

**Minutes of the 42nd Annual Meeting of the
North American Forest Commission – Fire Management Working Group
Banff, Alberta, Canada
Banff Springs Hotel, New Brunswick Room
October 6-9, 2008**

Tuesday October 7, 2008

Hosted by the Canadian Forest Service (CFS), Alberta Sustainable Resource Development (ASRD), and the Canadian Interagency Forest Fire Centre (CIFFC).

1. Welcome

Meeting called to order by chair Bill de Groot of the Canadian Forest Service, who welcomed everyone on behalf of the North American Forest Commission and thanked everyone for their attendance.

Background on the NAFC and FMWG:

- NAFC is one of six forestry commissions established in 1960
- Approximately 100 agencies are involved in the NAFC
- The Fire Management Working Group is one of nine active working groups within the Commission
- The working group was established in 1962, this being the 42nd annual meeting
- NAFC-FMWG is an active group internationally and has contributed in many ways with the increase of global coordination projects
- The NAFC-FMWG is seen as a leader in fire management and resource sharing

The three primary objectives of this working group are:

- 1 - Sharing knowledge & information
- 2 - Support mutual aid resource sharing (including technical & training expertise)
- 3 - International cooperation & development in fire management

Top accomplishments for the working group:

- 1 - Fire Management Study Tours
- 2 - International Wildland Fire Conference Series

2. NAFC-FMWG Committee & Delegate Introduction

Don Harrison (Acting Assistant Deputy Minister for Alberta Sustainable Resource Development), Dennis Brown (Director of the Canadian Interagency Forest Fire Centre), Roberto Martinez (Forest Fire Protection Manager with CONAFOR) and Dale Dague (Branch Chief of International Fire for the US Forest Service) all introduced themselves and made opening remarks.

Roundtable introductions completed. See [Appendix 1](#) for list of delegates in attendance.

3. Meeting Overview

Reviewed meeting agenda as handed out. Highlights as follows:

Tuesday October 7/08

- Country Reports: Mexico, USA & Canada
- Report on NAFC Meetings
- Fire Management & Research Information Session – Fire, Insects and Fire Management

Wednesday October 8/08

- Field Trip (lead by Parks Canada and ASRD)
- Banquet provided for meeting delegates in evening

Thursday October 9/08

- Regular Business meeting
 - Review meeting minutes from 2007 & work plan from years past
 - 5th International Wildland Fire Conference Update
 - History Report for NAFC-FMWG
 - Australia - New Zealand Study Tour 2009
 - Regional Consultations
 - Next Years Meeting in 2009 (United States)

4. Country Reports

MEXICO

2008 Mexico Fire Season Report - Roberto Martinez (Forest Fire Protection Manager - CONAFOR)

- 9,552 wildfires occurred in 32 federal states from January 1st – Sept 30th this year. 78% of wildfires in 2008 had an extension of less than 10 hectares.
- This year the burnt area by wildfire was 217,615 hectares which is 74% than 1998 which was worst wildfire year in Mexican history.
- Due to poor weather conditions between 2006 and 2007, wildfire burned area increase in 2008. Precipitation was reduced by 53% and temperatures increased 21% for the same period, which allowed for more extreme fire behaviour.
- 98% of wildfires in 2008 were surface type and 2% were burned tree areas.
- There were 140 complex fires in Mexico this year, burning 74,905 hectares, utilizing close to 14,000 firefighters from CONAFOR, the Military Navy, State Government, Municipalities and volunteers. These large fires lasted an average of 5 days.
- 6 people died while working on wildfires; 2 individuals from CONAFOR and 4 volunteers.
- For every \$1 lost fighting forest fires, \$12.60 dollars were saved avoiding fire damages.
- Fire emissions are estimated in 5.88 million tons of pollutants, most of which were generated in biomass burning.
- Helicopter efficiency and fire engines help significantly with fire suppression efforts and economic damage was avoided using these tools.

International Programs – Arturo Raygoza (Fire Suppression Assistant Manager – CONAFOR)

- \$7.5 million was available for financial and technical support, in which resources such as equipment & helicopters were made available.
- Since 1998 lots of things have happened with Mexico's fire program. A national program is now up and running, which receives great support from the USA, Canada, & Spain. México in turn has been able to assist Guatemala, Belize, Bolivia, and other countries in Central America with training, assistance and expertise.
- For the first time ever, Mexico has trained to the ICS I-400 level. With some help from the US Forest Service, they have also made some international training courses (program of certification and expertise) and have seen major training assistance from Canada in the state of Jalisco.
- Just yesterday, Mexico moved forward in agreeing to sign a Memorandum of Understanding between CONAFOR and CIFFC, which will prove to be a great success for both countries.

