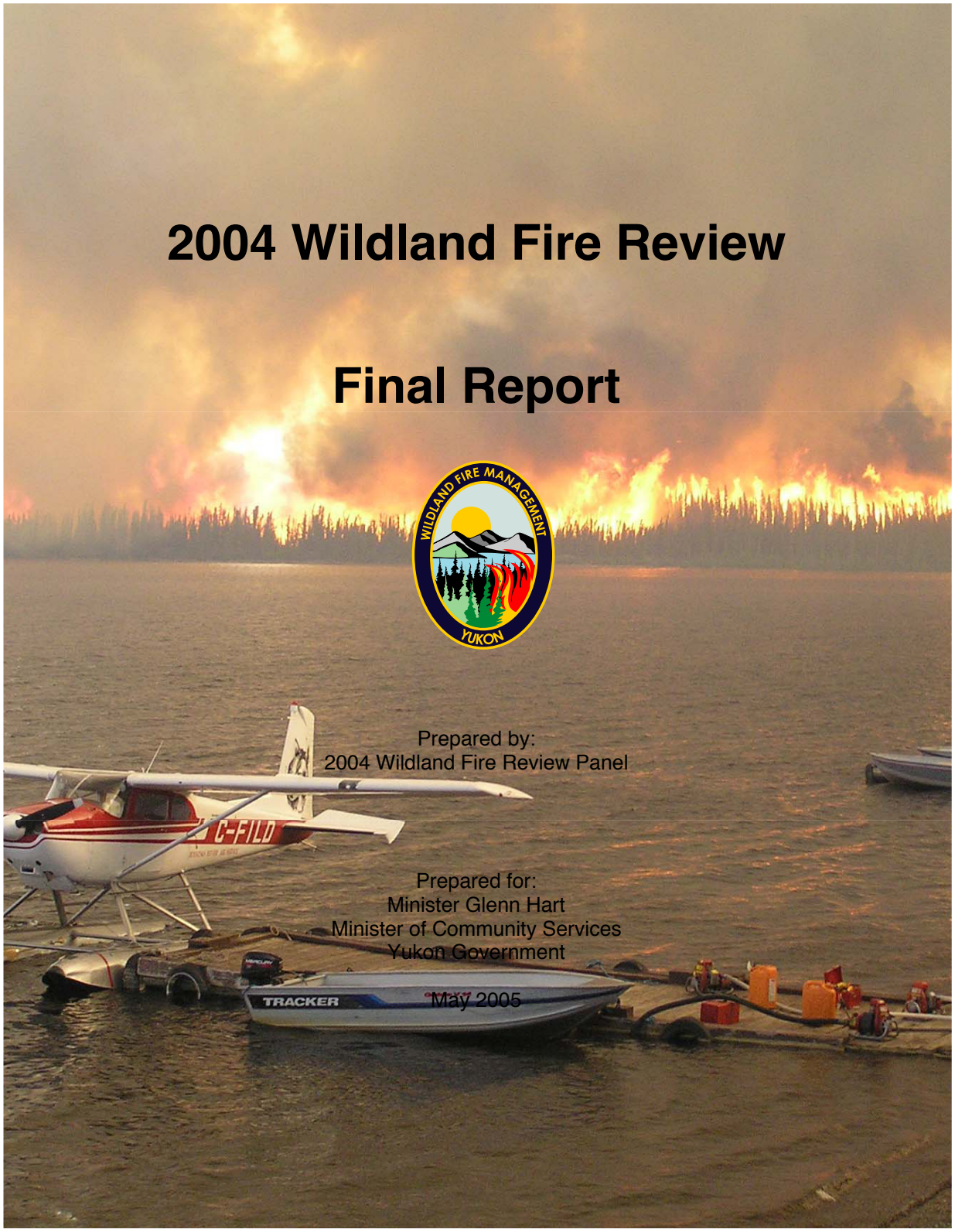
2004 Wildland Fire Review

Final Report



Prepared by:
2004 Wildland Fire Review Panel

Prepared for:
Minister Glenn Hart
Minister of Community Services
Yukon Government

May 2005

Acknowledgements

The Panel would like to acknowledge the cooperation of Government of Yukon departments in providing detailed summaries of the impact of the 2004 fire season. In addition, we thank the Yukon citizens that attended the community public meetings and open house sessions. Staff of Community Services contributed background documents, logistical support and an excellent overview of the operational component of the 2004 fire season. We would like to recognize in particular Dan Boyd, Ken Colbert, Adriana Venasse, David Milne, Al Beaver, Christopher Boland, Walter Nehring, and Scott Hamilton. The Panel also appreciates the contribution of Angela Walkley and Jillian Chown, who provided the Secretariat Services.

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EXECUTIVE SUMMARY

Given the magnitude of the 2004 forest fire season, the Government of Yukon contracted an independent, five-person panel to conduct a community-based review. From December 2004 until March 2005, the Wildland Fire Review Panel traveled to each Yukon community to meet with interested parties.

The Panel was mandated to conduct an independent community- based review with the following Terms of Reference:

1. To benchmark the 2004 fires relative to Yukon's historical fire regime.
2. Describe and evaluate the Yukon's strategic approach to wildland fire management, based on the current fire zonation and identify government, First Nation, and stakeholder responsibility.
3. Determine the ability of the Yukon Wildland Fire Management program and organization to plan for and effectively respond to wildfire occurrence.
4. Review the post fire impacts from both a community and government perspective, which include recovery initiatives.

There were, as expected, a number of issues and concerns brought out through the review process. From the consolidation of issues and concerns brought forward by the public and the Panel's evaluation of the Yukon's Wildland Fire Management program, nine key issues have been isolated for developing a blueprint for advancement and change. The nine key issues are:

1. Strategic Approach to Wildfire Management,
2. First Nations,
3. Fuel Management and Fire Behaviour,
4. Training,
5. Wildland Fire Management Organization,
6. Wildfire Operations,
7. Communications,
8. Post-Fire Recovery, and
9. Wildlife

After a thorough analysis of the issues, and based on their expertise, the Panel has made recommendations to the Government of Yukon. The Panel's recommendations are summarized below:

- A fully adjusted zonation system;
- A specialized communication protocol that is inclusive of First Nation and community values and objectives;
- An enhanced mitigation approach to fuel management and continuation of the FireSmart program;
- Adoption of the Community Services Certification Manual and expanded training at all fire management levels;

- Allocation of extra staff resources to the Wildland Fire Management program and reaffirmation of the intent and long-term function of the arrangement between Community Services and Energy Mines and Resources, delivered through the MOU;
- Addition of heli-attack crew, supported by a medium helicopter on contract;
- Establish a reinforced Preparedness System through the application of hard-line principles;
- Develop a generic communication strategy and communication plan;
- Include proper registration and FireSmart improvements in approval conditions of a potential trapper compensation program; and
- Develop and implement fire management plans for woodland caribou and other wildlife populations that have established and approved species management plans.

Detailed recommendations are presented for each key issue and, in addition, suggested action items are listed in Appendix 1 for operational improvements.

INTRODUCTION

The 2004 forest fire season in the Yukon saw unprecedented temperatures, unusual lightning storms, and lack of rainfall over a prolonged period, which resulted in record-breaking number of fires and area burned. Staff from Wildland Fire Management, Volunteer Fire Departments, Emergency Measures Organization, RCMP, and other government departments and agencies were fully challenged by this extreme fire event. Governments from First Nations and municipalities were involved as were a great number of local individuals and fire crews from outside the Yukon.

The hot weather, severe fires, and heavy smoke conditions affected Yukoners, but through their initiative and cooperation, they contributed to an overall successful firefighting campaign.

A historical examination of the 2004 fire fighting effort in the Yukon would highlight success for a number of factors including:

- No loss of life
- Minimal loss of property
- Significant reduction in human caused fires
- Containment of fires within the Priority Action Zones (perhaps the most significant measure of performance)

At the conclusion of the fire season, a number of questions prompted a Government of Yukon discussion regarding a comprehensive review exercise. What would have happened if the Wildland Fire Management staff had not successfully dealt with the priority issues of the 2004 fire season? Would Yukon's toll, in terms of area and, more importantly, values at risk, have been as serious as they were next door in Alaska? What kind of issues would have occurred in the high risk fuels in the Whitehorse /Southern Lakes interface had it not been for the public response to the fire ban and the collective effort of all agencies including Wildland Fire Management, the Volunteer Fire Departments, and the RCMP?

Despite their success in delivering the priority objectives of fire management, the Government of Yukon solicited a mechanism to examine opportunities for improvement. They recognized that the 2004 fire season provided a rare opportunity to identify strengths and weaknesses within the context of the Yukon organization, and to examine how the business of fire management could be enhanced.

A thorough review of the Yukon's fire management practices was eventually approved following the 2004 fire season for the following reasons:

- The extreme amount of fire activity on the landscape would be a true test for any modern wildfire agency.
- Although the 2004 fire season brought abnormal conditions and extremes, there is no guarantee, in light of all of the evidence of global warming, that a similar season will not be repeated.

- The magnitude of the 2004 fire season provided a steep learning curve for the many sectors and individuals involved in the effort. It therefore becomes important to capture the lessons learned, which together with many ideas and suggestions, can contribute to a template for positive change.
- Since the responsibility for Fire Management was devolved from the Federal Government (DIAND) to the Government of Yukon, only two fire seasons have been experienced. It is therefore prudent to examine this new arrangement in the wake of 2004, within the context of the Devolution Transfer Agreement (DTA) and beyond its expiration in 2008.
- The lessons learned from 2004 provide the Yukon with the opportunity to take its unique approach to wildland fire management to the next level.

FIRE REVIEW PANEL

Given the magnitude of the 2004 forest fire season, the Government of Yukon contracted an independent, five-person panel to conduct the community-based review. From December 2004 until March 2005, the Wildland Fire Review Panel traveled to each Yukon community to meet with interested parties. Please see Appendix 4, 2004 Wildland Fire Review Public Review Summary for a complete list of parties contacted.

The independent review team included three out-of-territory wildland fire experts: Cliff Smith, chairperson, Lou Foley and Dennis Quintilio, with years of experience in both wildland fire management and in fire review exercises, and two well-respected Yukoners: Lawrence Joe, and Bill Klassen, with extensive local experience and expertise with natural resources management in the Yukon. (See Appendix 2 for Panel biographies)

TERMS OF REFERENCE

The Panel was mandated to conduct an independent community- based review with the following Terms of Reference:

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REVIEW PROCESS

As an integral part of the review, the Panel was directed to conduct a series of stakeholder meetings with public and private interests, Yukon First Nations, and Government of Yukon personnel across the territory. In response, over the course of three months, the Panel conducted meetings in every major community in the territory, and in all fourteen First Nations. In total, 40 meetings plus countless discussions with government staff were held in 19 Yukon communities. The Government of Yukon was committed to hearing and capturing all of the comments

and suggestions that were made at these public meetings. To this end, the findings from this broad based review have been synthesized within the document entitled "*2004 Wildland Fire Review, Public Review Summary*" which is appended to this report (see Appendix 4).

In addition to their own experiences and professional opinions, the Panel used this document in developing its final report, weighing all of the suggestions and concerns that were raised, and responding to all items that fell within the Terms of Reference.

Largely, Yukon citizens were very much in-tune with the conditions that "Mother Nature" brought to the 2004 fire season and appreciated the overall effort and performance in combating the fires. At the same time, as one would expect coming out of an unusually active fire season, several issues and concerns were identified.

This report, in addition to setting the context for the 2004 fire season and describing the current organization around the fire management effort, identifies the key issues that were recognized throughout the course of the review. Tied to each significant issue is a high-level recommendation, which, if implemented, should better position the Yukon to address the ever-increasing challenges of wildland fire management. Supporting these main recommendations are a series of sub-level recommendations described as "Action Items" that are found in Appendix 1.

From the perspective of the Panel, the Government of Yukon, Community Services, is on a solid footing, and is prepared to introduce improvements and innovations, which will bring about an even stronger level of support and endorsement from its constituents.

CONTEXT

Forest fires are a natural and beneficial process on the Yukon landscape. However, for developments adjacent to or surrounded by forests, there is a significant risk to life and property. Forest fires have affected many communities in the territory over the last 50 years including Faro, Old Crow, Burwash Landing, Pelly Crossing, Dawson, and Whitehorse. The 2004 fire season was one of the extreme seasons on record, but was seen by the majority of Yukon residents as a natural occurrence that must be managed in the public interest. In order to appreciate the magnitude of the 2004 fire season, the context of historic fire events in the Yukon are described in this section of the report.

COMMUNITY FIRE HISTORY

The annual area burned from 1950 to 2004 illustrates the intermittent cycle of extreme fire seasons in the Yukon. Over the 54-year period, annual area burned exceeds 200,000 hectares only eleven times (Figure 1). The average area burned over the last 25 years is 120,000 hectares compared to 1.7 million hectares in the 2004 fire season and concurrently a similar record fire season occurred in neighbouring Alaska.

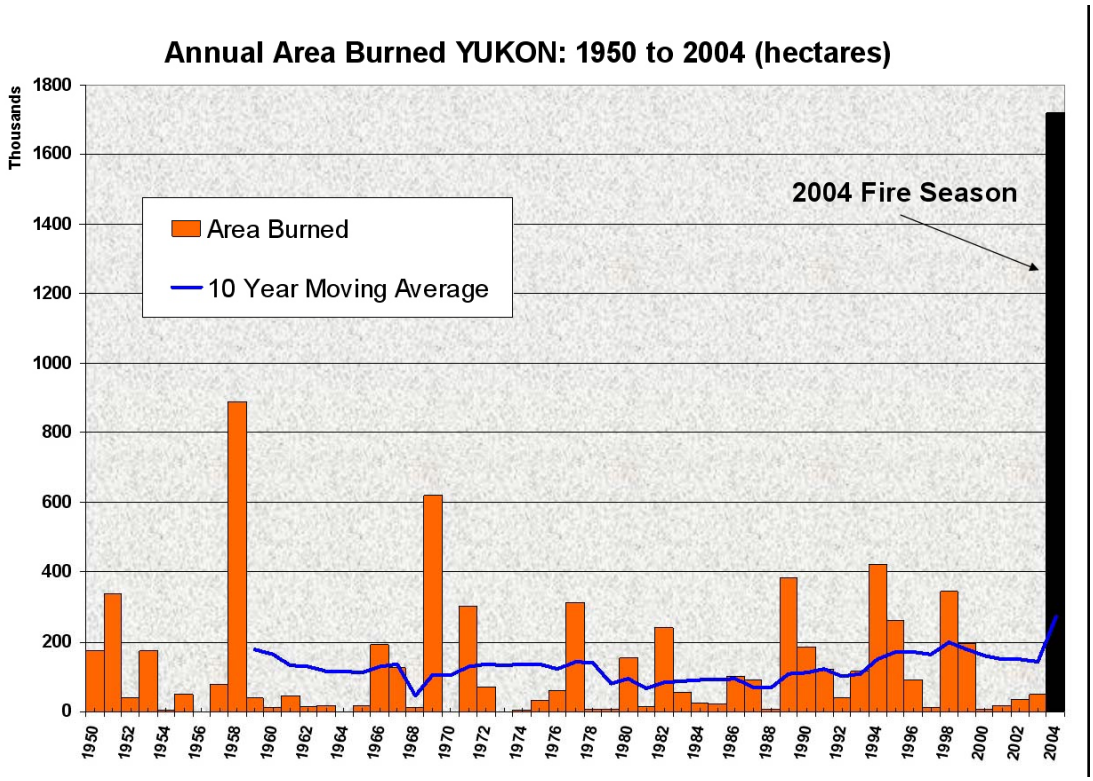

Figure 1 Annual area burned from 1950-2004

The benefits of wildfire at the landscape level are pervasive and fundamental but community safety cannot be compromised. Significant urban interface events occurred as early as 1898 when wildfire burned cabins on Upper Bonanza Creek. In 1899, fires raged around Whitehorse, and in 1911, the Dawson Daily News reported "fires burning 15 miles in every direction from Stewart City."

In 1958, the Braeburn fire erupted from a campfire that was not extinguished in the fall of 1957 and on May 23, high winds blew the fire across a hand-line. By August 28, the area burned was over 147,000 hectares and much of the fire control effort was spent saving the Lodge and adjacent cabins. In 1969, the infamous Faro fire burned into the newly constructed community and long after the town was re-built, residents lived with fine charcoal and ash blowing into homes and businesses. The Pelly fire also occurred in 1969 and residents of Pelly Crossing were evacuated for three days while fire fighters established a fire line 1.5 km from the community. In 1958, because of the Takhini fire, Whitehorse was put on evacuation notice and the seriousness of the fire prompted the authorities to upgrade the Whitehorse Robert Service Way as an alternative access route. The Echo Valley subdivision, on the outskirts of the City of Whitehorse was evacuated because of the 1991 Haeckel Hill Fire. The Minto fire in 1995 followed record temperatures in June and again Pelly Crossing residents were evacuated because of heavy persistent smoke. In 1998, the Fox Lake fire burned 45,125 hectares and smouldered through the winter months, flaring up in the spring and again threatening the Braeburn Lodge. The Burwash Landing fire in 1999 burned into the community with little warning and a hurried but safe evacuation occurred just ahead of the fire front.

Yukon demographics dictate a priority zone concept, which defines a fire exclusion policy combined with the recognition of the fundamental role of fire at the landscape level. Fire history suggests that community safety is a function of sophisticated priority setting.

FIRE REGIME

Yukon forests occupy about 27 million hectares of the territory. Similar to the boreal forest in other parts of Canada, they are subject to large, stand-replacement forest fires, which have been the primary post-glaciation disturbance mechanism.

The 2004 fire season is the most recent confirmation of the fundamental presence of fire throughout the Yukon; however, the extent and severity of this season exceeds historic records.

A fire regime is described by the combination of fire intensity, fire severity, fire occurrence, fire size, fire timing, and fire type at the landscape level. Historically, this information is not complete without comprehensive research studies; however, the Yukon fire regimes can be described from available data (Figure 2).

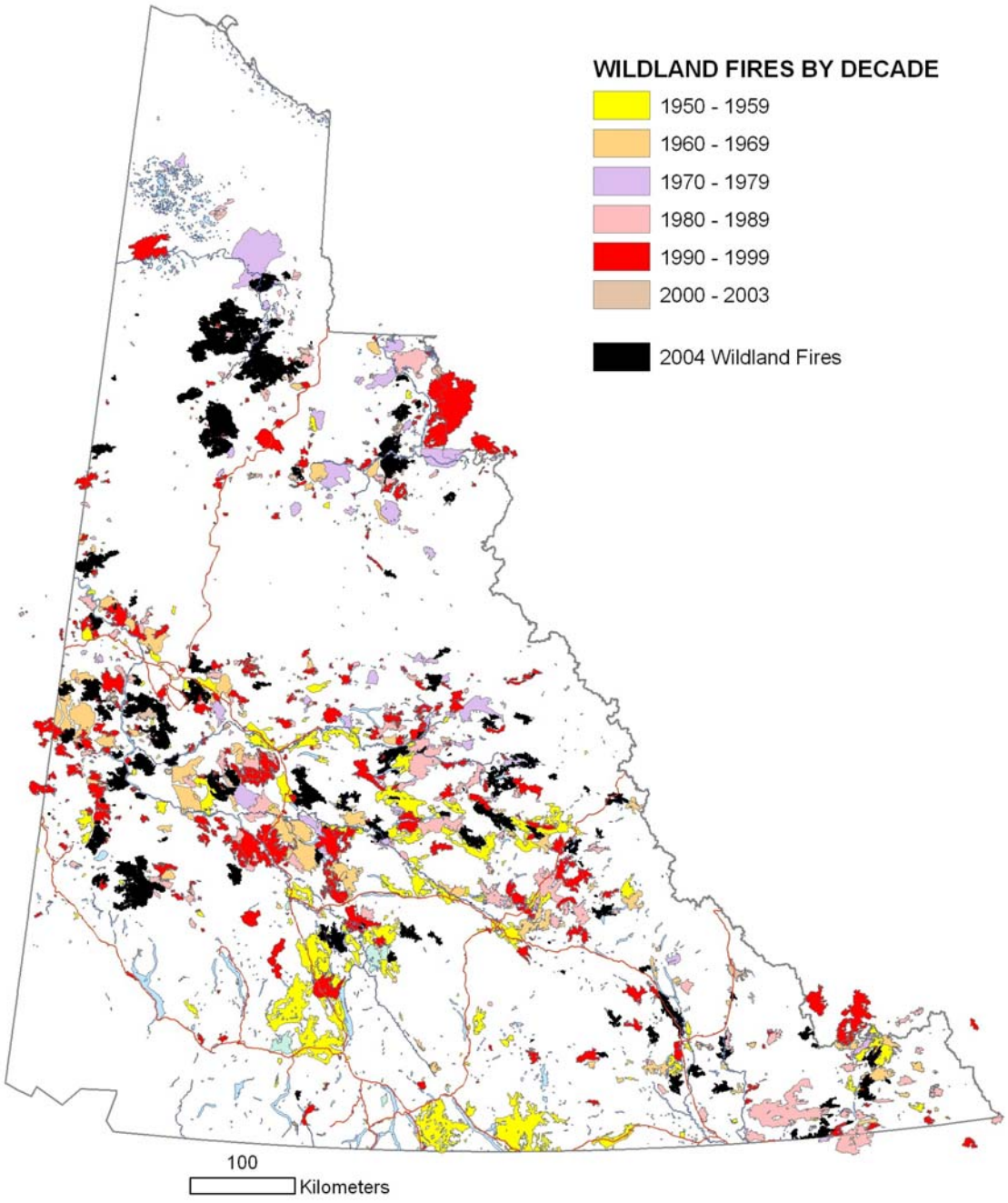

Figure 2 Fire occurrence and area burned from 1950-2004

Over the past 25 years, on average, 140 wildland fires burn about 120,000 hectares on an annual basis across the territory. Geographically, the majority of historic, large fire patterns follow the Tintina Trench, which stretches from the Dawson region southeast to Ross River and includes much of the current high priority protection area. Extensive fire patterns are also found in the Old Crow, Eagle Plains, and Peel River areas. These patterns are a function of very intense lightning occurrence, which in a normal year account for 55% of forest fires in the Yukon. The human

caused fires tend to be smaller, located near the settlements and account for 45% of fires on the average.