Mexico Fire Research – German Flores (Researcher – Forest, Agricultural and Cattle Research National Institute)

- The Canadian government has helped Mexico to develop a fire index program and the countries have discussed the use of satellite imagery to locate forest fires and monitor conditions.
- With all the tools we now have, human resource training is of importance to the organization. There are lots of projects on the go to measure fuel loss, estimate carbon emission levels in different ecosystems and trying to use geomatic technology.

Mexico's Local Participation in Fire Management - Juan Manuel Frausto (Fire Management & Restoration Program Manager – Mexican Nature Conservation Fund)

It is important to share initiatives to let the people on the ground have enough strength and abilities to deal with fires. Mexico needs to have different strategies to control fires, as there is a high number of human caused fires.

A document has been drafted to outline local participation of fire management in Mexico. It is a framework that will aid in the formulation of policy, legalities, regulations, as well as enabling conditions and strategic actions for fire management. The objectives are to give special consideration to social and community values and to engage the community in fire management. Background points are:

- Compilation of knowledge and experiences (Frausto, J. y Landa, R. Sociedad, fuego y ecosistemas: contribución de las organizaciones locales al manejo del fuego en México. 4th International Wildland Fire Conference. 2007. 16 p. (http://www.fire.uni-freiburg.de/sevilla-2007/contributions/doc/SESIONES_TEMATICAS/ST2/Frausto_MEXICO.pdf)
- Initiatives of civil and community organization of fire management in Mexico (including NAFC-FMWG panel and consultations with partners of the (20 non-government and 2 government)

- Voluntary guidelines FAO. 2006. Fire management: voluntary guidelines. Principles and strategic actions. Fire Management Working Paper 17. Rome.
(<http://www.fao.org/docrep/009/j9255e/j9255e00.htm>)
- Multi-stakeholder approach to involve community (training & equipment)

The purpose is to support the design and development of strategies to increase local participation and allow involvement of key stakeholders to promote a consensus.

Key issues outlined: strategic vision, collaboration & synergies, capacity building, responsible fire management and working with other sectors.

UNITED STATES OF AMERICA

2008 United States Fire Season Report – Dale Dague (Branch Chief of International Fire – US Forest Service)

- The United States is continuing to adapt to changing fire situations. Three key factors for the country are expansion of wildland urban interface, weather changes and hazardous fuel accumulations.
- Northern California had a record dry spell through the spring months. Over the course of three days (June 20 – 22), a dry lightning storm ravaged the State with more than 8,000 lightning strikes resulting in nearly 1,000 wildfires. More than 300 of these were large fires burning 668,000 uncontained acres. Close to 25,000 personnel were committed during the peak of suppression activity in California. International resources came in from Australia, New Zealand, Mexico and Canada, as well as national support from 41 States. The last Incident Management Team left in late September, and wildfire expenditures reached around \$700 million.
- In comparison to the ten year average, the number of total fires in the country is above normal but the total acres burnt is lower, as of the beginning of September.
- Prescribed fire is also critical and is a part of the Wildland Fire Use Activity, in which fires that are caused by lightning are allowed to burn for management purposes.
- The US Forest Service continues to be involved in assisting with national disasters, as federal agencies are required to provide assistance in urgent situations. It was a busier than normal year in terms of tropical storms, but the storms have not been as severe as the previous couple of years.
- Wildland Urban Interface discussion is driving the USFS's two major projects: The Quadrennial Fire and Fuels Review & National Wildland Fire Framework. The National Wildland Fire Framework is currently being developed with the US Fire Administration, who deals more with structural firefighting. It will require a huge effort, but should be interesting to see what is produced as an end result.

Wildland Fire Decision Support System - Tom Zimmerman (US Forest Service)

Quadrennial Fire Review (QFR): The QFR was first completed in 2005, but will be remodelled this year with five working panels looking into specific areas.

The QFR provides strategic direction for the fire program and will be linked to strategic plans. It can be used to justify the organization, assist in budget preparation, as well as policy development.