Yukon ecosystems are defined by major mountain ranges and elevation extremes, with vegetation communities of tundra, taiga, grasslands and wetlands, and forests. Climate variation is a function of both latitude and elevation differences and consequently both vegetation and fire regimes conform to the eco-regions. Although this fire season set unprecedented area burned records, fire follows historical distribution patterns with some exceptions.

2004 FIRE SEASON

The 2004 fire season in Alaska and the Yukon extended through June, July, and August, resulting in a total of 2.7 million hectares burned in Alaska in 2004, a figure comparable to what burned in Yukon, 1.7 million hectares. The greater area burned in Alaska is partly a product of its land base which is 3.5 times larger than the Yukon. The total area burned was captured daily through NASA satellite images from the MODIS Active Fire Management Program. A pair of MODIS satellites circles the Earth on a regular basis providing complete coverage of the Yukon several times a day. The satellite data provides a unique record of daily fire growth with a resolution level from 250m to 1000m and many Yukoners were downloading this information at home. The Wildland Fire Management staff produced a video clip of fire growth from June 20 to August 31 from the satellite data and presented this at the beginning of most of the Panel's public meetings. This was a very positive and informative contribution to the Panel's review process. Figure 3 captures the area burned in the 2004 fire season in both Alaska and the Yukon and is an exceptional record of the severity of the summer fire events. The Panel is cognizant of the fact that even though these two jurisdictions are adjacent to one another, Alaska is much larger in terms of both size and population. In contrast to the distribution of fires away from communities in the Yukon, many fires in Alaska involved urban-interface operations and evacuations were frequent.

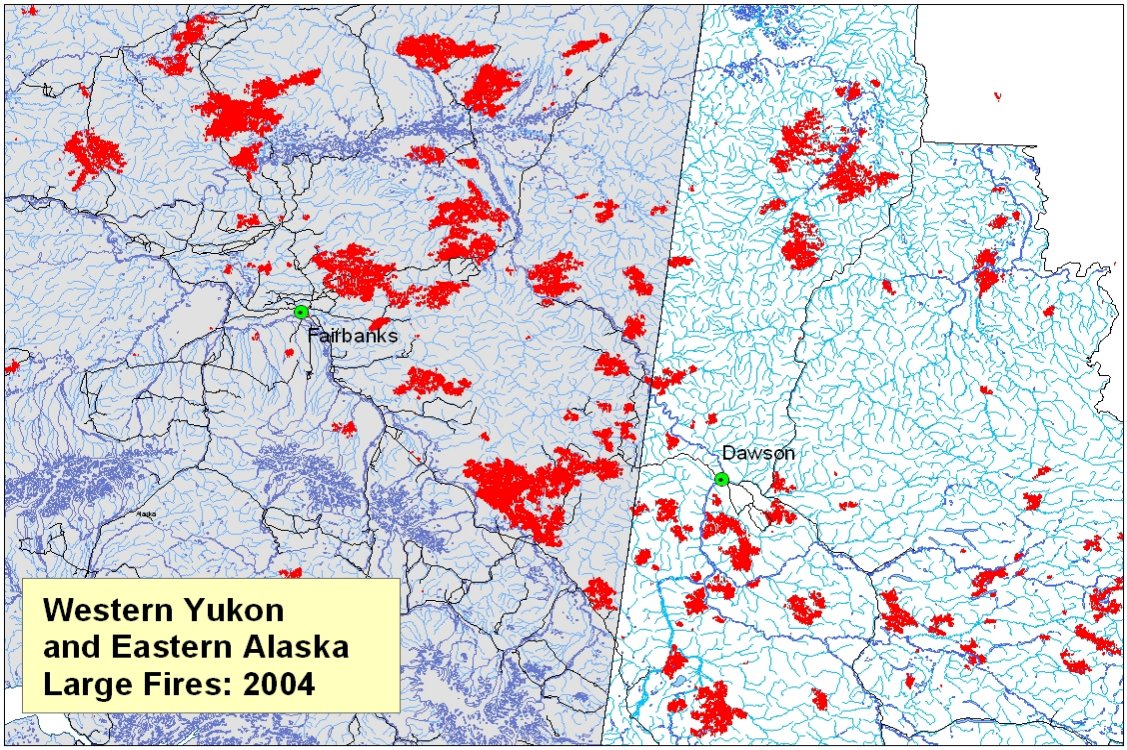

Figure 3 Spatial record of area burned in 2004- Alaska and Yukon

Fire weather was similar and a high-pressure ridge dominated throughout the north in June and July. The Buildup Index (BUI) north of Whitehorse climbed above 100 (anything above 80 is considered extreme) in early June and did not decline until the end of July. Mayo's BUI values reached 216 on July 15 with Drought Codes (DC) peaking at 711 (anything above 425 is considered extreme) in September. The BUI maximum in Fairbanks reached 189 on July 20 and DC values peaked at 644 in September. These statistics are derived from the Canadian Danger Rating System that describes the fuel moisture levels of medium and heavy forest fuels in both Alaska and Yukon. The peak values of both the DC and BUI are record values for the Yukon.

The 2004 fire season ironically followed a winter with above normal snow pack, which delayed the onset of fires but obviously did not diminish the severity of the season. Early spring snowmelt is often dominated by sublimation and run-off, subsequently the benefit of increased forest fuel moisture content is lost. The drought code carry-over from 2003 was significant near Whitehorse, Carmacks, Ross River, and Beaver Creek. However, there were no obvious signs that the 2004 fire season was going to be the most extreme on record for the Yukon. The 2004 fire season began to get very active with lightning fires by the middle of June and by the end of the month, 120 new fires were burning and the long range forecast was for continued hot and dry weather (Figure 4).

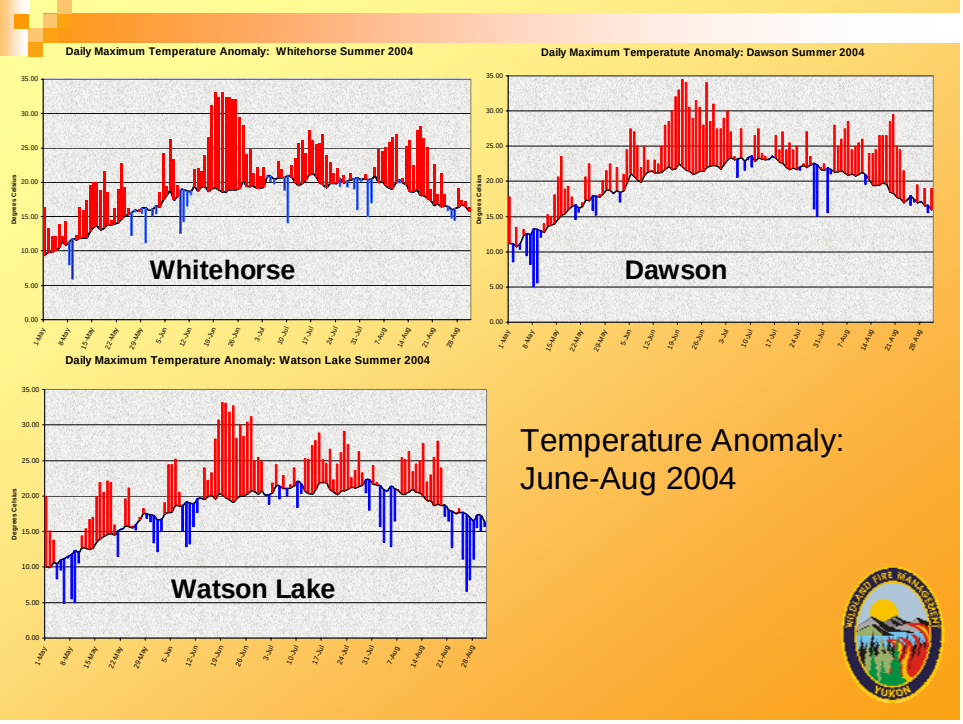

Figure 4 Maximum daily temperature anomalies from June to August-2004

July began with high wind, record temperatures, and extreme fire behaviour, particularly in the Dawson gold fields. At that point, the Yukon was smoked in from both the Alaska and local fires. Resources were being imported through the national Mutual Aid Resources Sharing Agreement (MARS) with the Canadian Interagency Forest Fire Centre (CIFFC). A fire ban was decreed across the Yukon and public support virtually eliminated any further man-caused fires. August began with another wave of lightning storms, which lasted until the 26th of the month, and September finally brought the fire season to a close after a summer of record-breaking events.

The final area burned for the season was 5.6% of the forested region of the Yukon, which is 14 times the average area burned from 1950-2003. Canadian Forest Service scientists have estimated a 50% area-burned increase with a climate change projection of twice the carbon dioxide levels in about 50 years. The significance of the 2004 fire season in the Yukon is notable and does suggest that fire cycles may be extreme in the future, especially when considering the effects of climate change.

YUKON FACTORS

Through the Panel's public review process, it was noted that there were several factors that made fighting forest fires in the Yukon unique in Canada. These factors include the Yukon First Nations, the Klondike gold fields, and river corridors. Below is a short description of each of these unique factors.

FIRST NATIONS

As of April 1, 2005 there are ten self governing First Nations in the Yukon. Each of these First Nations have signed a Program and Service Transfer Agreement (PSTA) that provides for a contract to supply initial attack and pre- suppression services in respect to Settlement Land and the associated Traditional Territories. The contract is a renewable five-year contract starting at $100,000 year. The early contracts are now up for renewal. The PSTAs allow for the negotiation of contractual arrangements for sustained attack fire suppression services.

To date, the ten settled First Nations have retained 11,528 sq. miles of settlement land. When all 14 Final Agreements are settled, First Nations will have retained at least 16, 060 sq miles (41,595 sq km), or 8.5 % of Yukon.

In the 2001 census, 25% of the population of the Yukon identified themselves as having aboriginal ancestry. The median income of First Nations was 39% lower than that of non-First Nations and the household income was 23.7% lower.

KLONDIKE GOLD FIELDS

Placer mining plays a large role in the Yukon's economy. The Klondike Placer Miner's Association (KPMA) estimates that placer mining is the second largest private sector income earner and employer in the Yukon after tourism.

The placer gold mining area south of Dawson City experienced significant impact from wildland fire during the 2004 season. Fortunately, there were no losses of life or property, but fire threatened some of the mining operations. The Panel heard from representatives of the placer mining industry, Dawson City residents, and representatives of the various government and community agencies involved in fire response throughout the gold fields. Issues and concerns were related to the immediate threat of wildland fire to life and property, severe smoke conditions, communication problems, media misrepresentation of the actual situation, and increased vehicular traffic on narrow mining roads. Limited access to some areas of the gold fields was another issue, as was knowing where all of the miners were located. Fire management issues affecting the placer mining industry are further discussed in the Key Issues section of this report, under Communications and Post-Fire Recovery.

RIVER CORRIDORS

River corridors in the Yukon contain many values: fish and wildlife habitat and wildlife travel corridors; traditional fishing camps and villages, e.g. Big Salmon Village; travel routes for tourists; and timber values. These values may be lost to or reduced by wildland fire during both normal and extreme fire seasons. Of those values that can be accommodated within the priority zones, not all have been captured on the current fire zonation maps.

While many tourists understand the role of fire in the boreal forest landscape, last year's forest fires greatly disrupted travel plans for many. Canoe and kayak tour groups were advised against traveling down the Yukon River beyond Carmacks for part of the summer. A fire management concern was the need for patrols along river corridors to monitor for campfires left smouldering. It was suggested that there

should be a campfire awareness program similar to the bear awareness program in order to support responsible behaviour.

The timber resources found in the riparian zone of river corridors are often the oldest and largest trees in a region and have the highest value. First Nations have selected some of these forested areas for logging purposes. This past fire season saw some of these high timber value areas burned.

ORGANIZATION

Wildfire Management in the Yukon dates back to 1946 when fire suppression involved little more than the protection of communities. The Department of Indian Affairs and Northern Development Canada (DIAND) administered it, with numerous changes to its organization over the years, and some major changes made in 2001, in advance of devolution.

The following organizational figures shows generally how they where organized in 1997 and 2002 just prior to devolution.

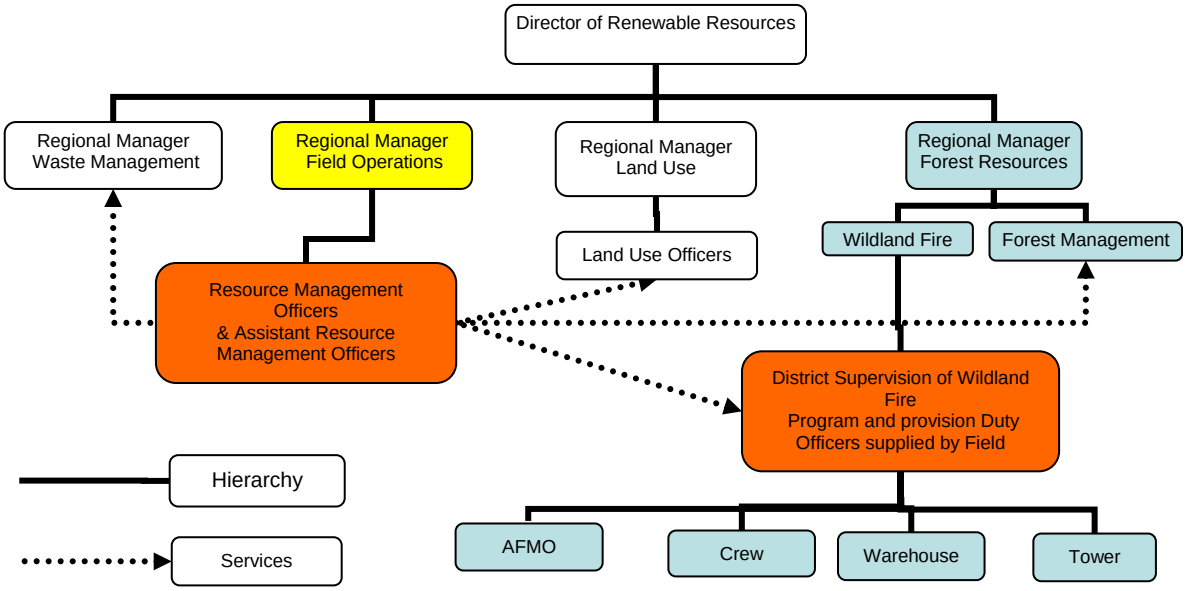

Figure 5 1997 Organization

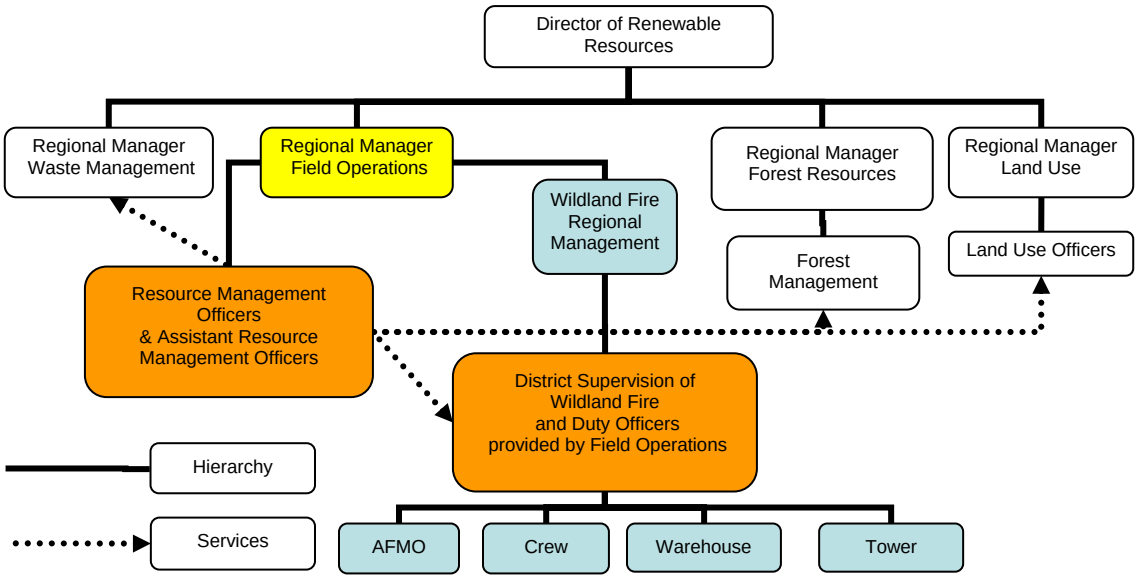

Figure 6 2002 Organization

It is interesting to note that Canada used a shared resource model in both organizational designs. In 1997, the Field Officers, reporting to a branch called Regional Field Operations, provided district supervision to the Fire Management Program, but the Fire Program had its own Regional staff and fire crew that reported to Forest Management.

In 2002, the model changed and the Wildland Fire Management program were moved to the Field Operations Branch. The Wildland Fire Management program continues to have its own regional office and operational crews at the district level. The Wildland Fire Management program is managed and held accountable through reporting to the Regional Manager of Field Operations. The district supervision and provision of duty officers continues to be provided by the Field Officers from the Field Operations Unit.

Under both models, Field Operations had primary functional responsibility for and the district management of the fire program, which included administrative services, the supervision of fire crew personnel, care and maintenance of facilities and equipment, the provision of 24/7 fire duty officers and overall management of fire responses in the district.

Both models rely solely on the Field Operations unit, which has no reporting structure to the Wildland Fire Management program for the day-to-day supervision and direction of the district Fire Program staff. Essentially, this supervision was contracted to another branch unit (Field Operations).

This model may have strengths in its efficiency of the use of staff but it also has inherent weaknesses in its lack of hierarchical accountability and potential of lack of consistent application of policies and procedures and directions. Stated another way,

the Regional Wildland Fire Program Management was disconnected in authority and accountability to manage the District Fire Programs.

In both models, Field Operations treats wildland fire as a priority during the fire season. The amount of work required to support the fire program may vary from year to year but it was generally accepted that it was at least 1/3 of Field Operations work and perhaps as high as 50% of the work, depending on the fire season and other work activities going on in the district.

In both models, Field Operations assigned a lead representative in each district to the fire program for the fire season; it would also provide additional staff to support a 24/7 duty roster for each district.

At devolution, the Wildland Fire Management role was prioritized firstly as a community protection program and as such, Government of Yukon made a strategic decision to place the Wildland Fire Management program in the Department of Community Service (discussion for doing this is covered in other areas of the report). The Field Operations unit was renamed Client Services and Inspections(CS&I), and was placed within the Department of Energy Mines and Resources. CS&I was seen as primarily a resource management agency with responsibility for mining, oil and gas, and Land Use compliance inspections.

The Government of Yukon, recognizing that the structure Canada used had its weakness and that the two programs were becoming functionally further apart, decided to place a Wildland Fire manager in each district. Placing a program manager in each district provides for accountable, consistent, linear management in fire management. The six district manager positions were achieved by moving six positions from the Field Operations unit to the Wildland Fire Management program. These positions represented about 25% of the Field Services positions prior to transfer of the programs to Government of Yukon.

The organizational design is still dependant on support from EMR’s CS&I (Field Operations). The six district positions moved over to the Wildland Fire Management program allow the fire program to place a program manager in each district. However, they are not sufficient to support all the needs of the Wildland Fire Management program, especially during the fire season. The continued need for duty officer functions, administrative support, and general backup support for the Wildland Fire Management program in each district is recognized and addressed by continuing to have CS&I (Field Operations) help with these functions through a formal working Memorandum of Understanding. The MOU is discussed in detail in the Wildlife Fire Management Organization section of this report.

The following chart shows how the two programs are currently organized.