Wildland Fire Decision Support System (WFDSS): Wildland fire management complexity is dramatically increasing and shows no signs of slowing down. As things increase in complexity, the capability to respond is decreasing. Improved decision support is becoming increasingly important in the management of large wildfires. A new system is under development, the Wildland Fire Decision Support System (WFDSS), which will be a web-based, geospatially displayed system and will meet the documentation and analysis of wildland fire suppression decisions required by federal agency policy. The goals of WFDSS are to:

- Document strategic decisions
- Provide decisions support by utilizing appropriate fire behaviour modeling, economic principles and information technology
- Allow for operational plan preparation (linear, scalable, progressive and responsive for fire complexity)
- Provide spatial orientation with graphic displays that have no reliance on large test input requirements
- Provide risk and decision sharing through an Internet base
- Be applicable to all wildland fires as a single process
- Replace all existing processes and meet the needs of all the current users

In 2008 a test of the WFDSS prototype took place with the majority of fire activity for the USA occurring in California. At least one Fire Spread Probability Simulation (FSPro) analysis was completed on 234 incidents. FSPro is one of the decision support tools accessible through WFDSS and analyzes fire spread probability. This program calculates and maps fire spread probability and uses many weather scenarios. It is probabilistic, not deterministic.

The Raptic Assessment Values at Risk (RAVAR) model is also a decision support tools accessible through WFDSS. It is a spatial model that shows primary resource values to be protected. It can be integrated with FSPro to overlay fire spread probabilities with values to help prioritize firefighting resource allocations and incident prioritization. It is dependant upon data availability.

USDA Forest Service & Research Development Report - Colin Hardy (Program Manager of Fire, Fuel and Smoke Science Program – US Forest Service)

Within the US Forest Service, Research and Development there are a number of strategic program areas; one to discuss is Wildland Fire and Fuels. The outfit has been working to have the five divided geographic research areas work together instead of in autonomy; changing behaviours and making key connections will allow the outfit to work towards a virtual fire lab.

Objectives of the strategic plan for Wildland Fire and Fuels Research & Development that was created in June 2006 are:

- Work with managers to identify priority topics
- Manage research from a portfolio approach
- Increase emphasis on science application
- Re-invigorate science leadership
- Apply these concepts to both Base & National fire plan research

The portfolio approach for fire research & development are broken down into the following: core fire science, ecological and environmental fire science, social fire science, integrated fire & fuel management, & science delivery.

Within the next 15 years, new investments will be needed in the area of core fire science research. An independent external panel of peers reviewed this need in June 2007 and they came back with a number of recommendations, two important ones as follows:

- The immediate present day challenge is to balance the efforts to develop a new more flexible physics based approach while at the same time providing a moderate level of support for the existing systems without resorting to a major overhaul to extend the life of their usefulness.
- It must be highest priority to develop an international consortium to address the model development should be explored.

CANADA

2008 Canada Fire Season Summary – Serge Poulin (CIFFC)

The 2008 fire season in Canada was the 4th quietest season since 1982 in terms of fires. 87% of fires this year were in western Canada. 24% of the total fires were recorded in the month of August and 50% of those fires occurred during a 4 day period.

Highlights as follows:

- 52 resource request orders were received by CIFFC for personnel, aircraft and/or equipment. 25% of the movement of resources was done within a 4 day period in July and air tankers accounted for 50% of the resources (and 50% of total expenditures). Canada really depends on the ability to move our air tankers across the country based on need. The exchange standards developed in 1995 has helped to move these resources around.
- Expenditures for the year have added up to \$750 million, which includes all pre-suppression and suppression activities.
- International resources sent out of country: 59 personnel and 4 CV-580 air tankers (all sent by the province of British Columbia).
- The month of August was the quietest month in CIFFC history in terms of mobilization.
- This year saw the 1st time that unified command was used between the Northwest Territories and Parks Canada.
- Due to heavy rainfall, the province of Quebec had only three fires over 3 hectares this year, but had busiest season for lightning strikes.
- Nova Scotia had the busiest year on record in regards to exports.

- Total hectares burnt for the country saw 67% burnt in one single province: Saskatchewan, with just over 1 million hectares.

Canadian Interagency Forest Fire Centre Report – Dennis Brown (Director, CIFFC)

Wildland fire occurs in every jurisdiction in Canada every year and faces on average about \$2.8 million hectares of timber loss each year. Situated in Winnipeg with a total of five permanent staff positions, Dennis likes to think of CIFFC as a Canadian Risk Management Partnership. CIFFC is a non-for-profit federally registered corporation that is owned and operated by the federal, provincial and territorial governments. It was created in 1982 to facilitate resource and information exchanges through cost effective, efficient risk management partnerships via one telephone call. CIFFC fills resource orders quickly and efficiently saving agencies time and money during the peak of emergency. It ensures that national standards are met and pre-determined costs allow for smooth processing and minimal paperwork.