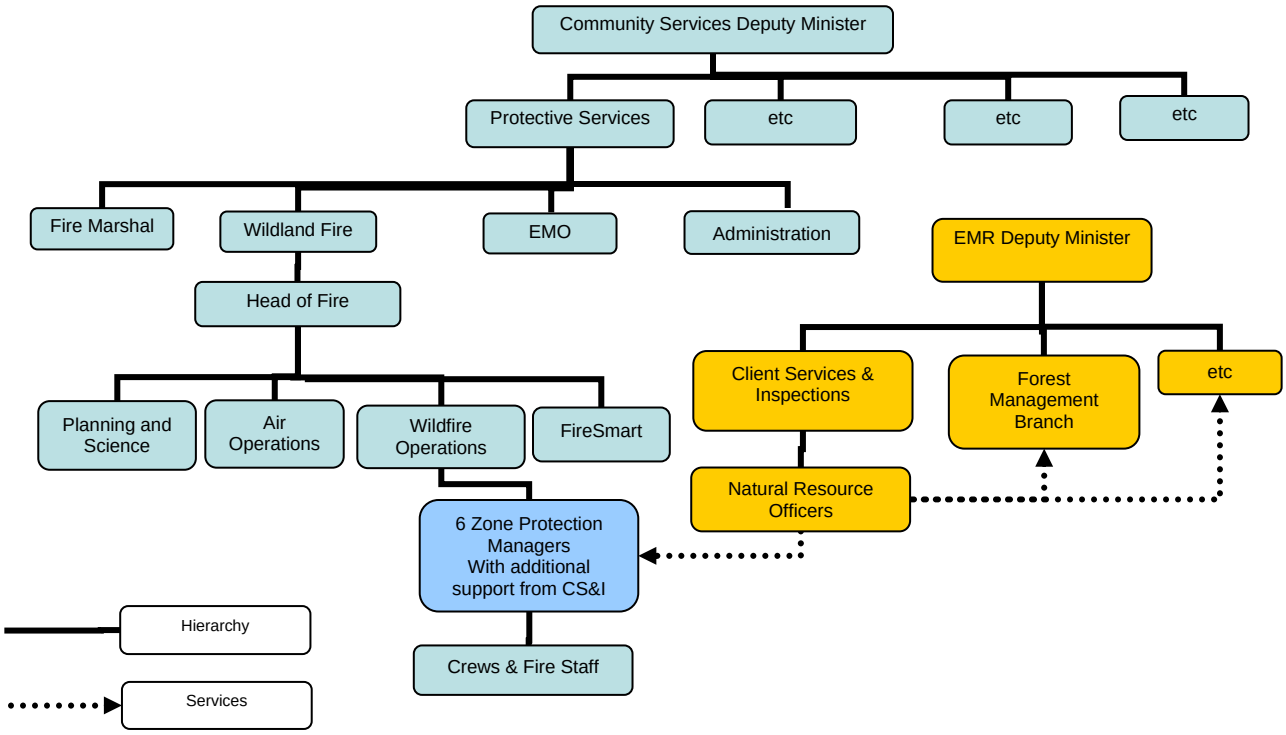

Figure 7 Current organization

As shown above, since devolution the Yukon, building on their unique strategic approach, has broken new ground in fire management organization by bringing together the Wildland Fire Management group with the Volunteer Fire Departments (VFD) and Emergency Measures Organization (EMO), all under the mantle of the Protective Services Branch of Department of Community Services.

Following devolution, the Government of Yukon added further resources to the program as follows:

- An additional three person Initial Attack crew for the Kluane District;
- Five seasonal clerks (Haines Junction, Dawson, Watson Lake, Carmacks and Mayo);
- Extended the two Air Attack Officers from six month to full time positions (extra six months allows support to fuel mitigation programs).
- One Meteorologist; and
- One GIS Technician.

Currently, fire operations at the Yukon Forest Fire Centre (YFFC) are managed by the Head of Fire Management who has three sub-sections: Wildfire Operations, Planning & Science, and Air Operations, as well as a stand-alone seasonal communications area, reporting to him. The staffing for the three areas is as follows:

Manager of Planning and Science
- Meteorologist
- Fire Prevention Officer
- GIS Technician
- Training Officer

Manager of Air Operations
- Administrative Clerk (6 months)
- 2 Air attack Officers
- Manager of Air Base (6 months)
- 3 Mix Masters (4 and 3 months)

Manager of Operations
- Logistics Coordinator
- Warehouse Supervisor
- Warehouse Person (1 full-time and 1, 4 months)
- Mechanic
- Radio Technician
- Radio Technician (4 months)
- 3 Clerks (4 and 6 months)

Territorially, for wildland fire purposes, the Yukon is divided into six zones: Tintina (Watson Lake) Tatchun (Carmacks, Faro & Ross River,) Northern Tutchone (Mayo, Stuart, Elsa), Klondike (Dawson, Old Crow) Kluane (Haines Junction, Beaver Creek, Burwash Landing and Destruction Bay) and Southern Lakes (Whitehorse, Tagish, Carcross and Teslin) Each Zone has one full time Zone Protection Manager and a six month seasonal Area Protection Officer (APO), with the exception of Carmacks which has two APOs, because of the distance to Ross River and the need for supervision of fire crews there.

The Panel was pleased to learn that there are plans to restore some fire operations at Beaver Creek with the establishment of a new volunteer fire hall, forward attack firebase and office space. A strong fire presence in the community is important, given that it is the location of the White River First Nation and a long distance from the Haines Junction Fire Base.

These six zones also have other seasonal (3 month and 6 month) staff (This listing does not include the Whitehorse-based mix masters, and stores people who are part of the 13 seasonal positions at Whitehorse.):

- 6 Zone fire clerks;
- 7 Area Protection Officers (extra in Ross River);
- 11, 3-person crews (33);
- 9, 4-person contract crews (36);
- 6 Stores persons (warehouse);
- 9 Lookout persons; and
- 4 Mix masters (Dawson, Watson Lake, Mayo, and Carmacks).

In addition, the Yukon contracts two air tanker groups, a DC6 c/w bird dog aircraft and three Fire Cats c/w bird dog aircraft.

Introduced in 2004, the STEP (Student Training and Employment Program) has been successful in providing seasonal support to the Fire program. The program provides excellent exposure for young people to the fire program, which can establish career beginnings. In addition, STEP support is also utilized at the Whitehorse Air Tanker Base, in the warehouse, in field communications (Public Information Officer) and in Carmacks and Watson Lake zone offices. Other possible roles for STEP students could involve Fire Meteorology and mapping.

The Wildland Fire Management program relies heavily on assistance from the Client Services and Inspections Branch of the Department of Energy Mines and Resources. This unique relationship is discussed in detail under the “Wildland Fire Management Organization Key Issue.”

Wildland Fire Management’s interaction with the Fire Marshal’s Office and the Volunteer Fire Departments (VFD) translates to a much superior fire response capability within the wildland/urban interface, which is important given the fuel loading adjacent to or near most Yukon communities. The VFD integration will be discussed later in this report. Similarly, the EMO has become a far more effective unit at both the central and community levels, which has already paid dividends during the 2004 wildland fire event. The enthusiasm of the staff involved within these units together with the synergistic energy created through this new organization, made a notable impression on the Panel.

Unfortunately, despite these very positive aspects, there is a downside in that the Panel members quickly recognized serious capacity or staffing deficiencies both at field and headquarters levels. There is not enough staff to fulfill the Duty Officer function at all six zones and the Yukon Duty Desk at Whitehorse. There is a shortage of bench strength in the field, particularly at the Area Protection Officer level. More Initial Attack capability and an additional Air Attack Officer are required and there is a need for more administrative support at some districts. There is also a requirement to upgrade the safety function throughout the operation. These deficiencies carry potentially high liability risks, not to mention their impact on overall effectiveness. As such, there is a critical need to address this problem in both the short and long term. These concerns are discussed in detail under the Wildland Fire Management Organization key issue section.

DEVOLUTION

Through the Yukon Northern Affairs Program Devolution Transfer Agreement (DTA), the Government of Yukon assumed responsibility for fire suppression in the territory from the Federal Government, effective April 1, 2003. The transfer agreement (Section 5.6) prescribed that for the duration of the five-year expense-sharing program, the fire suppression management policies as formerly practiced through the Northern Affairs Program, of the Department of Indian Affairs and Northern Development (DIAND), would be maintained, with particular emphasis on the zonation system.

LEGISLATION

The delivery of the program is enabled through the Yukon Forest Protection Act and the Forest Protection Regulation (2003). The Act was amended at devolution through annexation of the Forest Protection Regulation from the Federal Yukon Lands Act. The regulations carry precedence over the Act, in application. Although no serious problems have surfaced from this arrangement thus far, there are potential liability concerns involving performance factors and property loss, which could result in costly litigation. The precedent class action suit of Bartek vs. the State of Alaska Division of Forestry in 1998 is a red flag for protection agencies. In that suit, $100 million (U.S.) was sought for damage to 454 homes due to negligence by fire fighters. The plaintiffs argued that the State did not take aggressive action, and therefore was in violation of their own policy directives in this respect. The jury found that the State was not negligent by its actions or omissions; however, the fact that a class action suit of this nature went to trial is an indication of liability exposure.

The competent delivery of the Yukon Wildland Fire Management program is of paramount importance to ensure that public and personnel safety is not compromised through an act of negligence or fault. The issue of liability has been elevated through the passage of Bill C-45, which is a Federal Act to amend the Criminal Code that came into force on March 31, 2004. The act deals specifically with criminal liability involving organizations. The summary provided with the Act states in part:

(a) Establish rules for attributing to organizations, including corporations, criminal liability for the acts of their representatives.
(b) Establish a legal duty for all persons directing work to take reasonable steps to ensure the safety of workers and the public.

Beyond the liability issue, there may also be a need to develop legislation for programs such as FireSmart that provide mitigation to address fire risk. Preferably, the Forest Protection Act should be updated and rationalized with other key legislation such as the Lands Act, the Building Standards Act, and the Civil Emergency Preparedness Act.

POLICY

The 1997 Yukon Forest Fire Policy Study was prepared for the Government of Canada with devolution in mind. It recommended a number of improvements, many of which were made. The Panel used this study as a basis for assessing fire policy. It provided defining criteria for a “made for the Yukon” Fire Program that includes:

- Its mission and design are based on well founded and accepted values; and
- It is guided by clear and effective operating policies.

The Wildland Fire Management program is founded on value-based policy dating back to 1973, and now utilizes a new model harmonizing community protection and natural fire on the landscape. It is guided by a number of policy directives involving all aspects of fire management, organized around the main categories of prevention,

detection, suppression, and fire ecology relationships. Within this context, priorities involving prevention of personal injury and loss of human life from wildfire, loss of community property, and specified resource values and recognition of the natural benefits of wildland fire are specified.

Fortunately, the Yukon's strategic approach to Fire Management through its application of the zonation system is the most prudent course for an evolving fire management organization to adopt. This approach, which embraces wildfires on a large portion of the landscape, and fire exclusion with mitigation practiced along or near travel corridors, population centres or areas of human value, has served the Yukon extremely well since its initial adoption in 1973. It is truly a unique approach, due to its dependency on the dynamics of the landscape. It would be retrogressive to stray too far from its principals of application, after taking into consideration the territory's vast and largely uninhabited expanse.

FINANCIAL CAPABILITY

The delivery of the current Wildland Fire Management program is financed through a budget of approximately $13 million, which includes the direct firefighting budget of $6.5 million. This level of funding has carried the program in normal years in the past; it is by no means adequate for the long term, especially when considering the need for additional resources/capacity.

Figure 8 summarizes expenditures over the 2004 fire season and highlights that 50% of the total costs were associated with aircraft hired from outside of the Yukon and 11% with imported crews and contractors. The remaining 39% of total costs went directly to the Yukon business community and local firefighters. There was a perception at most public meetings that outside firefighters were brought in at the expense of local crews, however, figure 7 shows a $2.9 million total for local crews compared to $2.4 million total for outside crews and this ratio is consistent with other jurisdictions during extreme fire seasons.

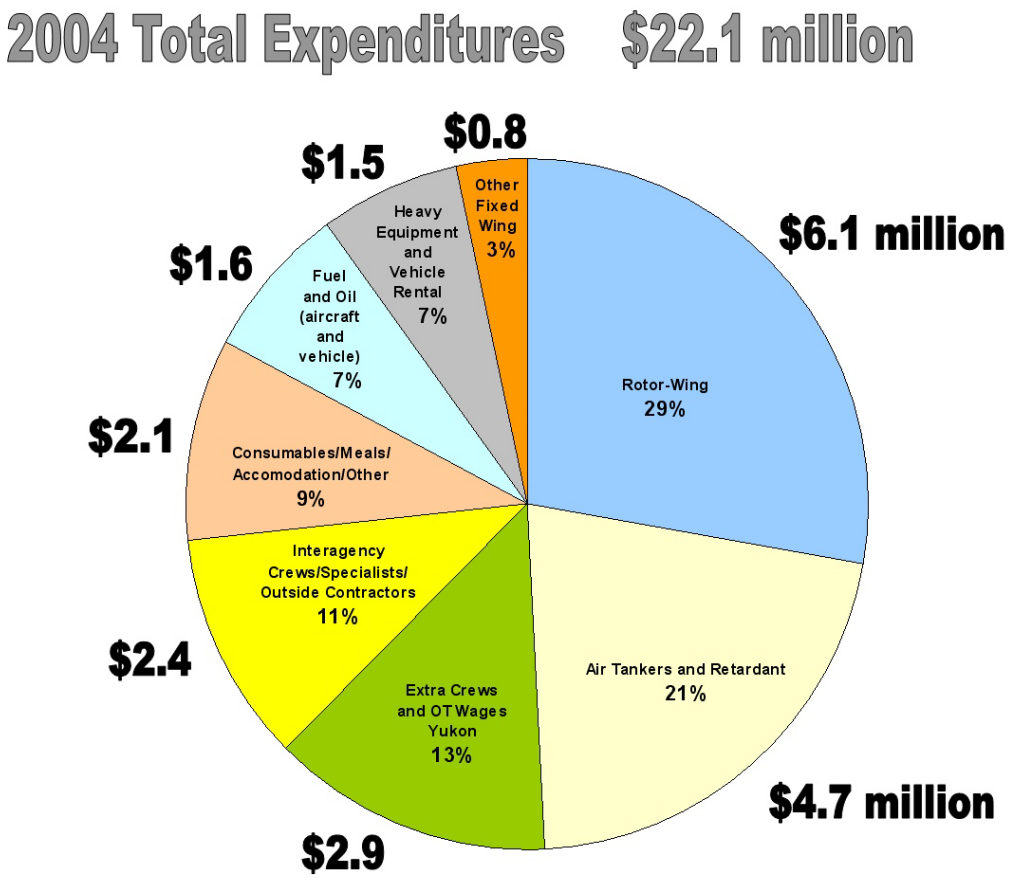

Figure 8 2004 Total fire management expenditures

Of much greater and immediate concern is the need to address contingency funding for program shortfalls in the event of more 2004 type fire seasons. The 1997 Yukon Forest Fire Policy Study, conducted on behalf of DIAND, recommended a contingency fund at devolution, capped at five times the annual suppression allocation. This was not done, however a transition arrangement through the DTA (Section 5.2) exists that provides a risk sharing arrangement between the two governments for annual Fire Suppression expenditures beyond $6.5 million for five years, post-devolution. (The federal cost share, which was 70% in 2004, declines to 40% by the end of the agreement at Year 5.)

In October of 2004, the Government of Yukon did establish the provision for contingency funding, to a maximum of $30 million dollars through Bill 47 (an Act to amend the Financial Administration Act.) The Act establishes the Wildland Fire Suppression Revolving Fund, which shall be used for suppression of wildland fires. The act provides for revenue from direct appropriations, from monies realized from the sale of wildland fire suppression related assets and from amounts recoverable from other jurisdictions as a result of providing them assistance in the suppression of wildland fires. The challenge now will be to secure some revenue for the fund, which currently sits at zero-balance.

Currently, there are problems regarding the payment of the Federal share of the expenditure excess for the 2004 fire season. The Government of Yukon has met all

of its reporting requirements as required under the DTA, but reimbursement has been delayed. This in itself would suggest the need to re-address the functionality of the DTA. However, far more important is the urgency to develop the financial capability to handle above normal fire seasons, especially after the expiration of the DTA. The suppression expenditure budget of $6.5 million in the Panel's opinion, is not adequate for the future, recognizing such factors as the effects of global warming that are already producing significant drying trends in Western Canada, the expansion of the wildland/urban interface, increased flammability of maturing and insect damaged forests and increasing use of the landscape by eco-tourists.

Section 5.5 of the DTA directs both parties to review the "Fire Suppression expense sharing arrangement" to their best efforts, by the end of the fifth year following the Effective Date. The Government of Yukon has recognized the urgency in proceeding with this review mid-term in the DTA instead of at the end, and has requested such, through a September 3, 2004 letter from Premier Fentie to the Minister of Indian Affairs and Northern Development. Hopefully, the Government of Canada will agree, as part of its responsibilities for the North, and will respond appropriately.

Once these high-level program matters around legislation policy, resources, and financial security have been resolved, the future of the program can be charted, in a true business planning sense. Addressing these constraints should translate into a very effective and efficient delivery of a Yukon Wildland Fire Management program.

> Note: In the area of fiscal responsibility, the Panel did hear concerns around the late payment of invoices, which is not unusual given the extreme amount of commercial activity that was involved in the delivery of the 2004 fire suppression operation. Over the course of the winter, the Department has reworked administrative processes, especially around the late payment problem and has made improvements to the fire cost reporting system. The Panel is satisfied that this area has been addressed satisfactorily.

KEY ISSUES

Most Yukoners understood that the 2004 fire season presented a very complex and challenging set of circumstances. Most people were appreciative that despite the severity of the fire climate, the smoke hazard, and the high level of activity, the government organization as a whole performed admirably. The public in general noted the fact that there were no fatalities and property loss for the most part was minimal. Most community people were also complimentary that the Government of Yukon was engaging in this public review of the 2004 fire season.

There were, as expected, a number of issues and concerns brought out through the review process. From the consolidation of issues and concerns brought forward by the public and the Panel's evaluation of the Yukon's Wildland Fire Management program, nine key issues have been isolated for developing a blueprint for advancement and change. The nine key issues are:

1. Strategic Approach to Wildfire Management,
2. First Nations,
3. Fuel Management and Fire Behaviour,

4. Training,
5. Wildland Fire Management Organization,
6. Wildfire Operations,
7. Communications,
8. Post-Fire Recovery, and
9. Wildlife

STRATEGIC APPROACH TO WILDFIRE MANAGEMENT

Yukoners' understanding and appreciation of natural processes allows widespread acceptance of the role of wildfire in the maintenance of natural ecosystems. What makes the Yukon unique is that not only is this principle understood it is applied as a major pillar of wild fire management policy. The Yukon landscape lends itself well to stratification, defining where fire intervention is practiced, balanced against where it is embraced as a natural ecosystem process. As a result, the territory has assigned just over 25% of its land area to the response zones where human values take precedence over natural values. These response zones generally include the areas of human settlement and the travel corridors where coincidentally most of the human values are located. In the remaining three-quarters of the Yukon landmass, wildland fire is allowed to occur, except where it is an immediate threat to specific values. The successful application of the zonation system has been well demonstrated over the past three decades. With a few notable exceptions, aggressive initial attack and suppression has limited fire losses within the fire response zones. With continuation of these policies, along with the improvements identified in this report, the Yukon can expect initial attack success to be in the 95-percentile range, comparable to any progressive fire management agency- worldwide.

The 2004 fire season served as major validation of the zonation policy. Despite the presence of extreme burning conditions, heavy smoke, and high activity levels, fire losses from approximately 116 fires occurring within the four response zones were limited to approximately 300 thousand ha, compared to over 1.5 million ha that burned in the Wilderness Zone. Figure 9 illustrates the locations of most of the larger fires (seen in red) that occurred within the Wilderness Zone. Fires occurring in the areas of critical to strategic fire management zones were kept small and contained. The statistics in Table 1 validate this trend. The number of fires, area burned and average fire size is much higher in the wilderness zones than in the protected zones. The largest fires occurred in the wilderness zone (where fire is allowed to take its natural course unless a fire analysis directs otherwise), while the smallest fires occurred in the critical response zones.

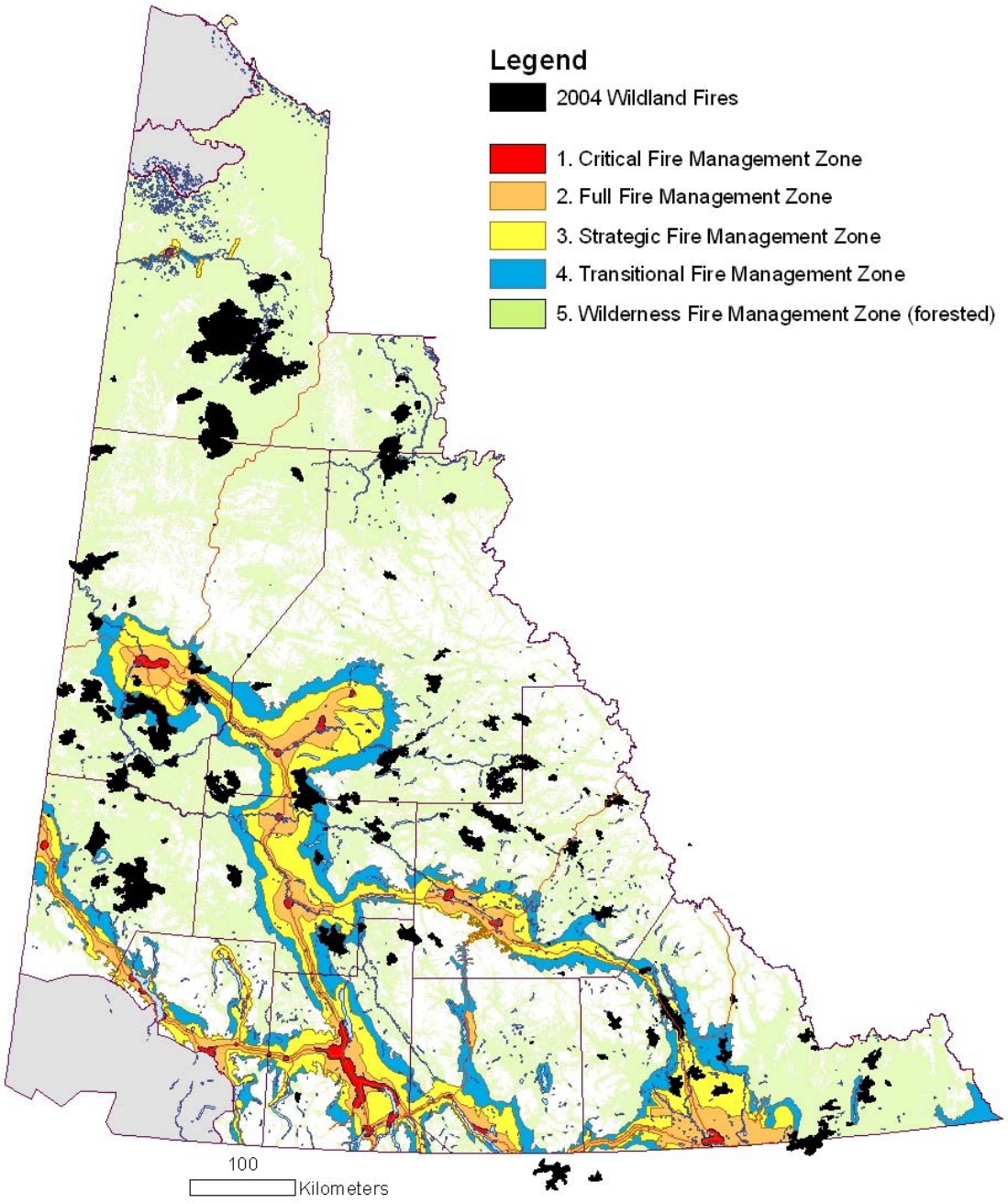

Figure 9 Fire management zones with 2004 Fires

Table 1. 2004 Fire Incidence and Area Burned by Zones

Fire Management Zone	Number of Fires	Area Burned (ha)	Average Fire Size	Burned Area Percent
Critical	20	23	1	----
Full	36	11,662	324	0.64
Strategic	29	107,826	3594	5.93
Transitional	30	180,589	6020	9.94
Wilderness	167	1,517,411	9141	83.49
Total	282	1,817,511	6491	100.00

Although the current zonation system works well in principle and application, this does not mean it cannot be improved, nor does it mean that it receives the full level of support that it should from First Nation governments and communities. After carefully considering the input received in the public review, the Panel is of the opinion that the system is in need of adjustment.

A zonation system has many requirements, including:

- The system must be dynamic, and be able to accommodate shifting trends and values on the landscape;
- It must be based on shared decision-making leading to ownership of the priority values by all involved stakeholders;
- It must be flexible in application and allow for a shrinking zone of action during periods of high fire action; and
- It must be practical to apply and achieve the fiscal objectives of the Government of Yukon.

The Devolution Transfer Agreement (DTA) locks in the Fire Management policy, which includes the current zonation, for the duration of its term, ending March 31, 2008. This would suggest that change before 2008 is not possible. However, the Panel believes that it is important to make some adjustments immediately.

There is debate about whether outright changes to the zone boundaries can be made within the quantum area that is defined in the DTA. This should be clarified in the short term. Regardless, even if no physical adjustment of the boundaries are possible, the existing policy contains ample flexibility for the Government of Yukon to designate values or areas that are outside the current response zones for protection, as long as it assumes financial responsibility for suppression operations that do occur. It is understood this practice is already in place but it clearly needs to be articulated more, both internally and externally.

Probably the most common concern raised at meetings with First Nations, Renewable Resource Councils and some communities was the lack of follow up communication to the DIAND 2002-03 zonation review. This is well documented in the 2004 Wildland Fire Review Summary appended to this report in Appendix 4. As a result, many First Nation councils and individuals felt that significant values, previously identified, were not reflected in the current policy, or if they were, are not recognized on maps or any available public documents. It is not realistic to expect

that total agreement and accommodation of all values identified is achievable, let alone practical. Nevertheless, the result of the 2002-03 zonation review along with the decision rationale must be communicated back to stakeholders.

The application of fire action flexibility is well established in the current fire management practices, particularly for fires that are beyond the initial attack phase. The strategic action deployed to fires occurring within the Strategic and Transitional Zones demonstrates that flexible application is in place. Most people understand and accept that under heavy fire loads, the fires closest to communities and highest values as described by the Critical and Full response zones, will receive priority action.

In terms of practical application, the Panel questions the use of five zones, in particular, the value of the Transitional Zone. The rationale for this zone is understood, given the flexibility afforded in the Strategic Zone, but its presence seems to be redundant. By eliminating this zone category and including it spatially within either the Strategic or Wilderness Zones, there should be an opportunity for less confusion. In addition, the end product should be more appealing to the stakeholders.

Rationale

The principle of fire management founded on priority zones is strongly supported by the Panel; however, further strategic application could be extended beyond the Critical and Full Response Zones through initial attack on some early spring fires or fires that are in close proximity to the Strategic and Transitional Zones. By doing this, fire spread and smoke problems can be reduced in response zones and public appreciation and support could be bolstered for at least attempting fire containment. Further, the assignment of some of the Transition Zone to the Wilderness Zone may allow for accommodation of other isolated areas of priority value within the response zones. (E.g. Tatchun Caribou range - Little Salmon/Carmacks First Nation)

The Panel has identified a number of other modifications that can and should be addressed before the expiration of the DTA. These are defined as Action Items and are listed in Appendix 1.

Recommendation

It is recommended that dynamic, science and culturally based policy improvements be incorporated into the guidelines for both short and long term issues and in line with the expiration of the Devolution Transfer Agreement, a fully-adjusted zonation policy should be put in place for the 2008 fire season.

FIRST NATIONS

The Panel was able to meet with or receive input from all 14 Yukon First Nations. Positive, constructive dialogue took place at these meetings. From these discussions, the Panel isolated several main concern areas as they pertain to wildland fire management: they are Zonation, Training and Employment, Fuel Modification, and Communication. Other issues of a non-fire management nature have been noted within the Public Review Summary document appended to this report. As these extend beyond the Panel’s Terms of Reference, the Panel did not address them specifically.

ZONATION

Dissatisfaction with the current zonation policy was raised in every community with the exception of Dawson. Strong opinions were expressed that the consultation process conducted by DIAND (Department of Indian Affairs and Northern Development) in 2002-03 was flawed and failed to identify and protect First Nation values. Concerns were expressed that First Nations values did not rank against the Dawson tourism industry, and that some areas would not have burned if properly mapped. The Panel also heard that lodges were protected while cabins belonging to First Nations people were left to burn and that rural blocks of settlement land were impacted by fire with little or no communication from Wildland Fire Management to the First Nation. Traditional camps and villages continue to be used by First Nations people and river travelers. The Panel agrees that these places should be protected for these reasons as well as for their heritage values where applicable.

There were numerous questions regarding what happened to information submitted during the round of zonation consultation that was conducted by DIAND in 2002-2003. Maps provided without point source values or priorities identified in a format different from the Government of Yukon's were not included in the zonation exercise. There was no explanation or justification of the final maps and little opportunity for feedback or viewing. Given First Nations stake in settlement land and traditional territories, the Panel supports a full communication process on the finalization of values and priorities. The Panel further suggests that any previously identified values that are unaccounted for should be recovered, and prioritized. Those designated for protection should be mapped. Those that are not, need to be clearly articulated back to the First Nation, along with the rationale for their exclusion.

Concerns were raised about the final zonation, not recognizing specific priorities, Including important wildlife habitat (e.g. the Ddhaw Ghro Habitat protection area); forestry values, traditional activity sites sacred sites, cultural sites (Chu Tthaw Hot Springs), villages (Aishihik , Hutshi, Hootlinqua, Big Salmon), some river corridors and tourism values such as the Fishing Branch and bear viewing area.

Other First Nation concerns involving the zonation issue included:

- The need to integrate Traditional Knowledge into zonation determination;
- Some information is confidential and can only be divulged when necessary; and
- GIS and mapping capacity is not well developed in many First Nations and in these cases, assistance is required for delineation of priority values.

It is important to recognize that Wildland Fire Management does prioritize specific values or areas for fire fighting that are outside of the current zoned priorities, once they have been brought to their attention. The Panel further believes that through the implementation of thorough communication and follow-up processes by the Government of Yukon, these concerns are for the most part reconcilable. There is a real opportunity for the newly devolved fire program to address and clean up some of the perceptions and the problems of the zonation system as it applies to First Nations. Specific direction through recommendations and action regarding this issue are addressed in the Strategic Approach to Wildland Fire Management, earlier in this report.

TRAINING AND EMPLOYMENT

Since the effective date of the Umbrella Final Agreement on February 14, 1995, the Government of Yukon and Canada have committed to a goal of having a public service that is representative of the demographic makeup of the Yukon. Aboriginal people make up almost 25% of the population of the Yukon, yet comprise less than 12% of Government of Yukon's 3800 employees. A concern was expressed over the apparent failure of the Government of Yukon to meet this commitment. There should be training opportunities, designated positions, targeted recruitment, preference in hiring and other measures reasonably required to meet the employment goals as committed to in Schedule A of Chapter 22 of the Final Agreements. First Nations also share in the responsibility and have a role in providing training and developing the capacity of their citizens. The Panel does agree that the employment of more First Nations people in the Wildland Fire Management program represents a win/win situation for both the program and the First Nations people. To help achieve this goal, Wildland Fire Management is encouraged to increase their current training program and develop career opportunities.

At this time, of the 57 percent of the employees who reported, only 10 seasonal employees have been identified as aboriginal and there are no identified permanent aboriginal employees. If the Yukon is to meet its obligations, then it needs to aggressively implement a plan that would see another 400-500 Yukon First Nation employees added to the Government of Yukon. The establishment of contract initial attack crews for First Nation communities that have Final Agreements and that have negotiated a Program and Service Transfer Agreement represents a positive building block. It was noted that the Kluane First Nation is negotiating an initial attack crew in the community of Burwash Landing. There is also a provision that allows for the negotiation of sustained attack fire suppression services. Initial attack crews were also negotiated for the Kaska communities of Ross River and Liard even though they do not have a Final Agreement. However, in the absence of Final Agreements for Carcross and White River First Nations, direct initial attack capability at these communities is also absent, with additional crews being assigned instead to Whitehorse and Haines Junction. The Panel is of the strong opinion that initial attack at any community should not be compromised for any reason, and should not be influenced by political arrangements.

The Panel also noted that First Nation contract crews are different from Yukon crews in respect to the number of crew members and seasonal tenure. These differences should be rationalized between the two types of crews, with the needs of the Wildland Fire Management program being the determining factor. It was also noted that the training levels and certifications varied between the crews. The Panel is of the view that in order to address capacity and training issues, Yukon needs to provide more annual training opportunities in coordination with the First Nation contractors.

Within communities, training of initial attack crews and crew leaders to nationally recognized certification standards should continue to be a priority. Early season fires may in some cases provide excellent training opportunities. As part of the training effort, crew rotation away from the community may be required and is encouraged, provided that fire-fighting capability on their home turf is not compromised while they are away.

The Yukon has long recognized the Emergency Fire Fighter (EFF) as an integral component to the delivery of the Yukon Wildland Fire Management program. The Panel has confirmed that the majority of EFFs are aboriginal. It is the opinion of the Panel that the EFF program needs to be improved in order to maximize its potential value in the Wildland Fire Management program. In particular, the inventory of qualified EFFs through the certification roster needs to be updated annually. Additional training courses should be targeted to communities with potential to deliver more EFFs to the program. Continued oral testing is encouraged where literacy skills may limit conventional participation.

FUEL ABATEMENT/REDUCTION

With today's recognition of the role of fire and in its absence, the build-up of fuels, the FireSmart program has been introduced to Yukon communities and has been well received. The winter season work opportunities and enhanced fire protection are of significant benefit. Comments were received that it does not go far enough nor does it bring about the changes on the landscape that would be required to provide the level of safety some communities' desire. Not all communities have multi-year plans to allow for the strategic investment of resources.

It was proposed in several communities that the contract crews should continue to do FireSmart work when the hazards are low and that their seasons should be extended to allow more work. This may alleviate some of the concerns that the projects are often not approved until snow depth is a hindrance.

CONSULTATION/COMMUNICATION

Most First Nations raised consultation and communication issues. Relationships varied from very positive to dysfunctional and hostile. A communication protocol is needed to identify who to talk to in communities and when. Open and better communications would have resulted in concerns being better heard and understood. There is a concern regarding a lack of effective communication systems in an emergency. There is a need to consult First Nations regarding fire location in relation to rural blocks of settlement land because First Nations do not have the resources to monitor fires or their impacts, but it is important that they be kept in the picture.

The need for more local involvement in decision-making was expressed and some communities went even further by suggesting their desire to be involved in the initial fire response decision. Some communities expressed the concern about initial response decisions being made by local Wildland Fire Management staff in isolation, without involving the First Nation while others were concerned that local Wildland Fire Management staff had to consult with Whitehorse before they could proceed with fire action. The Panel recognizes that a community decision-making process would be most impractical when decisions must be made instantly in order to successfully combat wildfire. Instead, much of the involvement should come up front well in advance of impending fires. Input including local knowledge can be provided during consultation sessions on zonation. Community workshops involving First Nations Lands and Resource Departments, the Renewable Resource Councils, Client Services and Wildland Fire Management staff could be held during the off season to ensure that all current issues are addressed and to make sure people are aware of the decision making process. This would help to ensure that communication

channels are fully open. When fires do occur, regular communication through briefings and meetings provide the opportunity to convey concerns around confidential First Nations values, along with other issues.

There should be a fire management presence in all communities to ensure good communication and liaison. Fire Wardens or Area Protection Officers (APO), at Carcross, Pelly Crossing, and Beaver Creek would benefit this process as they are presently without a firebase. Although Pelly Crossing and Old Crow have a Fire Crew, some consideration should be given toward establishing a seasonal APO or Fire Warden position at these locations.

RESEARCH

It is felt that the climate and weather are changing and extremely warm summers will become more frequent. This presents an opportunity to engage in research on impacts of climate change and fire on plants, animals and permafrost. Yukon should work co-operatively with First Nations, management bodies like the Porcupine Caribou Management Board, Renewable Resource Councils, and other government agencies such as Canadian Wildlife Service to better understand the potential impacts of wildland fires.

Rationale

Participation by First Nations in the Yukon's Wildland Fire Management program can and should be streamlined. The timing is right for the Government of Yukon to take a fresh approach with the recently devolved fire program. A more open communication process that allows First Nations the opportunity for constructive input should yield a higher level of First Nation ownership in the program and partnership with Wildland Fire Management. More fire management presence in some communities is one way to foster improved communications. This new approach should be accompanied by other priorities that address firefighting priorities, such as improvements to the Emergency Fire Fighters program, and research programs into fire effects on First nation's values

Recommendation

The Government of Yukon should develop a specialized communication protocol that will provide opportunities for First Nations to input their values and objectives for use by Wildland Fire Management in the decision making process. This begins with agreement on the strategic approach to wildland fire management, and extends to operations, through regular community meetings and open communication before, during, and after the occurrence of wildfires.

FUEL MANAGEMENT AND FIRE BEHAVIOUR

The extensive and remote characteristics of the Yukon forest landscape are described earlier in this report. Historically, natural fire occurrence and distribution dictates future area burned through modification of stand age, structure, and species. Recent fire patterns at the landscape level continue to influence fire spread, and the fire behaviour characteristics associated with forest types are well documented through both observation and research. This knowledge is applied in all the fire management zones, particularly in setting priorities during multiple fire situations. The general concept of young, regenerating stands being less susceptible to

extreme fire behaviour than older, often diseased forest stands is understood and applied at the landscape level. At the community level however, relying on the existing fuel type breaks and fire suppression options under high and extreme hazard is not sufficient.

Throughout North America, mechanical harvesting and low intensity prescribed burns are increasingly applied to create defensible space adjacent to communities at risk to wildland fires. This approach significantly improves the probability of successfully protecting life and property in the event of a catastrophic fire event near communities in forested areas. This innovative program has a variety of titles, but in the Yukon, the term “FireSmart” is used to describe fuel reduction at the wildland /urban interface.

FIRESMART AT THE WILDLAND/URBAN INTERFACE

The Panel was impressed with the government and community support for the FireSmart program in the Yukon. Throughout the public review process, the Panel heard many times that fire is an ecological requirement for healthy forests and that the communities accept the benefits with many landowners cooperating around their own homes by taking responsibility to FireSmart their places. The admiration for natural fire however stops at the backyard of residents and subsequently the support for fuel reduction is generally very high in the interface area. The challenge is to integrate the fuel reduction with other land use activities and objectives at a reasonable cost. The concept of FireSmart begins in the residential areas where firewood, brush piles, and other combustible materials connect a home to the surrounding forest area. The associated risk to the individual dwelling is also a risk to the community as fire quickly spreads from home to home.

Starting with guidelines for eliminating the back yard hazard, the FireSmart program then addresses adjacent forest stands within a one-day fire run from a community. The preferred fuel reduction option is to thin forest stands and remove the ground debris in order to eliminate the possibility of a crown fire overrunning a residential area. In the immediate proximity of a community, primary and secondary backfire lines are established by using natural barriers and forest management harvesting. The emphasis here is on the strategic location of fuel breaks based on evaluation of fuel flammability and contribution to fire suppression operations. A program that allows communities to recover revenue from timber or ongoing fuel reduction operations for re-investment into community protection could provide an innovative means to secure and expand the FireSmart program.

It was felt that risk assessments and “FireSmart” prescriptions should be offered for all of the mining camps. It was also felt important to maintain the access roads into the mining areas. The Klondike Placer Miners Association (KPMA) encouraged contact with immediate neighbours and proactive protection of individual mining sites. The KPMA also suggested the cooperative development of a fire management plan specific to the placer mining area. The plan would address specific firefighting action and tactics and through ownership by the KPMA, would provide Wildland Fire Management and their crew’s credibility and support to take action on wildfires within the active mining area. Placer miners have the expertise, equipment, and access to water to enable them to participate in the protection of their assets against wildland fire.

FIRESMART AT THE LANDSCAPE LEVEL

The Government of Yukon is actively pursuing a forest industry program and this implies an additional forest protection mandate for commercial forest stands. This is also an opportunity to strategically harvest flammable stands at the landscape level and to protect both communities and future forest growing stock. In the Yukon where timber commitments are under discussion, the forest management plans should be a model for integration of fire and forest management objectives. This relationship is dependent on the ability of the Government of Yukon to address the sustainability of a wood supply in the southern Yukon. As the forest management and business plans evolve, the priority zones will adapt but for the present, the Panel supports an initial attack enhancement in the Watson Lake region. A recommendation for additional helicopter/crew initial attack capability in the Wildfire Operation section of this report addresses the issue.

Rationale

The Yukon should rightfully take pride in their successful application of the FireSmart model that has already achieved a high level of stakeholder ownership. This level of mitigation is a good start, but by itself does not afford full community protection because of the continued threat of wildfires incoming from the adjoining landscape. Communities such as Whitehorse, Haines Junction, and Watson Lake are particularly vulnerable, as was Faro in 1969. The challenge therefore will be in the design of strategies to reduce fuel loading and fuel continuity, within and beyond the wildland / urban interface zone.

Recommendation

The Government of Yukon should explore means to enhance its mitigation approach to fuel management and the FireSmart program should be continued and where possible expanded. On forested lands beyond communities, strategies to reduce the risk of wildfire on specific values such as timber or tourism should be developed and secured through Land Use or Integrated Resource Management Plans.

TRAINING

The subject of training was a significant point of discussion throughout the fire review process and has already been discussed under the First Nations Key Issue. In addition, the Panel noted the interest by Yukon Community Services to improve training opportunities. Three perspectives regarding training emerged in the review. The first perspective came from the First Nations regarding their training needs for their Contract Initial Attack crews, Crew Leaders, and the EFF program; second from the Wildland Fire Management staff regarding the national certification standards and Bill C-45; and third from a majority of stakeholders regarding cross training with other Volunteer Fire Departments.

EFF TRAINING

Historically, the EFF program was community based and created benefits to locals through enhanced initial and sustained attack capability in the critical fire protection zone. Currently, the national standards imposed by the Canadian Interagency Forest Fire Centre eliminate many individuals in the communities that have solid fire experience from being certified through the national system. The Panel recognizes the importance of national standards and the safety implications but also agrees with

the community suggestion of strengthening the EFF program in priority locations. The use of EFF for initial attack is no longer acceptable considering the liability issues, but the Panel supports the use of EFF for mop-up operations and to provide training experience for new recruits.