CIFFC has the following components:

- A Board of Trustees comprised of the Assistant Deputy Ministers from each of the 13 jurisdictions to help develop strategic plans and approve finances.
- A Council of Directors comprised of the Wildland Fire Directors from the 13 jurisdictions, which meets regularly to share ideas and enhance the national plan for cooperation.

It is important to balance local needs with variable fire occurrences across Canada and United States. There are been only 1 year out of 26 years of reciprocal arrangement that personnel was not exchanged between Canada and the United States. CIFFC is currently working on arrangements with other international partners to enhance the capacity of partnering agencies to meet future challenges.

Strategic directions presented at an independent workshop done from a staff level and endorsed by the council of directors and board of attendees as follows:

- Enhance the coordination of mutual aid resource sharing
- Provide international arrangements for mutual aid
- Maintain and enhance creative process for the collection of data and information management
- Additional wildland fire training (considered critical)
- Financial sustainability to ensure efficient and effective service delivery
- Develop and implement specific strategies to address current and emerging wildland fire issues

Canadian Forest Service Fire Research Report - Bill de Groot (Research Scientist – Canadian Forest Service)

Currently there are 30 people working on fire research with the CFS. Handout listed all of these individuals and their main areas of study. Some highlights are as follows:

Canadian Wildland Fire Information System

CWFIS has been around for a while and is a wealth of information for fires in Canada. The website provides current national information including fire danger rating, fire behaviour, fire & smoke locations, as well as weekly statistics and links to provincial agencies. There is also a modeling component which uses forecasted weather, satellite-detected fire perimeters and hot spots. Monthly fire danger ratings are forecasted using Environment Canada data.

Global Early Warning System for Wildland Fire

Provides a global system to implement international resource sharing agreements, as well as provide daily fire danger information to countries that do not have a fire danger rating system developed or in place.

The early warning system can prevent many negative impacts of wildland fire. A global early warning system supports:

- International technology transfer of fire danger rating science &
- Local capacity building to implement successful fire prevention, detection and suppression programs

Risk Management Study

CFS has partnered with the University of Alberta to study spatial variation in landscapes and the fire risk across a 2.4 million hectare study area.

(Risk = susceptibility X impacts)

National Carbon Emissions Modeling

System developed for international reporting under the UNFCCC. Wildland fire C emission estimates are used directly in Canada's National Forest Carbon Monitoring, Accounting and Reporting System (NFCMARS), which is led by the CFS. The annual area burned by wildfires in Canada is highly variable (0.3-7.5 million ha/yr) and carbon emissions is as well, due to differences in fuel types/fuel load (spatial variability) and fire weather influencing burning conditions and behaviour (temporal variability).

Fire and Climate Change

We will start to see shifts between fuel types and (to our benefit) towards quickly resprouting and faster growing species (i.e., aspen) as a result of shorter fire cycles; we are hoping total stand carbon storage will balance out a bit in the long term (balancing greater C loss from increased fire with greater C sequestration rate with faster growing species). However, it is expected the future will bring more fire activity, longer fire seasons, more ignitions, and uncertain fuel effects. Big question is will the climate warming cause more fire and increased atmospheric CO₂ ; a positive feedback to further increase in fire activity? Potentially the answer is yes when looking at trends in the Drought Code.

Canada-Mexico Project to Develop the Mexico Fire Information System - Kerry Anderson (Fire Research Officer – Canadian Forest Service)

After the extreme 1998 fire season in Mexico, there was a push to create an integrated fire information system in that country. At Mexico's request the CFS (in partnership with CONAFOR, SEMARANT & INIFAP) developed an operational system for them. Available in Spanish, it was launched to the internet in the spring of 1999 and later deployed to Mexico. Basically, it takes fire weather observations throughout the day and building maps from which Mexicans can produce a daily report.

This project has established collaborative outcomes between all three North American countries and contributed to the strengthening of management capacities, expertise of programs, & international agreements.

In 2002 an original proposal was created in writing and a three phase work plan was developed:

- Phase 1 – Team Training & Product Development
 - Move processing to Mexico
 - System & website improvements
- Phase 2 – User Training
 - Develop training materials
 - Training the trainers
 - Knowledge dissemination
 - Feedback workshop
- Phase 3 – Scientific Calibration
 - Fuel model development
 - Fire occurrence prediction
 - Fire weather forecasting
 - Satellite map
 - Fire threat analysis

Current Status Update

Phase 1

- System was developed in Edmonton (1999)
- CONAFOR employees were trained (2003)
- System installed in México City (2004)
- Operations moved to Guadalajara (2005)

Equipment problems caused Mexican operations to cease and the Edmonton site continued to operate. To finish Phase 1, the system needs to be re-installed in Guadalajara to re-establish Mexican administration of the system.

Phase 2

System has been providing daily information to Mexican operations since 2000 and is part of regular federal fire management training courses. Feedback is regularly received from the users.

Phase 3

The projects for Phase 3 have been initiated but have not moved much further than that due to lack of funding.

5. Report on NAFC Meetings**Integrated Working Group Meeting (March 2008, Arlington, Virginia) – Bill de Groot (CFS)**

The purpose of this meeting was to facilitate formal and information discussions among the different NAFC organizational levels, share information, and improve communications between the working groups. It identified and developed a plan for collaboration on cross cutting issues.

The eight active NAFC working groups are: Atmospheric Change & Forests, Fire Management, Forest Genetics, Invasive Plants, Insect and Disease, Inventory & Monitoring, Silviculture, & Watershed.

NAFC Purpose/Function:

- Sharing information
- Solving common forestry problems
- Influencing policy
- Offering solutions
- Forming relationships
- Serving as the best point of contact for information

Primary Clients of NAFC are political masters and policy makers, FAO, the science community and working level staff of government policy offices.

Cross-cutting topics (thematic groups) that were discussed as long term projects:

- Maintaining forest ecosystem resiliency
- Maintaining forest sector competitiveness and diversification
- Databases and Monitoring

NAFC Meeting (June 2008, San Jose, Puerto Rico)

Please see the following website if you would like more information on this meeting, as no one from the NAFC-FMWG was able to attend:

http://www.fs.fed.us/global/nafc/nafc_reports/nafcreports.htm

6. Fire Management & Research Information Session: Fire, Insects & Fuel Management**Mountain Pine Beetle Ecology & Population Dynamics - Allan Carroll (Research Scientist – Canadian Forest Service)**Overview of MPB – Biology & Impacts

Currently, western North American contains the ingredients for an unprecedented outbreak of MPB. Attacks are mediated by mutualistic fungi and successful reproduction in pine stands leads to tree death. MPB normally exists as a member of the bole-infesting bark beetle assemblage, responsible for maintaining stand health and is NOT a new forest pest.

There have been three or four significant outbreaks in western Canada, particularly in British Columbia. A total area of 14 million hectares has been affected in that province and by the time the MPB population begins to decline there will be an 80% mortality of mature pine by 2013. Dispersal events in 2002 and 2006 have created the invasions of the Alberta plateau. The lodgepole/jack pine hybrid zone will allow beetles to move through the boreal forest and by the year 2070, we will reach suitability for MPB across the continent.

MPB Outbreak Requirements

- Abundant susceptible hosts:
 - Trees most prone to MPB attack are between 80 and 160 years old
 - Effective fire suppression (less than 1% of historic area burns currently)
 - Selective harvesting (Prior to 1970 lodgepole pine was considered a weed)
 - Climates favouring beetle survival (conditions are warmer and drier, both of which are suitable for MPB)

Discussed the endemic and epidemic phases of MPB. CFS began a study in 2006 near Tumbler Ridge, British Columbia (6 stands, 1ha plots). In 2007 the study shifted to Grande Prairie, Alberta (8 stands, 1ha plots). Found these results:

- Attack behaviour
 - Preferential colonization of large-diameter host trees
 - Pattern of host selection similar to historic range
- Phloem thickness versus beetle productivity
 - Beetle productivity increased with phloem thickness
 - Higher productivity than expected from historic range
- Beetle productivity vs. attack density
 - Productivity declined with attack density – intraspecific competition
 - High brood production, even at extreme attack density
 - No apparent peak optimum density
- Jack pine and jack-lodgepole hybrids
 - No opportunity to test (yet)
 - Lab experts believe that beetle productivity in jack = lodgepole pine and fungal mutualists are viable in hybrid and jack pines
 - Jack pine less resistant and more apparent than lodgepole

There were some good mortality rates over the 2007-08 winter, which has resulted in declining populations. There is significant government commitment to directly control infestations and the distribution of pine across the country may not support expansion into central Canada.