CERTIFICATION

The international record of fatalities on wildfires is significant and the extreme fire behaviour events occurring recently worldwide have been exceeding historical patterns. The Wildland Fire Management staff has developed a certification manual current to April 2005. The Panel supports this initiative and the effort to sign the Memorandum of Understanding (MOU) between the departments of Community Services and Client and Inspection Services of Energy Mines and Resources. The MOU should address the certification importance and the recruiting of new staff with both fire interest and introductory qualifications in fire management.

CROSS-TRAINING

The relationship between the Volunteer Fire Departments and Wildland Fire Management is outstanding and the cross-training initiatives are a tremendous contribution to the Government of Yukon. This is a unique and valuable program and could be a model for other Canadian jurisdictions.

A significant training effort will be necessary to bring Yukon VFDs up to standard in wildland firefighting; however, the Panel feels that this will result in a high return for the investment.

Rationale

Given the need for strong competence levels by all those involved in wildland firefighting and the potential liability implications that have been underscored by Bill C-45, there should be a priority placed on an upgraded training initiative. An expanded training program, following international firefighting certification standards, where applicable should yield significant strengthening of capability and competence levels, for all line fire-fighters (Initial Attack, Sustained Action, and EFFs), Wildland Fire Management and Government of Yukon seconded staff and the Volunteer Fire Departments

Recommendation

Wildland Fire Management training should be formalized and strengthened through the adoption and Implementation of the Community Services Certification manual for application to all government staff involved in the program and through expanded training at all levels including, all line fire-fighters (including Initial Attack Crews, both in-service and out of service), fire overhead, and the Volunteer Fire Departments.

WILDLAND FIRE MANAGEMENT ORGANIZATION

As part of its review proceedings, the Panel was asked to evaluate the current organization's structure involving the delivery of the Wildland Fire Management program by the Protective Services Branch of the Department of Community Services. The current organizational structure, which was put in place at the time of devolution, is unique in that it links wildfire operations with the structural fire organization of the Fire Marshal's office, Volunteer Fire Departments (VFD) and the

Emergency Measures Organization (EMO). The new organization resulted in a relatively fewer number of dedicated fire management staff, particularly at the field level, it is strongly dependent on regular support from Client Services and Inspection staff of the Department of Energy, Mines and Resources.

The Panel was impressed with the integration of the Volunteer Fire Departments with Wildland Fire Management organization. VFD ‘s have, within a relatively short period, become involved in several aspects of the Wildland Fire Management operation including training under the Incident Command System, the use of Air Tankers, mitigation including FireSmart operations, and most importantly, the implementation of loaded vehicular patrols for detection and initial attack on new fire arrivals. Within the Whitehorse-Southern Lakes district, there were a number of new fires that were successfully actioned by VFDs. Some of these were reported and registered through the wild fire reporting system, while others were not. Accurate and complete reporting of all fires that occur within the wildland/urban interface is a prerequisite for performance assessment, and fiscal accountability.

The Panel observed a high level of initiative and enthusiasm, on behalf of the VFD volunteers. Because these individuals live and work within the rural communities, their newly acquired interests in the wildfire domain extend a sense of ownership to other local residents. The enhanced capability to respond to wildfires within the wildland/urban interface, which also happens to represent the Yukon’s greatest risk scenario, cannot be overvalued.

It should be noted that the integration of VFDs and their involvement in wildland fire is limited mainly to the Whitehorse/Southern Lakes District. It should therefore become an immediate priority to expand the involvement of Volunteer Fire Departments across all Yukon communities, where appropriate. All VFDs require more training in wildland firefighting operations. Additionally, VFDs require equipment, particularly 4x4 trucks complete with pumper units, in order to extend their range of effectiveness across the interface zone.

The Panel similarly saw the installation of the Emergency Measures Organization (EMO) under the Protective Services umbrella with the Wildland Fire Management group and the Volunteer Fire Departments as a positive step. This observation was confirmed repeatedly through many consultations with community leaders and the involved citizenry during the public review.

The EMO today is stronger through the support and depth provided by the Protective Services Division. EMO volunteers manifest this new strength through a strong community presence. EMO has a strong network of agency and community representatives who report through the Emergency Coordinating Group. Through this conduit, there is generally effective communication and coordination.

The Panel was most impressed with EMO’s practical learning approach with mock exercises, the most notable of which was conducted at Dawson, just before the 2004 fire outbreak. Similar exercises were held in Whitehorse and Tagish. A beneficial spin-off to this training approach would be the development of a custom exercise for Fire Duty Officers involving both Client Services and Inspections and the Wildland Fire Management groups. .

The people with whom the Panel met had high praise for the Emergency Measures Coordinator in Dawson for the way in which EMO matters were handled. The community suggested that the EMO Coordinator position should be a paid rather than a volunteer position. The Panel understands that EMO coordinator remuneration is the responsibility of the Municipality. The company the EMO coordinator worked for essentially donated his time for this service and he worked as many as fourteen days without a break. The general feeling was that before similar situations develop in the future, the whole EMO coordination process needs to be reviewed. It was suggested that mock emergency exercises be conducted to better clarify roles.

The 2004 fire season provided a steep learning curve for the EMO organization. There was confusion and misunderstanding over the declaration of a State of Emergency at Dawson and the subsequent Evacuation Order. In the event of future evacuations, ordered because of a declaration of a state of emergency, there needs to be a clear understanding as to who will exercise what authority with respect to an evacuation order. There were also problems around the use of outside Public Information Officers, many of whom lacked training and experience. A new Yukon Emergency Plan is nearing completion that should address the need for strengthening internal policy guidelines in these respects and offer solutions in the communications area.

Despite the strengths afforded through the new Protective Services organization, as described above, there are some serious capacity concerns involving this structure. Simply put, there are not enough dedicated staff resources to deliver the Wildland Fire Management program. The problem is most serious at the field level, but also exists within certain areas at the branch level. In addition to the concern over capability and efficiency, there are potentially serious liability issues over the use of untrained and inexperienced fire staff. New staff needs full support through supervision, mentorship, and formal training. These principles also apply to staff seconded from other departments, bought on to provide incremental support to Wildland Fire Management, during periods of high fire activity.

Notwithstanding the legal requirements established under Bill C-45, it is essential for today's operation to have a well-developed and proactive safety program. Safety has been at a lower level within the organizational structure involving Wildland Fire Management and there is an obvious need for a more comprehensive program. One innovative approach under consideration is to establish a Safety Section with a Manager and a Safety Officer who would also cover the duty desk at various Yukon locations throughout the fire season. This "Roving Duty Officer concept" will help to free up Zone fire personnel to their regular fire operational and management responsibilities. The panel strongly supports both of these initiatives.

The use of staff from the Department of Energy Mines and Resources' Client Services and Inspections Branch to augment the delivery of wildland fire management in the field is a logical way to proceed, at least in part because of the staffing deficiency described above. Furthermore, the Panel is convinced that such an arrangement is necessary in order for the current structure to survive. Unfortunately, the MOU that has provided the sharing of resources between the two departments has been fraught with misunderstandings and disagreements over its application. This results not only in acrimonious relationships, but also more

significantly means that the limited number of Wildland Fire Management staff are tied to the duty desk, when they should be in the field, delivering the Wildland Fire Management program. This not only involves all aspects of the program but also entails the need of being on-site on active fire operations.

The Panel spent considerable time with staff from both departments dealing with the problems of the M.O.U. and has communicated separately from this report with regard to the details. However, it should be mentioned that a significant contributor to the problem around the implementation of the MOU stems from the fact that the field seasons of both organizations coincide and as such, each has their own priority demands. The Panel further sensed that there was firm commitment to the principles of the MOU at the Ministerial and Deputy Minister level. It has recently been realized that there are fundamental differences at the middle management level and that these differences threaten the continuance of the arrangement between the two departments. This matter needs to be addressed with prime urgency and resolved.

Notwithstanding the current problems around the MOU, the Panel concluded that most staff within the Client Services and Inspection Branch, particularly at the field level, were receptive and interested in maintaining required training levels and a role in the delivery of the Wildland Fire Management program. Innovative solutions to the problems inherent with the MOU, particularly involving the core fire season and the sharing of administrative staff are presently being developed. With total commitment and involvement emanating from the most senior levels of both departments, a smoothly functioning arrangement should be achievable.

Beyond the arrangement involving EMR, Community Services should explore relationships with other departments for the training and subsequent use of staff in the Wildland Fire Management organization during peak periods of activity, similar to 2004. For example, it is believed that the Department of Environment could provide valuable staff resources from its Conservation Officer cadre. It is noteworthy that the Department of Community Services presently supplies warehousing, telecommunications and small engine mechanical services to several departments, so that an extension of these types of cooperative arrangements is a prudent course for the Government of Yukon.

Notwithstanding the provisions of support for other government departments, as discussed above and earlier in this report under organization, there remains a need to address staff shortage within Protective Services at key operational levels. These include:

- Whitehorse –Safety Section Manager
- Whitehorse –Safety Officer
- Whitehorse- One additional Air Attack Officer;
- Beaver Creek- Area Protection Officer -6 months;
- Teslin- Area Protection Officer*- 6 months;
- Old Crow- Fire Warden or Area Protection Officer - 4 months;
- Pelly - Fire Warden –4 months;
- Carcross-Fire Warden- 4 months;

As stated earlier in this report, the firebase at Beaver Creek is considered by the Panel as a priority and should be established as soon as possible.

In the area of administrative support, the clerical positions for the fire program should be maintained as four-month seasonal positions at the three Zone Protection Offices that share a common site with Energy Mines and Resources. In these situations, CS&I can and do provide additional clerical support during periods of high fire activity through the Memorandum of Understanding. At Watson Lake, Haines Junction and Dawson, the Zone fire operations are separate from CS&I operations and therefore the continuance of a six-month tenure for these clerical positions is justified. The extension provides support to Zone fire staff during the shoulder seasons when there is limited support available from CS&I. Once Fire Management Operations are restored at Beaver Creek, administrative support will also be required at this location.

The proposed Fire Warden position is discussed further under the Key Issue of Wildfire Operations, sub-heading Prevention. With proper guidance and on the job training, this position has the potential to become a corner stone between the First Nation community and the Wildland Fire Management group. It can provide a dependable communications link and deliver fire management services. It will likely only succeed if everyone at all levels in both the First Nation community and Wildland Fire Management program understand the objective and work together to ensure it receives a fair chance to work, especially during the first year and the start up period in future years. It is suggested that influential people in the community such as elders should have a role in the recruitment and selection of individuals to fill this position.

Consideration should also be given to designating one individual from Wildland Fire Management and a representative from First Nations to champion the program. They would carry out on site audits, recognize individual innovations and pass them on to other communities, and assist with training and identification of opportunities for the betterment of the program. A key responsibility of these champions would be to ensure all involved are clear on the expectations and use the position to its full potential.

Rationale

The Wildland Fire Management organization within the Department of Community Services is a unique approach that carries some very positive attributes, particularly those involving the linkages with the Volunteer Fire Departments and Emergency Measures Organization. Countering this arrangement are concerns over capacity, especially those around staffing and the functionality of the MOU. In this respect, an urgent priority is to reaffirm the intent and the long-term function of the arrangement between Community Services and Energy, Mines and Resources. The core period that reflects that portion of the fire season when Energy, Mines and Resources staff are needed to fulfill active duty needs to be agreed on in the short term and new innovative solutions like the Roving Duty Officer proposal need to be pursued for future application. Along with EMR participation, there is a need to develop additional bench strength through arrangements with other Government of Yukon departments.

Within the Department of Community Services, there is a need to expand the involvement of VFDs across the Yukon. There are staffing needs in Initial Attack, at

the Area Protection Officer level in the field and in administrative support. There is also a need to establish seasonal Fire Warden positions in some First Nations.

Recommendation

The current organizational structure housing Wildland Fire Management within the Department of Community Services –Protective Services Branch is supported because of the synergistic relationship that exists with other departmental services, most notably the Volunteer Fire Departments and the Emergency Measures Organization. However, to address serious capacity and potential liability concerns, it is imperative that extra resources be added. Furthermore, in order to ensure adequate bench strength, the relationship, coordination and capacity of cooperating departments must be addressed and reinforced; this includes the MOU.

WILDFIRE OPERATIONS

The wilderness landscape and the remoteness of communities are a central and guiding feature of fire suppression policy and operational procedures. The Yukon's operational strategy is based on six districts with permanent and seasonal staffing that evolved from existing community locations and access routes. There are inherent challenges in dealing with pre-suppression and initial attack in the Yukon and innovation and local knowledge are prerequisites for success. The 2004 fire season was the first operational test of significance since the DTA and this fire review is an opportunity to re-assess strengths and weaknesses. The success of the 2004 operations is a function of dedication combined with the skill set of the Wildland Fire Management staff, and the Panel appreciates their contribution of background information and clarification of review issues for this section.

As the Panel conducted this review during the winter months, they relied on paper trails and off-season interviews. The Panel recognizes that several operational situations can only be accurately evaluated during the fire season, and consideration should be given to a review during future fire seasons.

In this section, issues regarding wildland fire operations in the Yukon are addressed under the headings of Prevention, Detection, Pre-Suppression, and Suppression and Air Operations.

PREVENTION

The Government of Yukon has a number of excellent prevention programs and the Panel noted the long-term commitment to community safety and protection. Introduction of the FireSmart program and continued annual support is an outstanding prevention initiative and is a model for other Canadian jurisdictions. Publication of the brochure, "Driving the Fire Belt" provides both residents and tourists with an understanding of fire ecology and the responsibility for preventing man-caused fires. In addition, the proactive prevention initiatives in the 2004 fire season significantly reduced man-caused fires. Use of Fire Bans during extreme fire hazard periods was accepted and supported by the public. The role of the Volunteer Fire Departments and the RCMP raised public awareness and enforced the fire ban with excellent results as man-caused fires were reduced by 34%. It is noted that Alaska, with a similar hazard, experienced close to 50% man-caused fires, which is likely due to their much larger population.

The Yukon fire prevention program is obviously effective. The Panel did, however, identify a need to establish community fire management presence on a full time basis during the fire season in some First Nation communities. Consideration should be given toward establishing a Fire Warden position at Pelly, Carcross, and Old Crow. (An option at Old Crow would see an Area Protection Officer installed instead of a Fire Warden) If the expected benefits from these three positions are realized, consideration may be given to expanding the program to other First Nation communities in the future. If established, the Fire Warden Position will serve as a Wildland Fire Management representative for the Protective Services Branch, with the main duties of fire prevention liaison with the community. In addition to fire prevention, the Fire Warden may assist in other areas such as pre-suppression, particularly as related to the recruitment of EFFs and in overseeing the EFF program within the community.

Fires resulting from trees falling on power lines is common in the Yukon due to the number of extremely narrow power line right- of- ways. Both utility companies indicated a desire to participate in the Fire Smart program and may even be ready to enter into a wildfire agreement to help prevent wildfires. Typically, an agreement would entail support from the Government of Yukon to provide assistance with hazard tree identification, approval to clear additional hazard trees, especially those that are located off their right-of-way, and perhaps, provide for limited liability for cooperation/participation.

The Panel noted that very little, if any, hazard reduction burns are conducted. An evaluation of opportunities should be carried out and a program developed to help reduce wildfire hazard through use of this tool. Hazard reduction burns conducted in close proximity to communities could compliment and reinforce the FireSmart program.

The Spruce Beetle hazard in the Haines Junction/Kluane area is continuing to grow, with over 400,000 hectares of dead or dying forest. Additionally, the concentration of continuous fuels in the Whitehorse/ Southern Lakes region brings ever-increasing risk to the wildland/urban interface. Consideration should be given to increasing the priority for mitigating these threats through proactive fuel modification programs, including prescribed fire and aggressive mechanical means and the development of site-specific pre-attack plans.

DETECTION

The use of MODIS satellite imagery by Yukon Wildfire Management and advising interested stakeholders of its availability on the Internet worked exceptionally well in 2004. It will likely continue to be used as a detection tool in future years, especially in the remote areas of the territory and during extreme smoke events.

Air patrols were used successfully in 2004, although extreme smoke events hindered this operation from time to time. The VFD and RCMP both carried out patrols that served well as extra detection. In addition, the Kusawa Lake fire tower, which had not been in operation for nearly 20 years, was reactivated in 2004 and was successful in detecting lightning fires in the area that could have led to a major fire.

The public (especially near Whitehorse) continues to be a very valuable detection agent. Much of the success in this respect can be attributed to the Department's initiative in public education and in publicizing the need to report fires.

Smoke problems, some of which came from Alaska, will continue to be a problem in future years. Increased air patrols, along with ground patrols such as those carried out by the VFDs will continue to assist with this problem.

Yukon Wildland Fire Management should consider carrying out a review of all existing towers and their coverage of all priority zones to determine what is required. Perhaps some existing towers are no longer required, some closed towers could be re-opened, and new towers may be required. Closed towers such as Kusawa Lake, mentioned above, should be re-evaluated, especially during the higher fire hazard periods. This evaluation could also be influenced through changing priorities that result from a new zonation; therefore, timing may be best after the existing Canada-Yukon agreement is completed.

PRE-SUPPRESSION

In the overall mandate of any fire management system, the investment in preparedness provides the highest returns through sophisticated guidelines for resources commitments in advance of fire starts. A number of documents contribute to the Preparedness System in the Yukon and they are derived from solid analysis of the historic fire risk and the daily calculation of fire danger levels. Some of these documents include, Yukon Wildland Fire Management Suppression Preparedness Guidelines 2004, prepared by Yukon Community Services, Wildland Fire Management; Development and Structure of the Canadian Forest Fire Weather Index System, Canadian Forest Service, Van Wagner, C.C. 1987., and Fire Behaviour in Upland Jack pine: The Darwin Lake Project. Northern Forest Research Centre, Canadian Forest Service, Quintilio, D. et al. 1977.

In the Yukon, a generalized fuel type (C-3) is used as a background for the calculation of fire behaviour variables using the Canadian Fire Behaviour Prediction System (FBP). The Panel agrees with the assumptions but was concerned on learning that the daily-computerized prescription for preparedness was not always applied due to staff limitations. As stated in the supporting documents, the Preparedness System is a work in progress and the following comments are suggestions for increasing the investment return.

The following principles should be included in the Wildland Fire Management preparedness system:

Clear objectives are paramount for the successful delivery of results under a preparedness system. Without them, the evaluation of performance becomes subjective and confusing. Although there is reference to some standards in various papers, manuals, etc., the Panel was not able to clearly find official standards for the following areas:

- Automatic incremental resourcing based on hazard level in anticipation of new starts;

- Departures from prescribed resource levels are acceptable as they serve as guidelines, however any changes must be documented and justified in the Fire Log;
- Pre-positioning of initial attack crews to temporary field locations (as opposed to overlapping resources at one location) resulting in greater coverage and reduced response time, and automatic dispatch at certain hazard levels;
- Reduced get-a-way times to improve initial attack (I/A) times (existing 15 minutes at red alert should be 3 minutes) with consideration of pre-warming aircraft engines, etc.;
- Include any presently unincorporated data on values identified and provided by communities when selecting I/A resource positioning; and
- Objectives for wildfire discovery size, initial attack time from discovery and size, control time (e.g. 10 o'clock rule) need to be clearly articulated as part of preparedness planning.

Other pre-suppression measures recommended by the Panel include:

- Expand the involvement of Volunteer Fire Departments (VFD) beyond current use of Whitehorse/Southern Lakes region to include stand-by and loaded patrols at higher hazard levels;
- Field fire staff need to be more directly involved in field operations, particularly when campaign or project fires are ongoing. Operational measures to release fire personnel, from prolonged stints at the Duty Desk, such as the proposed Roving Duty Officer program, would help to alleviate this situation;
- One Duty Officer per existing Zone office plus the Yukon Duty Officer should be maintained. Client Services and Inspections, who provide Duty Officer support to the Wildland Fire program, have committed to a core season from June 1 to July 31 for the 2005 fire season. The Panel, however, strongly suggests that the core season should commence much earlier—on or about May 7—and end later— on or about August 15. The earlier start is based on normal fire operations commencing, and recognizes the probability of early spring fire occurrence. The August 15 end date takes into consideration that the first air tanker (DC 6) goes off contract at that time, as do the First Nation Contract crews. The fire management staff need to be actively involved in the overall fire operation during this core period (May 7-Aug. 15) and not tied exclusively to the duty desk. The Duty Officer roles and responsibilities are well explained in the existing '2004 Duty Officer Manual'. Some variance may be considered in the shoulder seasons (Apr. 1 to May 7 and Aug. 15 to Oct. 31) plus consideration for lower hazard days (green & blue alert levels) when a duty officer may not have to be at the desk, or even in the office; however, moderate, high, and extreme days should see a Duty Officer at each Duty Desk; and
- Ensure all Duty Officers understand how to use the iFMS computer program and complete a daily pre-suppression preparedness plan for submission and review/approval to the Yukon Fire Centre and that the procedure is carried out daily throughout the fire season.

SUPPRESSION

Suppression operations build following fire events that overwhelm initial attack effort and expenditures increase exponentially, particularly under State of Emergency declarations. Under identical fire season severity, it is interesting to compare the fire suppression expenditures in Alaska and the Yukon. Recognizing the much larger size of Alaska, it is still interesting to compare total expenditures in Alaska, which reached $110 million US, with the Yukon expenditure of $22 million.