Summary/Conclusion

MPB outbreak is exuberated by the combined effects of climate change and forest management. The unprecedented outbreak has facilitated breach of the Rocky

Mountain geo-climatic barrier and MPB productivity is higher in naïve versus experienced lodgepole pine forests.

Does Mountain Pine Beetle Increase Fire Hazard? – Bob Keane (Missoula Fire Science Laboratory, USDA Forest Service)

Currently most of western North America is experiencing a major MPB epidemic where there is no end in sight. Major causes of this epidemic are: favourable weather, abundant host species and reduced habitat heterogeneity. Casual mechanisms are fire exclusion and climate change. This brings up an interesting dilemma as MPB kills many pine trees each year and these dead trees appear to pose a fire hazard. The perception is that fire hazard increases with the beetle epidemic and this is used as a reason for harvesting.

Important stand changes that might increase fire hazard: microclimate (finer fuels/lower fuel moisture, higher fuel loadings & greater undergrowth response), increased winds, radiation, temperature, decreased humidity, falling snags (firefighter safety) and longer fire seasons.

Important stand changes that might decrease fire hazard: Microclimate (high surface fuel moisture, increased rainfall, high water tables, decreased radiation due to undergrowth, deeper snow packs), live fuel moistures, higher undergrowth fuel moistures with greater decomposition fine fuels and high log fuel loadings.

Space does matter and fire hazard needs to be evaluated at the landscape level, considering composition, structure, topography, orientation, position, climate and weather.

Does fire hazard increase? Bob feels it depends on the situation and there is a no one size fits all answer. Need to look at local conditions and multiple scales (trees, stand, landscape) and all will definitely require more research in over story composition, understory shade tolerant species, survivors of the attack and surface fuel structure. The longer the MPB attack and the more trees killed, the longer high fire hazard conditions will exist.

Mountain Pine Beetle, a British Columbia Fire Perspective – Brian Simpson (Director, BC Forest Service)

The current MPB epidemic in the province of British Columbia has attacked an estimated 13.5 million hectares and threatens stability and economic well being of communities. It is projected to kill 80% of public land within the province by the year 2015 and there is no doubt that there is increased fire activity in beetle kill-stands. The government has taken ownership of problem and has integrated it with community planning, as well as bylaw development and enforcement. It is important for the government not to just come in and take over but to have local involvement. 87 of 185 communities have wildfire protections plans completed. 28 pilot projects and 200+ treatment projects are under way or complete.

Brian presented the Carrott Lake Research Project where wildfire hazard assessments and predictions for MPB-killed lodgepole pine stands were completed. Some of the findings were:

- Fire can burn with high intensity under calm conditions of very low wind
- Expect fire to move in more than one direction at once (bubbling) under light winds
- Crown fire activity is linked to RH and direct solar radiation (shading has great impact)
- Spotting abundant at some stages of attack; smokeless spotting is possible in the canopy and you cannot see it until the fire drops to the ground
- Crown and surface fire will sometimes move in different directions

Strategies & Tactics/Impacts on Fire Operations & Management that BC has learnt:

- Always start from an anchor point and be aware of spotting; educate and train crews on transition from fire fighting to evacuation (need extensive and consistent crew safety briefings)
- Harvest 75 metre corridors along road systems
- Utilize bunchers and skidders at night in standing red areas
- All fire lines must be supported by burning. There is no rank 4 transition in beetle killed stands; the fire moves from ground to crown immediately
- Crew configurations and deployment platform (i.e.) helicopters) need to be doubled up
- Suggest having an IC in the air overhead when the FPMC is 91 or greater in a localized area

Other MPB/Fire Operational Observations:

- Red retardant colour is not visible on red trees
- Issues with water tables in terms of availability and quantity
- Increased number of danger trees with lots of top thirds snapping off
- Use existing fuel breaks and stay away from standing timber
- Emphasis on separating crowns more than building line down to mineral soil
- Support all lines with burning and heli-torch operations, which is safer for burning canopy
- Logging and stand treatments leave behind residues with different characteristics
- Need integrated fuel management and forest harvesting activities
- Importance of proper documentation of operational issues & fire behaviour

MPB Fuel Management Program & Community Wildfire Protection Planning:

- MPB has changed provincial fuel management priorities and the start of a fuel management programs coincides with largest MPB infestation in BC Forest Service history
- Land use plans and annual allowable cuts have been adjusted to accelerate harvesting rates to best utilize dead and dying timber.

- Research projects are ongoing to analyze the dynamics of the MPB infestation, with the ever increasing harvest debris left from accelerated harvest rates posing an increased fire hazards to communities.

Mountain Pine Beetle in Alberta – Dan Lux (Manager of Forest Health, Alberta Sustainable Resource Development)

Alberta is unique when it comes to dealing with the mountain pine beetle infestation and has had to adapt some tools and techniques to face the issue. It comes very sporadically and is not normally an element of forest management.

Almost 20 years went by without an infested tree in the province and thus MPB is normally not an element of forest management, but tactics are similar to fire suppression; Beetles are like a slow moving fire and one agency cannot do it alone. This is a bigger landscape issue that requires change. Alberta works closely with neighbouring provinces/territories, municipalities, First Nations, Parks Canada, Forest Industry, and various Research Agencies.

In 2006 Alberta experienced a huge spotting event which blew several hundreds of kilometres into the province, allowing the MPB infestation to spread quite rapidly. However, not all spots are successful, making MPB manageable in the province.

Alberta uses a Decision Support System (similar to an initial fire risk assessment) to determine the following by spending significant time completing detailed aerial surveys, followed up by GIS analysis: Beetle Risk Rating, # of infested trees, Stand Susceptibility & Neighbouring Stand Susceptibility Management Zone. Spring population forecasts are patchy and difficult, but are critical in setting priorities.

Population forecasts are important as the beetles have a 2 year life cycle in summer temperatures and beetles that do not accumulate enough heat will take the entire time to develop. This makes them a low priority for control as they pose a low risk. Cold weather is also a big factor in MPB mortality: the beetles need to be exposed to -35°C to -40°C under the bark in order to kill them. January 29, 2008 brought -43.2°C temperatures to the Grande Prairie area, helping to slow the spread. Banff saw temperatures of -32.5°C that same day and it did nothing to affect MPB in that area as it was not cold enough.

What is needed is a healthy pine strategy and a long term answer. Goals for Industry are to forecast numbers of highly susceptible stands in next 20 years, reduce the number of highly susceptible stands by 75% and determine all impacts. Building breaks and planning aggressive prescribed burns make it difficult for the beetles to find a host and breed. Alberta has such plans in the Willmore, Kananaskis, and R11 areas.

Tuesday October 7th meeting adjourned.

NOTE: PowerPoint presentations from this days meeting were compiled on to DVD's and three copies were given to each countries leading delegate

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Thursday October 9, 2008

Chair Bill de Groot (Canadian Forest Service) welcomed everyone and announced an additional item for the meeting to be the signing of the Memorandum of Understanding between CIFFC and CONAFOR.

See [Appendix 1](#) for list of delegate attendees

See [Appendix 2](#) for list of action items

See [Appendix 3](#) for 2008 FMWG Workplan

1. Review of 2007 FMWG meeting minutes from Guadalajara and March 2008 FMWG mid-term meeting minutes from Arlington, Virginia

Dale suggested the meeting minutes from Guadalajara last year should be posted to the website; Bill made note of this and will look into. Juan commented that the front webpage for the NAFC-FMWG is now available in Spanish.

Action Item # 1 – 2007 meeting minutes from Guadalajara are to be posted to the NAFC-FMWG website. (Bill de Groot)

Bill felt that the mid-term meeting held this past March in Arlington Virginia was worthwhile and he recommends that if there is an opportunity to meet in the future, to take advantage of time together to prepare for the annual meeting. At this past mid-term meeting (March 2008):

- A review of the FMWG work plan was completed.
- Denny Truesdale gave a presentation on how the NAFC-FMWG fits into international cooperation activities, particularly with FAO.
- Nominations were made for award recipients: Bob Bailey and Cliff Henderson. Bill made note that 4 more awards were made and in storage with Alberta.
- A fire history review was given.
- There was discussion on the website, and the suggestion was made to put up more pictorial stuff from field trips and study tours so people can see the highlights of the work being done by our group.
- Planning (logistics and agenda preparation) for the Banff meeting was completed.

2. Review FMWG Work Plan and Action Items

The FMWG work plan is divided into three objectives, all with individual activities listed under each. The work plan was edited on screen and each activity was discussed/updated as appropriate.