The comparison to Alaska is made only to illustrate what can happen with the occurrence of large fires within the urban interface. If the Yukon were to experience similarly large interface fires, the suppression costs would go up more than just proportionally. Again, this underscores the importance of Yukon's Zonation policy, as well as the need for fuel management programs in and around communities and the need to prevent wildland fire.

The existing Wildland Fire Analysis Strategy (WFAS) is very detailed and time consuming. It serves well for fires that escape initial attack and that are on their way

to becoming large fires. There is, however, a need to develop a simplified Wildland Fire Analysis Strategy for Initial Attack (e.g. Initial Attack Strategy (IAS)) for application on wilderness zone fires that are not identified as a point source). Such a device allows for quick assessment with full communications followed by decisive and proactive action.

AIR OPERATIONS

The Panel recognizes the overall expertise of the Air Operations group and their excellent performance throughout the fire season. The Panel was thoroughly briefed by the Air Operations group on the unique features of the Yukon concerning the use of aircraft for fire suppression, particularly the air tanker program. After reviewing the Air Operations program, the Panel feels the program is a good fit.

The Panel feels that the Rotary Wing Program could use some adjustment. An increase in the base level of aircraft is justified in that a significant number of casual hires are completed during high hazard events for both helicopters and air tankers. A 'bigger bang for the buck' could be realized with contract helicopters vs. air tankers, especially when consideration is given to release (and payback) opportunities that will be realized through the Mutual Aid Resource Sharing Agreement (MARS) during low hazards in the Yukon, and the limitation of airstrips. A number of advantages accrue from the helicopter scenario for initial attack flexibility, which could address the security of the southern Yukon wood supply as business opportunities develop over time. The merchantable timber requires a protection ability that conflicts with community protection in the Watson Lake area. In this scenario, a tanker group at the Watson Lake airstrip and a heli-attack crew day-based to action fires threatening merchantable wood is in the interest of the Government of Yukon if a forest industry is being promoted. Assistance with the summer season workload in the Department of Energy and Natural Resources during low hazard periods was a strong factor in the helicopter recommendation.

The mid-slope ignition of the majority of lightning fires creates another opportunity for helicopter/bucket operations supported by crews. This tactic is ideally suited to limit fire spread down the slope and into drier valleys with continuous fuel types. Tanker groups working concurrently to hold the fire at the top of the ridge increase the probability of successful initial attack.

Based on the above analysis, the Panel has concluded there would be a significant advantage in establishing heli-attack capability supported by contract helicopters. A medium helicopter along with an eight-person heli-attack crew will improve the hitting power on initial attack, and in consideration of the Yukon geography and terrain, it is recommended in place of pursuing additional air tankers. The Yukon should examine the feasibility of contracting one medium and one intermediate helicopter for a two-month duration. Both resources will greatly improve response capability and under proper management should be cost effective over the course of a fire season.

A secondary suggestion for improvement is the use of double crewing on helicopters to take advantage of the long day-light and increase fire action time. In addition, some consideration must be given to increase the staffing in Air Attack, to allow for overall management relief. This has already been addressed under the Wildland Fire Management Organization Key Issue.

Rationale

The Yukon has a solid foundation in fire operations, however, a number of improvements have been identified. The most important of these involve the preparedness system and heli-attack capability addressed below in two separate recommendations. There is also a need for additional prevention measures involving mitigation operations on power-lines and the spruce beetle infestation and in augmenting the FireSmart program with hazard reduction burns. Analysis of the detection network should be undertaken at the conclusion of the DTA. Standards involving detection, preparedness and suppression operations should be formally recognized and adopted. Fire staff in the field need to be released from the Duty Desk in order for them to do their job in fire management.

Recommendations

The Preparedness System needs to be taken to a new level through commitment to hard-line principles that include automatic incremental resource increase based on hazard levels in anticipation of new fire starts, pre-positioning of initial attack crews to temporary field locations, reduced response times, and automatic dispatch.

In order to improve the effectiveness of initial attack, and in consideration of the Yukon geography, it is recommended that a seven or eight person heli-attack crew, supported by a medium helicopter under contract, be established for the core period of the fire season. This heli-attack capability should be moved around the Yukon based on fire hazard and risk.

COMMUNICATIONS

The Review Panel heard many concerns as well as positive comments about various aspects of communications related to many components of the fire management effort during 2004. It is widely accepted that good communication is essential, especially during times of emergency or environmental crisis.

In some communities, the Panel heard expressions of appreciation about how well the individual fire managers had kept the community informed through daily briefings and updated fire maps. Many Yukoners also appreciated having access to the Wildland Fire Management website and its link to the MODIS website to obtain regularly updated fire information.

Concern was expressed with respect to the completeness and accuracy of the database of locations of valued assets, such as placer mining camps. Various government agencies hold some of these data, the most up-to-date probably being Water Resources, and Mining Land Use Inspection Services. Some of this information was being obtained even as fires approached the gold fields. A complete inventory of such sites needs to be generated and kept current.

The Panel heard significant concern and outright anger about the way the various news media treated information about the status of the different wildland fires and their effect on road closures and real or potential evacuations of threatened areas. There was general criticism that media, particularly national newspapers, radio, and television were looking for sensational stories and exaggerated the danger and incorrectly reported evacuations of communities and mining areas and road closures. The public felt that this incorrect information translated into fewer tourists visiting

areas like Dawson City that relied on tourism as an important component of the local economy. These revenue losses were not necessarily offset by income earned by providing services to the firefighting teams. Yukoners also expressed the view that more could have been done by the Government of Yukon to counter the negative media reports.

There were also concerns raised about internal and interagency communication and communication technology. Some felt that the daily briefings at joint agency meetings were an effective means of ensuring that all the departments involved were kept informed. Others were critical of the communication process, saying that it occurred too late in the day for the information to be useful for the planning of the day's activities. Some outside of government felt that it was not clear whether the Wildland Fire Management Branch or the Emergency Measures Organization was the point of contact for information. A clear separation between emergency communications and tourism marketing communications needs to be acknowledged and appropriate resources for training in each of these roles needs to be allocated. The view was expressed that the different audiences for emergency messages and tourism marketing messages needs to be recognized and it is necessary to determine when the handoff to the government spokesperson should occur. There were complaints that it took a long time, under the circumstances, to determine who the right contacts were in British Columbia and Alaska, and that these contacts changed during the course of the fire season. There was criticism that the road closure signs in Alaska remained in place even though the danger was past and the road was open.

Communication technology was not as efficient as it might have been; some highways maintenance personnel who were actively involved in fire management sometimes were working with two or three different radios. There were also places where radio communication did not work because of incomplete coverage. A related complaint from travelers was the lack of commercial radio coverage along the highways between communities. This resulted in people traveling to Dawson along the Klondike Highway not learning of a road closure until they arrived at the closure point.

There were concerns expressed about the methods and means of communication with communities and groups as well as with individuals whose property may have been threatened by fire. The fire situation near the gold fields became so severe that a state of emergency (SOE) was declared on July 4 and an evacuation was ordered a few days later. There was some confusion surrounding the SOE, given that the declaration of the state of emergency by the Minister occurred following a late night meeting. Some of the participants in the earlier portion of that meeting, such as the Klondike Placer Miners Association (KPMA) representative and the EMO representatives, learned of the declaration by way of radio broadcasts the following morning. Some of those who spoke with the Panel felt that hourly notices on CBC radio of the SOE contributed unnecessarily to a state of alarm. The news reports also were not clear as to whether the SOE and evacuation order also applied to Dawson City. The Government of Yukon seemed to assume that the RCMP would enforce the evacuation order but the RCMP detachment in Dawson City was not prepared to do this. The misperception, however, that the police would be forcing miners to leave their claims resulted in strained relations between the RCMP and some members of the mining community. Most of the operators were unprepared to

give up working on their claims for the duration of the state of emergency. Additionally, many of the operators are well equipped with heavy equipment, pumps, hoses, and access to sufficient water supplies to protect their mining operations from fire. The evacuation order was generally ignored by the miners, although a small number did come in to Dawson and stayed in hotels for a short period. During the SOE of the gold fields south of Dawson, an area that has limited communication capacity, radio frequencies, and telephone lines were often tied up by people trying to find out critical information. CBC coverage does not extend as far into the gold fields region as it once did, therefore, radio announcements did not reach some in the region. The KPMA representative was contacted by helicopter in at least one instance so that she could spread the word to miners, and did so by hand delivering information to some miners. There was disagreement between government agency representatives and the mining community regarding the effectiveness of the dissemination of information about the status of fires threatening the gold fields, the state of emergency, and the evacuation order.

The few individuals who lost remote cabins to fire felt that if they were made aware of the threat to their property, they could at least have saved movable equipment. Some community members said that there was confusion about the naming and numbering of fires. The Wildland Fire Management personnel relied on a numbering system while community members referred to fires by name. Some were also concerned that elected officials in the community were not kept informed.

As an adjunct to the review of the 2004 fire season undertaken by the Panel, communications practitioners within the Government of Yukon met to consider how the communications aspect of the fire season was handled. While the general conclusion, which the Panel supports, was that an exceptional communications response was delivered by all agencies during the 2004 fire season, there are areas that need strengthening. The 2004 Yukon Forest Fire Communications Report stated that,

“The primary criticisms heard from the public and the media related to the communications component of the response and were primarily focused on the perceived need for more information. This is the reality of an extremely active fire season.”

Some identified communications-related complaints include:

- Advisories of highway closures, their duration and their rapid change of status;
- Evacuation advisories for the Dawson gold field areas;
- Authority to enforce evacuations;
- Correcting speculative comments or observations by media or the public;
- Media (local and outside) were too dramatic in their reporting of the fire situation which negatively impacted on the Yukon tourism industry; and
- Messages were not sympathetic to the daily tourist movements and contributed to some of the negative perspectives.”

The Communications Report included a number of recommendations, with which the Panel generally concurred. The main recommendation from the report, which the Panel strongly endorses, is summarized below.

Rationale

There was a wide range of communications concerns expressed. The magnitude of the 2004, fire season provided a template for first time users and first time experiences. There were a great number of people that were impacted. Internal communication problems affected mainly those that were involved with the fire operations while external communications affected tourism commerce, and even travelers from afar. From this review, the Panel determined that remedial action is required as follows:

In the gold fields, an inventory of claim sites needs to be kept current. There need to be separate communicators for emergency measures and tourism marketing, with appropriate training for each. Information officers should be given training about fire dynamics and the ecological role of fire in the boreal forest.

Communications around highway travel involving radios, signage and the messages around road closure/delays, need to be improved. The issuance of State of Emergency and Evacuation Orders needs to be re-defined internally, within government circles and then clearly articulated to the public.

Recommendations

The Government of Yukon should develop a generic Emergency Communications Strategy and Communications Plan and distribute it widely amongst response agencies to foster a more effective emergency communications response. A ministerial spokesperson should be appointed and a consistent message should be developed and delivered by a single government spokesperson appointed, probably, by ECO. A component of the communications strategy and plan should include ways to counter negative or sensationalized reporting about wildland fire emergencies.

POST-FIRE RECOVERY

Post-fire recovery deals with impacts or damage resulting from wildland fires that occur to land or water resources, infrastructure, or person-made improvements. Because forest fires are a normal part of the ecosystem dynamic, recovery usually is left to natural processes. In some situations, however, some remedial action is necessary. This can vary from reclamation of the land to salvage of timber through to restoration of property and improvements. In some extreme cases, such as an interface fire that destroys homes, or businesses, disaster relief programs may be activated.

Relative to the large amount of area burned during the 2004 fire season, there was not an extensive amount of property loss. During the public review, however, the Panel did hear from individuals who directly lost assets, usually associated with a wilderness operation. An issue that developed following the fires in the Klondike gold fields was the loss of the insulating forest floor cover, both from the fires and from cat lines, resulting in thawing permafrost, subsequent slumping, and increased sedimentation. It will be difficult to differentiate this increased sedimentation from that generated by mining. This coming spring freshet will result in much of the sediment

being flushed downstream. The Panel was informed that Yukon Geology is doing a study on the effects of the fires on permafrost.

Two post-fire recovery issues captured the focus of the Panel. The first involves Isolated Wilderness Zone Assets and the second deals with Reclamation and Access Management.

ISOLATED WILDERNESS ZONE ASSETS

There are a number of different types of assets in the Wilderness zone, including First Nation villages, public infrastructure, fishing and hunting lodges, trap-lines, and trapper's cabins. Many of these assets are insurable. Some are identified as point sources within the zonation system and thus can receive protection by the Wildland Fire Management operation. The Panel has been asked to consider the matter of trapper cabin compensation.

Isolated trappers cabins are at risk during the fire season, particularly in the Wilderness Fire Management Zone. There are currently over 360 trapping concessions in the Yukon, with an estimated one to three cabins per concession. Some of these cabins are important to the culture of the Yukon and some have historic significance. The average value of the cabin and contents is far below the suppression costs for fighting fires in the Wilderness Zone. Taking action on these fires is not only expensive and impractical, but more importantly can compromise firefighting on higher priority operations.

The Panel is aware of a study involving options for a trapper compensation program undertaken by the Government of Yukon. One of the options under consideration is a program that could see certain levels of compensation for eligible mainline cabins that are registered and are subsequently destroyed by wildland fires. The Panel has considered this option and has concluded that a compensation program is reasonable and further recognizes that a risk sharing agreement between trappers and the government is a fair approach to maintaining the trapping industry and protecting the cabin sites. Criteria for cabin compensation should be rigorous and should include FireSmart principles.

RECLAMATION & ACCESS MANAGEMENT

An area of concern expressed by the public was increased access created by dozer fireguards that were established in critical wildlife areas. The request from the public was to close access at the junction of main roads but not necessarily reclaim the complete dozer guard. In the case of fireguards in environmentally sensitive areas, however, the public suggested reclamation. The Panel suggests that guidelines be developed and become part of the suppression budget or recognized as legitimate fire expenses, to carry out reclamation to a level required by other operations on the landscape (i.e.; mining, forestry, etc).

Rationale

Although recovery issues resulting from the 2004 fires are not large in number relative to the amount of area burned, there are nonetheless some concerns that need to be addressed. In the area of reclamation, there is the need to close off access where critical wildlife habitat exists. Guidelines for reclamation that are consistent with industrial requirements should be developed and implemented. A

policy decision involving compensation for loss of trapper's cabins assets needs to be created.

Recommendations

It is recommended that in the event the Government of Yukon implements a trapper cabin compensation program, the approval conditions include proper registration and mandatory FireSmart improvements.

WILDLIFE

Wildland fire has both a positive and negative impact on wildlife and its habitat. There may be direct losses of wildlife during a fire and important habitat may be destroyed. Fire is also the agent for renewal through the burning of mature forests in which habitat for a variety of species may have become limited. At the same time, mature forests are important and in some instances even critical habitat for other species. Biologists have suggested that fire is as essential to the health of the boreal forest ecosystem as rain is to the rain forest.

From a moose management perspective, wildlife managers would generally prefer to see wildland fires left to burn whenever possible. This would ensure a continuous supply of young deciduous growth as browse for moose. While it would seem that there is ample additional moose habitat resulting from a fire season such as experienced in 2004, some previously very productive moose ranges, such as the area known as the Teslin Burn (1958), have now grown back to the point where browse is less plentiful. There will be occasions when prescribed burning in such areas is necessary to regenerate specific moose habitat.

With respect to woodland caribou, however, the situation is somewhat different. During the public meetings and in comments from regional biologists, the Panel heard the concern expressed that core winter range of some woodland caribou populations is extremely limited, either because it was burned during previous fire seasons or because of human development. While caribou will occupy a burn area the first year after a fire, to feed on the mushrooms that follow a fire, they will avoid that area for up to 30 or more years while the lichen recovers. In the case of the Southern Lakes caribou herd range, fire prevention has altered the landscape to the point where climax species communities dominate it. While mature forest contains the lichens required by caribou, it does require renewal. Given the current mature state of the forest of this herd's range, a large fire could wipe out the whole winter range of this herd. In the Southern Lakes region, lichen replenishment could be accomplished by strategic logging of pine stands to restart plant succession and by small prescribed burns. This would break up the mature forest and reduce the likelihood of a catastrophic fire.

Wildland fire has reduced both the Tatchun and Finlayson woodland caribou herds' winter ranges. Fires in 1958, 1969, 1980, 1995, and 1998 have successively reduced the Tatchun herd's winter range; only 30% of the winter range remains unburned. The Community-based Fish and Wildlife Management Plan for the Little Salmon/Carmacks First Nation Traditional Territory 2004 – 2009 recommends that the Tatchun herd winter range be protected as part of a fire management plan. The Finlayson herd range has 3000 sq. km. left unburned, down from a total range of 25,000 sq. km. The caribou biologists have mapped the ranges of the various herds

digitally and suggest that fire management plans should be developed for these herds' ranges and plans be actively monitored. They also recommend that these reduced core winter ranges receive high priority for protection.

The Review Panel also heard concern about islands in the rivers being allowed to burn. These islands offer moose protection from predators while the moose are calving. Concern was also expressed about allowing forests to burn in swan nesting areas and about the effects on fishery resources when forests around productive lakes are burned. Fish population losses have occurred following fire, possibly due to siltation or water chemistry changes. The Panel heard concerns in a number of communities about the protection of river corridor values from fire. Concerns were expressed that fires within river or stream corridors may have a negative impact on fish habitat, including spawning habitat, through the indirect effect of increased siltation resulting from erosion. Some who spoke with the Panel were unhappy that these values were not shared by fire managers and were not reflected in the fire zone classification.

Rationale

There is a need to develop wildland fire management objectives for the protection of important wildlife habitat, in concert with the zonation system.

Recommendations

Fire management plans should be developed and implemented for woodland caribou and other wildlife populations that have established and approved species management plans; these should take particular account of protection priority for reduced core winter caribou habitat and include consideration of prescribed burning.

APPENDIX 1

ACTION ITEMS

Strategic Approach to Wildfire Management Action Items

- Re-define rules of application to allow for more strategic flexibility.
- Consider initial attack on some early spring fires or fires that are in close proximity to the Strategic and Transitional Zones.
- Consider elimination of the Transition Zone.
- Clearly articulate values or areas that are located outside of current response zones, but are designated for protection.
- Clarify authority of field fire personnel regarding zone interpretation and application.
- Adapt zonation to accommodate priority values (within quantum of the Devolution Transfer Agreement).
- Include tourism values in the value recognition process.

First Nation Action Items

- Establish Initial Attack crews in Carcross, Beaver Creek, and Burwash Landing.
- Rationalize First Nation contract crew size and length of season.
- Expand and rebuild EFF capacity in all communities.
- Establish fire management presence on a seasonal basis (Fire Wardens, or Area Protection Officers at Carcross, Pelly, Old Crow and Beaver Creek).
- Improve opportunities for advanced training and experience (e.g. Initial Attack and sustained action crews, fire base management, mix master or tower personnel), including crew rotation.
- Improve opportunities for employment and career development.
- Recover, prioritize and map any unincorporated data on values identified and provided by communities.
- Address need to identify First Nation cultural values and traditional knowledge and maintain confidentially as necessary.
- Initiate cooperative research into climate change and fire effects.

Fuel Management and Fire Behaviour Action Items

- Institute process for risk assessment and FireSmart prescriptions for mining camps.
- Develop Fire Management Policy for Placer Mining area.
- Design strategies to reduce fuel loading and fuel continuity, within and beyond the wildland / urban interface zone.

Training Action Items

- Stress the certification importance and also the recruiting of new staff with both fire interest and introductory qualifications in fire management within the MOU.

Wildland Fire Management Organization Action Items

- Expand the integration of Volunteer Fire Departments beyond the Whitehorse/Southern Lakes region, on a priority basis.
- Revise the procedures for reporting fires within the interface zone in order that all fire starts are captured within the database.

- Training for Volunteer Fire Departments in wildland fire-fighting operations and EMO's duty officer training should be expanded significantly.
- Procure wildland fire-fighting equipment for VFD's, beginning with 4x4 trucks c/w pumper units.
- Strengthen emergency policy guidelines around the issuance of emergency orders and ensure all agencies including the RCMP are on-board.
- Develop additional bench strength through arrangements with other Government of Yukon departments for training and provision of staff in fire management.
- Establish Fire Warden positions at Carcross, Pelly Crossing and possibly Old Crow, and designate representatives from First Nations and from Wildland Fire Management to champion the program.
- Address staff shortages at key operational levels, including Safety, Air Attack and Area Protection Officers at Beaver Creek, Teslin, and possibly at Old Crow as an alternate to the Fire Warden position mentioned above.
- Provide strong commitment and monitoring at all senior levels of both departments, as required by the MOU.

Fire Prevention Action Items

- Facilitate proactive mitigation by Utility companies in such programs as FireSmart and other fire prevention activity.
- Evaluate the introduction of hazard reduction burns to reduce wildfire hazards in proximity to community, or other corridor values.
- Increase the priority for mitigating the Spruce Beetle hazard in the Haines Junction/Kluane region and continuous fuels adjacent to the city of Whitehorse.

Fire Detection Action Items

- Closed towers should be re-valuated for use during periods of high hazard.
- Complete evaluation of the coverage from existing towers should be undertaken to determine future status and to identify gaps that will have to be augmented by air patrols, once the zonation has been fully adjusted.

Pre-Suppression Action Items

- Establish clear objectives for wildfire discovery size, initial attack size, initial attack response time, get away time, wildfire control time.
- Reaffirm wildfire value priorities as i) life, ii) property, iii) resource.
- Deploy automatic incremental resourcing based on hazard levels in anticipation of new starts.
- Document and justify departures from prescribed resource levels in the Fire Log.
- Pre-position initial attack crews to temporary field locations to reduce response time, and implement automatic dispatch at higher hazard levels.
- Reduce get-a-way times to improve I/A times: existing 15 min. at red alert should be 3 min. with consideration of pre-warming engines, etc.
- Include any presently unincorporated data on values identified and provided by communities when selecting I/A resource positioning.
- Incorporate stand-by and loaded vehicle patrols at higher fire hazards into regular routine of Volunteer Fire Departments, Yukon wide.

- Institute new innovations to release fire personnel from the office to field operations.
- Examine the feasibility of contracting one medium and one intermediate helicopter for a two-month duration.
- Train all Duty Officers to understand and use the iFMS computer program and in the completion of the daily pre-suppression preparedness plan and ensure submission to the Yukon Fire Centre for review/approval.

Suppression Action Item

- Develop and implement simplified Wildland Fire Analysis format for initial attack decisions on fires within values not already prioritized.

Air Operations Action Item

- Institute double crewing on helicopters to take advantage of the long daylight and increase fire action time.

Communication Action Items

- Develop cell-phone capability across the Yukon.
- Provide radio compatibility amongst government agencies and affected First Nations.
- Train information officers about fire dynamics and the ecological role of fire in the boreal forest.
- Clarify the process of determining the need for a declaration of a state of emergency and any enforcement of evacuation before a situation similar to that in the Klondike gold fields develops again.
- Improve the communication capability in areas such as the gold fields so that affected residents can be notified in a timely manner during emergencies.

Isolated Wilderness Zone Assets Action Items

- Close off and reclaim dozer fireguards, which provide access to critical wildlife areas, after the completion of fire control operations.
- Develop guidelines to carry out reclamation to a level required by other operations on the landscape (i.e.; mining, forestry, etc) and that these reclamation measures become part of the suppression budget or recognized as legitimate fire expense

Wildlife Action Items

- Identify and protect moose calving islands and other critical wildlife habitat, through the land use planning process.
- Research the effect of wildland fire on fish resources.

APPENDIX 2

PANEL BIOGRAPHIES

Cliff Smith — (Chairperson)

- Retired Deputy Minister of Forestry, Lands & Wildlife (Alberta)
- Since 1993, has operated his own consulting business
- Regularly provides consulting services to the Forest Industry
- Has participated in forest fire reviews in several Canadian and international jurisdictions involving countries in four continents
- Team leader on the 1997 Yukon Forest Fire Policy Review for DIAND
- Currently chairs the Alberta Forest Genetic Resources Council

Lou Foley

- Retired Senior Manager with Alberta Forest Service
- Head of fire in the Yukon for DIAND, 1996 & 97Since 1997, own/operate forestry consulting business
- Regularly provides consultation services to the Forest Industry Steering Committee member on the 1998 Alberta Fire Review carried out by KPMG
- Provides fire management expertise to ATCO Electric Annual contract to provide wildfire management services to Alberta Government

Dennis Quintilio

- Fire research scientist with Canadian Forest Service from 1967 to 1979
- Fire training manager with Alberta government from 1980 to 1994
- Executive Director of Forest Management and Integrated Resource Management for Alberta government from 1995 to 2001
- Resource management consultant from 2001 to present
- Author of 25 fire management publications
- Panel member on fire reviews in Saskatchewan, Alberta, Wood Buffalo and Kootenay National Park

Lawrence Joe

- Lawrence Joe was born and raised in Yukon and has a background in resource management
- He has participated as a board member on co-management and cooperative management processes in Yukon, B.C. and at the national level
- Lawrence is currently employed with the Champagne and Aishihik First Nation as the Director of Heritage, Lands, Resources and Education
- He has experience with land claim negotiations in Yukon and B.C. and is now responsible for implementing the Champagne and Aishihik Final Land Claim Agreement

Bill Klassen

- Bill Klassen has been involved in managing the Yukon's natural resources for the past 30 years
- He has lived and/or worked in all regions of the Yukon
- He has coordinated environmental assessments of forest harvesting programs in the Yukon
- He is a former deputy minister of YTG's Department of Renewable Resources
- He set up his own natural resource management consulting company in 1995, working in the NWT, the Yukon, and the Russian Far East
- He is currently the Chair of the Environmental Impact Screening Committee for the Inuvialuit Settlement Region

APPENDIX 3

REFERENCES

REFERENCES

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APPENDIX 4

2004 WILDLAND FIRE REVIEW

PUBLIC MEETING SUMMARY REPORT

2004 Wildland Fire Review

Public Review Summary

Prepared by:
JC Environmental Consulting and Cambio Consulting

Prepared for:
The Wildland Fire Review Panel

March 2005

Glossary

CS -	Community Services
DIAND -	Department of Indian Affairs and Northern Development
EFF -	Emergency Fire Fighter
EMO -	Emergency Measures Organization
EMR -	Energy Mines and Resources
EMT -	Emergency Medical Technician
FN -	First Nation
KVA -	Klondike Visitors Association
RRC -	Renewable Resources Council
SOE -	State of Emergency
VFD -	Volunteer Fire Department

2004 Wildland Fire Review Summary of Issues Report

INTRODUCTION

Given the magnitude of the 2004 forest fire season, the Yukon government contracted an independent, five-person panel to conduct the community-based review. From December 2004 until March 2005, the fire review panel traveled to each Yukon community to meet with interested parties. Please see Appendix A for a complete list of parties contacted.

The independent review team included three out-of-territory wildland fire experts: Cliff Smith, chair person, Lou Foley and Dennis Quintilio; with years of experience in both wildland fire management and in fire review exercises, and two well-respected Yukoners: Lawrence Joe**,** and Bill Klassen**;** with extensive local experience and expertise with natural resources management in the Yukon.

This document is a summary of the perspectives of the face to face meetings, public meetings and written submissions provided by interested parties from December to March, 2005. This summary is intended to provide a sense of both the positive and negative feedback received by the panel regarding the 2004 wildland fire management season.

BACKGROUND

The 2004 fire review panel operated under a terms of reference that included the following actions:

- To benchmark the 2004 fires relative to Yukon's historical fire regime.
- Describe and evaluate the Yukon's strategic approach to wildland fire management, based on the policy framework provided by the Devolution Transfer Agreement and identify government, First Nation and stakeholder responsibility.
- Determine the ability of the Yukon Wildland Fire Management program and organization to plan for and effectively respond to wildfire occurrence.
- Review the post fire impacts from both a community and government perspective, which include recovery initiatives.

The panel was comprised of five members:

Cliff Smith -- (Chairperson)

- Retired Deputy Minister of Forestry, Lands & Wildlife (Alberta)
- Since 1993, has operated his own consulting business
- Regularly provides consulting services to the Forest Industry
- Has participated in forest fire reviews in several Canadian and international jurisdictions involving countries in four continents
- Team leader on the 1997 Yukon Forest Fire Policy Review for DIAND
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- Retired Senior Manager with Alberta Forest Service
- Head of fire in the Yukon for DIAND, 1996 & 97
- Since 1997, own/operate forestry consulting business

- Regularly provides consultation services to the Forest Industry
- Steering Committee member on the 1998 Alberta Fire Review carried out by KPMG
- Provides fire management expertise to ATCO Electric
- Annual contract to provide wildfire management services to Alberta Government

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- Fire research scientist with Canadian Forest Service from 1967 to 1979
- Fire training manager with Alberta government from 1980 to 1994
- Executive Director of Forest Management and Integrated Resource Management for Alberta government from 1995 to 2001
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- Lawrence Joe was born and raised in Yukon and has a background in resource management
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- Lawrence is currently employed with the Champagne and Aishihik First Nation as the Director of Heritage, Lands, Resources and Education
- He has experience with land claim negotiations in Yukon and B.C. and is now responsible for implementing the Champagne and Aishihik Final Land Claim Agreement

Bill Klassen

- Bill Klassen has been involved in managing the Yukon's natural resources for the past 30 years
- He has lived and/or worked in all regions of the Yukon
- He has coordinated environmental assessments of forest harvesting programs in the Yukon
- He is a former deputy minister of YTG's Department of Renewable Resources
- He set up his own natural resource management consulting company in 1995, working in the NWT, the Yukon and the Russian Far East
- He is currently the Chair of the Environmental Impact Screening Committee for the Inuvialuit Settlement Region

The Secretariat

Angela Walkley of Cambio Consulting and Jillian Chown of JC Environmental Consulting were contracted to coordinate the public review process. Angela has nine years of experience facilitating natural resources management decision-making processes throughout the Yukon and internationally. She holds a Master of Arts in Leadership and Training from Royal Roads University, a Bachelor of Environmental Studies from University of Waterloo, a diploma in Renewable Resources Management from Yukon College and is a registered Professional Planner with the Canadian Institute of Planners. Jillian has nine years of experience in the field of natural resources and environmental assessment and has coordinated many workshops, seminars and training programs for First Nation, Federal and Territorial governments. She holds a Bachelor of Environmental Studies from the University of Maine, USA.

THE PROCESS

All potentially interested parties including Federal, Territorial, First Nation and municipal governments, land claim bodies, volunteer groups and non-government organizations were contacted via mail, fax, phone and email to invite them notify them of the panel's plans to visit the communities, set-up individual meetings and invite them to provide written submissions if they were not able to participate in an individual or public meeting.

In each community a public meeting or open house was scheduled for the general public as well as interested parties. Advertisements were placed in the Yukon News and posters were provided to the interested parties in each community to notify the general public.

The panel also had its own web site that included all background information, meeting schedules, and a questionnaire for interested parties to fill out. The web site (http://www.firereview2004.yk.net/) allowed parties to post their comments/concerns/ recommendations regarding last year's fire season to the panel.

The panel's main objectives during the meetings were to consider the nature of wildland fires in the Yukon, look at how the Yukon government manages wildland fire, and examine what happened this past season. The panel urged participants to speak freely, provide comment and opinion as well as recommendations regarding last year's fire season and seasons to follow.

Notes were taken for each individual and public meeting. All notes and written comments, with the exception of the input from Yukon Government, have been compiled and analyzed to form this summary report of the public review process.

PARTIES INVOLVED IN THE PUBLIC REVIEW

There were a total of approximately 320 individuals that participated in the public process. The following is the list of First Nations, land claim bodies, non-government agencies, municipalities and volunteer groups the panel met with during the review.

1. PELLY CROSSING/DAWSON/MAYO/OLD CROW

a Pelly Public Meeting and Selkirk RRC
b Dawson Public Meeting
c City of Dawson- Ray Hayes
d Trondek Hwechin
e Klondike Visitors Association
f Old Crow Public Meeting
g VGFN and RRC
h Mayo Public Meeting
i Nacho N'yak Dun

2. WATSON LAKE/LIARD/SWIFT RIVER

a Swift River Lodge
b Proper Land Use Society (PLUS)

c Town of Watson Lake
d Kaska Forest Resources Stewardship Council
e Watson Lake Fire Chief
f Watson Lake Public Meeting
g Liard First Nation
h Lower Post Resident

3. HAINES JUNCTION, BURWASH and BEAVER CREEK

a Kluane FN and Burwash Public Meeting
b White River FN and Beaver Creek Public Meeting
c Beaver Creek RCMP
d Haines Junction Public Meeting
e Champagne and Aishihik First Nation
f Alsek RRC

4. CARCROSS, MOUNT LORNE AND TESLIN

a Carcross Public Meeting and First Nation
b Teslin Public Meeting, First Nation and RRC
c Village of Teslin
d Mount Lorne Public Meeting

5. CARMACKS, FARO and ROSS RIVER

a Village of Carmacks
b Little Salmon Carmacks First Nation
c Carmacks Public Meeting
d Faro Town Council, RCMP
e Faro Public Meeting
f Ross River Dena Council and Public Meeting

6. WHITEHORSE, MENDENHALL and MOUNT LORNE SUBDIVISIONS

a Klondike Placer Miners Association
b Volunteer Fire Departments (Marsh Lake, Tagish, Mendenhall, Carcross)
c Mt. Lorne Public Meeting
d Whitehorse Public Meeting
e Yukon Energy Corporation
f Yukon Electrical Company Limited

7. WRITTEN SUBMISSIONS

a Frances Lodge
b Ddhaw Ghro Habitat Protection Area Steering Committee
c Caribou Commons
d Selkirk First Nations
e Tourism Industry Association Yukon

SUMMARY OF ISSUES

The feedback received by the panel was wide ranging and included both positive and negative perspectives as well a breadth of recommendations for improvements in future years. For the purposes of this summary document, the feedback has been grouped in six main categories: Zonation, Training and Employment, Impacts on Yukon Business/Economic Development, Fuel Management, Communications, and Operations/Equipment.

For each category a brief summary of is provided, followed by the range of positive and negative perspectives regarding each.

ISSUE 1: ZONATION

SUMMARY OF ISSUE:

The principle issues raised related to Yukon Government's present zonation policy include the consultation process leading to the present zonation map, the lack of consideration or response to values of lower economic value and the need for local decision making in transition and wilderness zones.

Positive

The feedback provided to the panel indicates that the public and most interested parties have an understanding of the use of zones for responding to wildland fires. Many commended Yukon Government for its success in ensuring that there was no loss of life or essential infrastructure despite the severity of the summer. An appreciation of the ecological role of fire in the boreal forest was expressed at most of the public meetings.

Negative

First Nations, Renewable Resource Councils (RRCs) and other community members spoke of their involvement in a consultation process which took place prior to the development of the current zonation map. The panel heard that during this process many local values were identified, but never reflected on the map or given any recognition in any other publicly available material. Many do not feel that their perspectives or input was taken into consideration and frustration was expressed with a total lack of follow-up, once people had provided their input. Many wondered what was done with the site specific information that they had provided and also questioned whether the final map protected values of importance. The lack of response to input during this consultation process also caused several to question the validity of the 2004 wild land fire management public review process that the panel was undertaking.

First Nations and RRCs felt that the current zonation system does not deal adequately with values such as seasonal dwellings and communities, cultural and historical sites, areas selected for future development activity, ecologically sensitive areas, trap lines, and critical wildlife habitat. Many of the First Nations (i.e. Champagne and Aishihik, Kluane, Selkirk) have communities which are mainly

occupied seasonally. The current zonation map does not reflect the value of these locations, despite the fact that these communities are at times considered more important than the permanent residences that are given the highest priority under the current zonation policy.

The panel also heard that there were inequities in what site-specific values were protected and which ones were not. The example was given of houses of higher economic value in the Frances Lake area being protected, while cabins passed down through generations and integral to trap line activities were left to burn. Some First Nations also felt that there was more priority placed on placer claims than areas of FN values.

Settlement lands selected specifically for their timber value are also given no recognition by the current zonation system. Several First Nations have seen settlement land chosen for timber value lost to fire without any discussion with First Nation staff or leadership.

Several examples of ecological considerations were also raised. A community-based Fish and Wildlife Management Plan was recently completed for the Little Salmon Carmacks First Nation Traditional Territory. Within this plan, it specifically recommends that fire be suppressed given the limited remaining habitat of the Tatchun Lake caribou herd. However, this area remained “wilderness zone” and in 2004, a portion of this habitat burned without any fire suppression considerations. Other concerns raised included the need to consider things like the southern lakes caribou recovery program, the spruce bark beetle infestation in the SW Yukon and areas such as the hotsprings located in the Dha Groh area.

A final point of concern raised during the public review process relates to local decision making regarding the need to get approval from Whitehorse or other regional offices in order to action fires within wilderness areas (zones 3 and 4). By the time Whitehorse has responded, small manageable fires have escaped.

ISSUE 2: TRAINING AND EMPLOYMENT

SUMMARY OF ISSUE:

Training and employment was an important topic of discussion during the review. Interested parties had four main areas of concern regarding training, and they were: certification requirements, access to training, local employment opportunities and extended work season.

Positive

Some recognition was given for positive initiatives undertaken by Yukon Government related to training. High praise was given for a mock emergency exercise that was undertaken in Dawson prior to the fire season and Volunteer Fire Departments members were very enthusiastic about recent cross training opportunities with Wildland Fire Management fire fighters.

Negative

Over the years, training standards have changed and many who used to be qualified for fire fighting positions no longer meet the certification standards. Many voiced confusion over what certification was needed and others who were aware of what was needed expressed frustration that the present certification requirements made no allowances for many veteran fire fighters who have a wealth of experience despite their inability to successfully complete the written or physical certification requirements.

There were some who did acknowledge the importance of the certification process for liability reasons and recognized that certification standards are applied throughout Canada. Those individuals on the BC border spoke of differing certification standards between Yukon and BC resulting in lost job opportunities for Yukoners. One example is the fellers certification that is required in BC, but not the Yukon. Many skilled workers were turned away due to this lack of certification.

Interested parties felt that there are not enough training opportunities provided for local people interested in obtaining certification or re-certification prior to the fire season. Training opportunities are often not offered in the communities or are offered late in the season without coordination with the First Nation (leading to scheduling/availability conflicts). First Nations want to know how to plug their people into fire fighting courses, especially before this next fire season. Where there are obstacles to certification such as physical fitness, literacy, driver's licenses, etc., First Nations and community members would like to see Yukon Government being more innovative about finding solutions. Little Salmon Carmacks spoke of the barriers that were confronting three of their skilled fire fighters. When they finally went to the Minister with the certification problems facing them, the problem was quickly solved with a local Wildland Fire Management staff member administering an oral exam.

The panel also heard that improvements could be made to reduce dependence on outside fire fighters and to improve the employment conditions for Yukoners. Many spoke to the low rate of pay, which does not reflect the rest of the Yukon's pay scale. There was also a lack of local First Nation hire until late in the process and most local fire fighters were used at the last minute. There are many potential benefits to hiring local people earlier in the season which individuals listed as being: maintaining money in the Yukon, building skills that would apply to other local job opportunities, improving socio-economic situations in the community and providing individuals with sufficient hours to qualify for employment insurance at the end of the fire season. Another suggestion was to extend the season into the fall by having fire crews continue working with FireSmart and other community improvement projects.

ISSUE 3: IMPACTS ON YUKON BUSINESS/ECONOMIC DEVELOPMENT

SUMMARY OF ISSUE:

Many parties felt that the 2004 wildland fire season had an adverse affect on local businesses, tourism, trap lines and placer mining. However, businesses located where fire crews were stationed and where tourists were held up due to road closures did well as they provided essential services like meals and lodging to the

crews. Most who were adversely affected acknowledged the work done by Yukon Government to mitigate the impacts.

Positive

Many local businesses such as those in Swift River and Dawson did well with fire crews in town. Holland America kept Dawson alive by using whatever means available to keep the tourists coming to Dawson.

A Yukon wildlife viewing program pamphlet with map and associated viewing location was developed and provided to tourists. It was considered an excellent initiative for introducing both locals and tourists to the important role that fire plays in Yukon ecology.

Despite the threat of smoke and fire, most placer mining operators were able to continue working while keeping informed on the fire risk status through the Placer Miners Association and Yukon Government's communication officers.

Potential benefits for the future include the close proximity of available fuel wood.

Negative

Tourism operators throughout the Yukon experienced a decrease in business due to the fires, the smoke, the perceived road closures and the media hype regarding the fires. Most tourism operators were understanding about the inevitable negative impact of the severe fire season, however many would like to have seen some of the smaller fires actioned early in the season to avoid the number and severity of the fires which led to so much smoke (again, it was recognized that there would still have been smoke from the fires in neighbouring jurisdictions).

It was felt that significant improvements could have been made with the management of road traffic in active fire management areas. Tourists often encountered hand spray-painted signs indicating "road closures". It was suggested that tourists should have been informed of potential delays with professional signage rather than ad hoc announcements of road closures. There were many comments relating to communicating with tourists and the tourist industry, but these are further discussed in the section titled "communication".

There were some individuals who attended meetings with the panel who personally lost assets and sources of income through the loss of infrastructure and land associated with their wilderness operation or trap line. It was felt that there was not enough done to monitor and suppress the fires that threatened and ultimately impacted there businesses. Some individuals felt that trapper's cabins were just left to burn with no appropriate compensation policy in place. They felt that YG did not understand all of the associated values with the trapper's cabins, like the loss of land, equipment, cabins and areas with economic, historical and cultural significance.

Those businesses that did well with Fire Crews in town had troubles keeping track of invoices. For example, invoicing and accounting was very difficult for the Swift River Lodge. Each person's name had to be recorded with the details of each meal.

Placer miners in the Dawson City goldfields were the most significantly impacted by the 2004 fires. They were concerned about the potential risk to infrastructure and lives caused by the fires, but were also worried about their short working season being cut down by unnecessary shut-down time, they were concerned that inventory left unattended could be stolen or destroyed. Many of the placer miners felt they had access to water and equipment to deal with the fires while located at their camps. As a result, they were not receptive to evacuation notices that would leave their investments potentially unprotected and result in the shut down of their operations.

ISSUE 4: FUEL MANAGEMENT

SUMMARY OF ISSUE:

The main form of fuel management raised during the public review is the fuel reduction that is being done through the `FireSmart program. Overall, the panel received positive feedback on the FireSmart program with a recognition that more should be done. In those areas where landscape and regional level planning is taking place, comments were also made regarding the need for integrating plans for reducing fuel loads into other integrated resource management planning processes. This was considered especially important in areas such as the SW Yukon with Spruce Bark Beetle.

Positive

There were many positive comments made regarding the benefit of reducing the risk of fire through the FireSmart program and it was also recognized as a valuable employment opportunity.

There were many individuals who spoke of work that they had done individually to FireSmart their own properties and most seemed to recognize the value of the program. This indicates that Yukoners have developed a general awareness of the value of reducing fuel load in order to reduce the risk of wildland fires.

There was a fire ban put in place early on in the summer season. The public appreciated the value of this ban for reducing human caused fires and few (if any) begrudged the inability to have campfires during such a hot and dry summer.

Negative

There are still many residential areas surrounded by heavy fuel-loaded forests. These areas present high potential risks to the homes and infrastructure in the area. There is also much more that individuals could be doing to reduce the presence of fuel right next to their homes.

There were often comments coming from the public that Yukon Government should be doing more to provide incentives for private owners to reduce the fuel load on their own properties. This was also the case with those individuals with cabins located in isolated locations. Some public members responded that there needed to be some sense of self-responsibility for reducing the risk of fire to their own homes. However, it was suggested that certain incentives could be provided, more education was needed and land development policies could be put into place to help encourage the reduction of fuel in high-risk areas.

Those involved in municipal, landscape level and regional planning suggested that fuel load management was infrequently considered in plan development. Conversely, it was suggested

that decisions regarding fuel-load reduction and fire suppression frequently did not take into consideration the existence of relevant natural resource management plans in the area. It was suggested that improvements could be made in this regard.

Specifically, several individuals advocated for the opportunity to harvest strategically in area of high fire risk. This would provide benefits for wildland fire management, as well as encouraging economic opportunities through harvesting

It was also suggested that more should be done to coordinate the building of subdivisions, roads, trails, transmission lines, and development projects that could serve simultaneously as firebreaks.

Some general feedback for improving the fire ban included regional variations so that those regions with significantly lower risk could lift the ban and provide opportunities to make fire during the hunting season that begins August 1. There was also a suggestion that there was some confusion regarding whether the fire ban would apply to smoking meat and fish.

ISSUE 5: COMMUNICATION

INTERNAL

SUMMARY OF ISSUE:

While internal communication issues is a big priority for Yukon Government, the public had only a few comments related to communication between community based Fire Management staff and Whitehorse based staff, general observations on how different branches worked together and some general recommendations to improve communication at the very beginning of the fire suppression efforts and in cases of trans-boundary cooperation.

Positive

Parties felt that coordination between all groups was great: EMO, EMR, CS etc. Communication between VFD and air support was very good. Helicopters were valuable for volunteer fire crews.

Negative

During the public review, it was felt that the initial response to fires was a scramble and it seemed that there was confusion with naming the fires using numbers, while local people were using different names.

Devolution has resulted in some challenges and some members of the public noted that people in different branches or departments were not always clear of their role. Due to internal communication issues a lot of confusion was created regarding evacuations.

There were also some gaps noted when switchover of crews or individual staff members took place. The placer miners found themselves in a position of talking to a new individual on shift who had not been informed by the previous individual of everything that had been taking place.

There were some trans-boundary communication issues between B.C and Yukon. In Swift River it was observed that there did not seem to be clarity on whose role it was to make decisions and action fires that are close to the border.

EXTERNAL

SUMMARY OF ISSUE:

Parties gave several positive examples of the way YG managed communication with the public, but also recommended improvements. Parties felt that the media was a major problem and held them responsible for publishing misinformation. The Klondike Placer Mining Association had some concerns regarding communication to its constituents, for example announcing State of Emergency followed by the Evacuation Order that was not enforced by the RCMP only led to panic and confusion for placer miners.

Positive

Interested parties felt that Yukon Wildland Fire Management did an excellent job of informing tourist centers. As well, it was felt that Tourism did an excellent job. There was a good public education campaign and local communications did a good job. A 10am broadcast through Northwestel radiophone (pre- State Of Emergency) which included information on which way the wind was blowing was helpful. The communications officers who were put on the job in Dawson and other areas were commended for doing a very good job and keeping people informed and feeling secure. The daily updates, maps and access to MODIS were very helpful.

People in Swift River talked about the excellent job that the Yukon fire management staff did in keeping them continuously up to date with what was taking place with the Swan Lake Fire.

Negative

The most challenging communication issue that the public, tourism operators and government dealt with during the summer of 2004 was the spread of misinformation and inflammatory statements and images through the media. The inappropriate media coverage of the 2004 fires was raised by almost every interested party that the panel met with. Some individuals believe that the media acted irresponsibly and should be held accountable. Others believe that the focus should be on recommendations for how to best deal with the media in the future. It was felt by many that Yukon Government’s communication to the media could be better coordinated and many of the recommendations to follow reflect this.

Many involved with the tourism industry felt that a number of improvements could be made in communicating to tourists who were traveling up the Alaska Highway to the Yukon. Many tourists turned back much further south in BC because they were given exaggerated information on the severity of the fires. Clear communication with Visitor

Reception Centres up and down the highway could help to alleviate the spread of misinformation.

While, many in Dawson appreciated the daily updates provided on the radio, the SOE report was played every hour once it was announced and the evacuation alert caused panic.

MECHANICS

SUMMARY OF ISSUE:

General concerns were raised regarding some of the technical communication challenges faced during the 2004 fires. It was suggested that Yukon Government should assess the communication systems available to them and insure that they are adequate for dealing with an emergency.

Positive

The panel received positive feedback from many communities and interest groups regarding the usefulness of the Modis internet site that provided up to date information regarding the location and size of forest fires throughout the Yukon (an exception to this was Burwash and Beaver Creek where they have constant internet challenges).

The 10am broadcast through Northwestel radiophone was considered a dependable source of information.

Negative

Individuals in Dawson raised concerns regarding the communication tools available to them. Most placer miners only have access to radio phones and there were frequently times when all of the radio phone lines were occupied with people trying to access information on the fires. There was also a telephone number that was specifically designated for people to call for updates on the fire, however it was frequently busy. If people could not get through to that line, they would call other lines and would be tying up phone lines needed for the operational side of fire management.

While the updates provided by CBC radio were beneficial for most, placer miners did not have access to the CBC radio update.

Some First Nations, especially the ones in remote communities, are worried that the communication systems currently in place are not adequate enough to get their members out of a community should a wildfire trap them. First Nations wanted to know what would have been the alternative communications if telephone had gone down in some of the remote communities.

ISSUE 6: OPERATIONS/EQUIPMENT

SUMMARY OF ISSUE:

This year, the number of fires in Yukon was greater than any year on record. The panel heard from many interest groups that the Yukon public was happy with the job

that Yukon Government and others did in suppressing the fires and getting communities prepared for the imminent forest fires near their communities. There were however some concerns that more could be done with initial attack, suppressing fires in the shoulder seasons and protection of values such as cabins, traplines, timber, traditional use areas, etc. There were also some concerns regarding equipment problems where it was felt that YG should have used local fire suppression equipment more effectively, and perhaps, should invest in their own equipment for next year.

Overall, Yukon wildfire managers need to be complemented for the work they did this year, and in particular for the protection of individual trapper cabins, etc. Interested parties understand that wildfires are part of the environment, and do not expect YG to be able to extinguish all of the wildfires in the Territory.

Positive

The panel received feedback that fire suppression was well managed by Yukon Government this year from communities facing the impacts of fire, such as Swift River, Teslin, Beaver Creek and Haines Junction. It was noted that there was good inter-agency cooperation and people generally felt that their values were protected. As well, interested parties saw EMO as extremely well organized. Specific comments were noted in a number of communities that Yukon Government Wildland Fire Management Staff should be complemented for the excellent work that they did this summer. Complements regarding the role of the RCMP, Highways and Public Works Department, Natural Resources Officers and EMO were also noted.

Maps provided to the parties showing how the fires had expanded were seen as very useful, and gave updated information.

In particular, the use of sprinkler systems in the Swift River and Gold Fields area was greatly appreciated and felt to provide a great deal of security.

Negative

Interested parties felt that there were some operational and equipment problems concerning fire trucks and accessories. There were problems with using highways hoses and fittings, as they weren't compatible. In one community, a new $100,000 pumper truck sat in the parking lot all summer instead of being used to fight fires. As well, Wildland Fire Management uses the same equipment list as Highways does. All contractors have to submit information to property management and often Wildland Fire Management may not be informed or people may not have their equipment/ skills on the list.

There were many interested parties who raised the concern that many of the Yukon's large fires could have been prevented or controlled had there been an effective initial attack. Some also felt that more should be done in general to reduce the total amount of area burned and not just let nature run its course.

It was expressed in many communities that initial attack needs to be increased as many fires grew to be a problem when they could have been prevented. During the Swift River Fire, BC fire fighters took 30 hours to take action and within that time the fire was out of control. Similar situations were reported within the Little Salmon

Carmacks Traditional Territory and the Selkirk Traditional Territory. In situations such as Frances Lake and the North Canol, where individuals had lost personal property, there was a heightened concern expressed that suppression efforts were insufficient. This lead to further frustration in the case of the Frances Lake fire as there were many veteran fire fighters who were willing and eager to defend the infrastructure in the area, but were restricted by Yukon Government from taking action.

Many community members felt that they were not being considered a priority with their local fire suppression crews gone all summer fighting fires in other places and unavailable to fight fires at home. First Nations felt that most of the fire suppression money was spent around Dawson because it is a tourist area and has a high density of placer miners.

Concerns were expressed that there was not enough local input regarding what could be initial attacked and when fires could be responded to. The First Nations expressed concern that the initial response should be decided in the community. It was felt that it takes too long to get the fire management in Whitehorse to approve anything and there is too much back and forth between local, regional and Whitehorse offices.

Some First Nations and Renewable Resources Council raised the concern that access roads created during fire suppression efforts were not being rehabilitated following the fire season. Access roads are all over the place, some on crown land and some on First Nation land. First Nations are concerned about increased hunting, trapping and predator access created by these roads.

APPENDIX A

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Whitehorse, YT Y1A 2A9

Yukon Chamber Of Commerce Office
Suite 101-307 Jarvis Street
Whitehorse, YT Y1A 2H3

Wilderness Tourism Association of Yukon
#4-1109 First Avenue
Whitehorse, YT Y I A SG4

Donald Hutton
Zone Protection Manager
Northern Tutchone District Mayo
Block 35, Lots 1-2
PO Box 100
Mayo, YT Y0B 1M0

Joanne Koser
Yukon Fish And Wildlife Management Board
PO Box 31104
Whitehorse, YT Y1A 5P7

Yukon Trappers Association
4194A-4th Avenue
Whitehorse YT Y1A 1J8

Yukon Municipal Board
C/O Sourdough Secretarial Service
Craig Tuton Chair
7213-7th Ave
Whitehorse, YT Y1A 1R8

Fire Chief Murray Williamson
Whitehorse Airport
316 Air Terminal
Whitehorse, YT Y1A 3E4

Yukon Development Assessment
Ron Chambers
#11 Nisutlin Dr.
Whitehorse, YT Y1A 3S4

Yukon First Nations Tourism Association
Shirlee Frost
21 Waterfront Place
Whitehorse, YT Y1A 6V1

Rod Hill
Yukon Geological Survey
Box 2703
Whitehorse, YT Y1A 2C6

Tourism Industry Association of Yukon
Lael Lund
#3-1109 First Ave.
Whitehorse, YT Y1A 5G4

Dan Baikie
Zone Protection Manager, Klondike District
Rm. 103 - 1242 Front St.
PO Box 279
Dawson City, YT Y0B 1G0

Beverly Brown
North Yukon RRC
Box 80
Old Crow, YT YOB 1N0

APPENDIX B

PARTIES PARTICIPATED

ROSS RIVER

Doug Bishop, Natural Resources Officer
Helena Jirousek, Administrative Assistant
Chief Jack Caesar

FARO

Bill Wood (Faro Search & Rescue President)
Larry Baran, CAO Town of Faro
Cpl Ken Alderson, Faro RCMP Detachment
Julie Klippenstein, RN @ Faro Nursing Station
Michelle Vainio, Councilor Town of Faro
Phyllis Forbes, Mayor Town of Faro
Julia Salo, Office Manager Town of Faro
Val Beniot, Councilor Town of Faro
Ryn Bunicich, Community Development Coordinator Town of Faro
Kieth Austin, Fire Chief Town of Faro
Ted Baker, Faro Ambulance Service
Mark Vainio, Manager of Operations Town of Faro
Deb Edwards, RN @ Faro Nursing Station
Jeanne Clark, RN @ Faro Nursing Station

LITTLE SALMON CARMACKS FIRST NATION

Elizabeth Skookum, Council member
Darlene Johnson, Council member
Eddie Skookum, Chief Little Salmon Carmacks First Nation
Mary Tulk, Council member
Joe Bellmore, Land staff
Susan Davis, Lands Director
Johnny Sam, Elder and Lands staff
Student trainees: Morgan, Erin and Tyler

VILLAGE OF CARMACKS

Nick Larkin, Mayor
Denis Hansen, Council
Stuart Harris, Council
Eline Wyatt, Council
Cory Bellmore, Council
R.L. (Bob) Jackman, CAO

DAWSON CITY

Father John Tyrell, Deputy EMO
Cam Sinclair, Health and Social Services
Aedes Scheer, EFF and Medic
Dan Baikie, Zone Protection Manager, Wildland Fire Management
Angela Senft, Health and Social Services
John Mitchell, EMO Coordinator
Sgt. Tim Ashmore, RCMP
Chris Mayes, Dawson Fire Department
Torben Larsen, Yukon Energy Corporation
Cliffe Mayes (Dawson Fire Dept.)
Barbara Hanulik, KVA
Brenda Caley, KVA

Jon Magnusson, Dawson City Chamber of Commerce
Marianne DeJean, NROfficer
Liz Appleby, Admin Assistant
Jim Leary, NR Officer
Ray Hayes (City of Dawson)
Ed Kormendy (Tr'ondek Hwech'in)
James Roberts (Tr'ondek Hwech'in)
Renee Mayes (Tr'ondek Hwechi'in)
Chad Dyce, Janet (seasonal Admin.)
Dave Johnson & Kathryn Perry (Mining Recorder)
Tara Christie (YPMA Executive Director)
Ray Hayes, CAO City of Dawson

MOUNT LORNE

Peter Persival
Doug Cote
Chris Stewart
Ron Adams
Herner Walcher
Steve Cardiff
Toos Omtzigt
Paul Mathews
Bruce Sundleo
Mark Stevens
Lisa Chevalier
Rob Scopel
Shan Olsen
Glen Hart

OLD CROW

Stephen Frost RRC
Vickie Josie
Joe Linklater (Chief)
William Josie (Councillor)
Stan Njootli Jr.-RRC
Robert Bruce – RRC
Stan Njootli Sr.- RRC
Robert Kaye RRC
Bev Brown –RRC Ex Dir
John Joe Kaye

HAINES JUNCTION

Lloyd Freese, Parks Canada
Kevin Mclaughlin, Parks Canada
Rhonda Markel, Parks Canada
Rob ?(Alsek RRC)
Brad Wilson (Alsek RRC)
Susan ?(Alsek RRC)
Gordon Allison, CAFN
Rose Kushniruk, CAFN
John Trotter, Zone Protection Manager (ZPO)
Brian Hoover, Area Protection Officer(APO) of Kluane Zone

TESLIN

Stephen Locke
Jerry Bruce
Mike Gergel
Minnie Clark
William Sydney
Lorie Joe
Kelly Morris
Johnny Martychuck
Jim Clark (Town Council)
Rob ? (Town Council)
Clara? (Mayor)

MAYO

Bill Leary (NRO)
Aaron Koss-Young (NRO)
Don Hutton, ZPM
Anne Leckie (Nacho Nyak Dun)
Crystal Stevens (Nacho Nyak Dun)
Brian Murrell (Carmacks Fire management)
Eric Fairclough (MLA)
Simon (RRC)
Chris (RRC)
Margrit Wozniak (Village of Mayo)
Ken Cooper (Village of Mayo)
Jimmy Johnny (RRC)
Dick Mahoney (NND)

BEAVER CREEK

Mark Londou (RCMP)
Rollie Smith (RCMP)
Olympia Marra (WRFN)
Sid VanderMeer (WRFN)
Connie LaRochelle(WRFN)
Stanley Jack (WRFN)
Kaz (WRFN, GIS technician)

BURWASH LANDING

15 Kluane First Nation staff and members

WATSON LAKE

Richard Potvin
Tor Forsberg
Paul Tubb
Reiner Rembe
Doug VanBibber (Liard First Nation)
Gord Dumas, YG, CS, Wildlands Fire Management
Mayor Richard Derocher
Councilor Sharon Miller
Councilor Nancy Moore
Councilor Diana Raketti
Councilor Glenn Holmes
YG staff Chris Bolen

Jane Sun-Comeau (LFN rep.)
Vanessa Law (Office coordinator)
Dan Reams
John DeVries
Bill Lux (Chair Kaska Dene Council)
Norm Sterriah (Ross River (Kaska Dene Council)
25 Liard First Nation members
Dickson Lutz
Nancy Moore
Chris Bolen, YG

WHITEHORSE

Bill Trerice
Lorne Harris
Chris Boland
Don Hobbis (Highways)
Erin Deacon (EMO)
Ron Adams (EMO)
Clive Sparks (Whitehorse Fire Chief)
Teresa Gulliver (CPAWS)
Karen Baltgailis (YCS)
Gary Miltenberger, Director
Myles Thorp, Manager, Forest Planning and Development
Pierre Germaine, Director Marketing and Sally Sheppard, Deputy Minister
Lorne Harris
Chris Boland
Walter Nearing
Gordon Dumas
Ken Colbert
Mike Sparks
Al Beaver
Dave Milne
Dan Boyd
Don Hobbis and other H&PW staff
John Russell, Acting ADM of Field Operations
Ken Kiemele
Harvey Jessup Acting Director of Fish and Wildlife
Ed Hubert, Deputy Minister of Environment
Client Services
Mark Zrum, EMR Client Services and Inspection
Paul Butra, EMR Client Services and Inspection

SWIFT RIVER LODGE

Jerry Johnson (Lodge)
Nick Urban
Bill Tyschuck (Lodge)
Sharon Johnson (Lodge)
William Sydney (TTC Lands Manager)
Minnie Clark (TTC Lands)
Jim Clark (Highways)
Anita Weatherall
John Beavan (Highways)

CARCROSS

Mark Wedge
George ?,Executive Council member
Albert James
Danny Cresswell
Norman James
Janet Lee
Bev Sembsmoen
Calvin Lindstrom
Frank James
Chris Bolen

APPENDIX C
LIST OF MEETINGS

WHITEHORSE MEETINGS

Whitehorse Public Meeting
Whitehorse Fire Department
YCS /CPAWS
Hamlet of Mt. Lorne Public Meeting
Kwanlin Dun First Nation
Ta'an Kwachan First Nation

DAWSON MEETINGS

Dawson Public Meeting
Health, safety and emergency related
Dawson Klondike Visitors Association (KVA)
Ray Hayes, City of Dawson
Tr'ondek Hwech'in First Nation
Yukon Placer Miners Association (YPMA)

WATSON LAKE AND SWIFT RIVER MEETINGS

Swift River
Liard First Nation
Watson Lake Public Meeting
Kaska Forest Resources Stewardship Council
PLUS
Doug VanBibber
Watson Lake Mayor and Council

MAYO MEETINGS

Public meeting
Nacho Nayak Dun First Nation

TESLIN MEETINGS

Public meeting
Town council

OLD CROW AND PELLY CROSSING MEETINGS

Old Crow public meeting
Vicky Josie
Vuntut Gwich'in First Nation and north Yukon RRC
Pelly Crossing public meeting

BEAVER CREEK AND BURWASH LANDING MEETINGS

White River First Nation
RCMP
Kluane First Nation

HAINES JUNCTION MEETINGS

Parks Canada
Champagne and Aishihik First Nation
Alsek RRC
Public meeting

CARCROSS-TAGISH MEETINGS

Carcross-Tagish First Nation

CARMACKS MEETINGS

Carmacks Public Meeting
Mayor & Council – Village of Carmacks
Chief and Council - Little Salmon Carmacks First Nation

ROSS RIVER AND FARO MEETINGS

Ross River Public Meeting
Faro Public Meeting

YUKON GOVERNMENT MEETINGS

Department of Tourism and Culture
Forest Management Branch
Air Attack Section
Department of Highways and Public Works
Gordon Dumas
Emergency Measures Organization
Energy, Mines and Resources, Natural Resource Officers
D. Baikie, C. Dyce, Janet Bell, D Johnson and Kathryn Perry
Don Hutton
Haines Junction fire centre
Richard Potvin, Department of CS&I
Energy Mines and Resources Client Services and Inspection
Energy Mines and Resources Forest Management Branch
Natural Resources Officer and Administrative Assistant
Client services and Inspections – Paul Butra
Department of Highways and Public Works
Department of Environment