1. Improve cooperation on wildland fire between Canada, México, & USA

- Assessment of fire policy in North American countries through review of final draft paper by Harley Hussein.
 - Task considered complete.
- Develop glossary of common wildfire management terms.
 - Dennis reports this task has not been completed due to the vacant admin role at CIFFC. Group feels this is still a valuable exercise and suggested moving this forward with a timeline to be complete for next years meeting (October 2009).
 - Dale Dague will provide contact assistance if necessary.

Action Item # 2 – Glossary of common wildfire terms to be completed for 2009 NAFC-FMWG conference. (Dennis Brown)

- Enhance International/Trilateral fire science cooperative.
 - Fire behaviour science meeting was held and task considered complete.
 - Group would like to see the development of a web accessible North American Fire Science Directory. CIFFC reports that the Fire Science and Technology Working Group have developed a document for Canada and suggested that perhaps we just tie in a link for the other two countries.
- **NEW** Activity: Provide a compendium (electronic copy) of ongoing research activities in North America.

Action Item # 3 – Electronic draft compendium of research activities in North America to be completed for October 2009 NAFC-FMWG conference. (Dennis Brown, Bill de Groot, Mike Hilbruner & German Flores)

- **NEW** Activity: Contact FAO to provide link after compendium is compiled.
 - Responsible parties will be Dale Dague & Dennis Brown.
- **NEW** Activity: México Fire Management Information System
 - One page outline for Phase III required ASAP (November 2008).
 - Full project proposal to be developed for mid-term conference call (February 2009).

Action Item # 4 – One page outline for Phase III of the México Fire Management System Implementation to be completed by November 15, 2008. (German Flores & Kerry Anderson).

- **NEW** Activity: Tri-country Project Proposal to NAFC

Action Item # 5 – Present proposal to NAFC in February 2009. (Dennis Brown, Roberto Martinez & Dale Dague)

2. Undertake and/or support cooperative global fire activities

- Design session track in cooperation with Australasia for the 4th International Fire Congress in Seville, Spain in 2007.
 - Task considered complete.
- Engage México in the Australia/New Zealand fire study tour and request that they participate in the study tour planning.

Action Item # 6 – Official invitation to be sent to México to partake in the planning process of the Australia/New Zealand fire study tour. (Dale Dague & Bill de Groot)

- **NEW** Activity: Spring 2009 Study Tour of Australia and New Zealand.

Action Item # 7 – Select the theme of the 2009 Study Tour by November 14, 2008. (Dennis Brown, Roberto Martinez & Dale Dague)

Action Item # 8 – Tour member nominations to be submitted by December 31, 2008. (Dennis Brown, Roberto Martinez & Dale Dague)

- Invite CIDA and USAID to 2007 meeting
 - Task considered complete. Dennis expressed his disappointment in CIDA's lack of involvement.
- **NEW** Activity: Regional Consultation.
 - Discussed training and the need to see terms of reference, scope, as well as the rules of engagement for Central and South America.
 - Group would like some background research on the guidelines and purpose of regional consultations to discuss at mid-term meeting in February 2009.

Action Item # 9 – Complete research on regional consultations and report back to group at mid-term meeting (February 2009). (Don Harrison & Bill de Groot)

Action Item # 10 – Contact the Canadian International Development Agency (CIDA) to pursue funding for regional consultation projects and report back at mid-term meeting (February 2009).

(Dennis Brown, Don Harrison & Bill de Groot)

Dennis/Don – to approach CIDA office in Ottawa

Bill – to deal with conference secretariat

Action Item # 11 – Discuss with upper management at CONAFOR if it will be appropriate to hold a Regional Consultation session (with South America) at the annual NAFC-FMWG meeting scheduled to be held in Mexico in 2010 and report back to group. (Roberto Martinez)

3. Enhance the FMWG committee efficiency and effectiveness

- Conduct a mid-term conference call
 - Discussion on possibility of meeting face to face, but conference call will work better due to traveling constraints.

Action Item # 12 – Mid-term conference call date to be set for February 2009 and group to be advised. (Dale Dague)

- Complete, centralized collection/record of minutes/reports/activities
 - Additions have been made to the website (under archive). Task considered complete.
- Locate notes of annual FMWG presentations to NAFC
 - Task deleted.
- **NEW** Activity: FMWG history report
 - Report has been finished and letter of thanks should be sent from this group to Erin Small.

Action Item # 13 – Letter of thanks to be drafted and sent to Erin on behalf of the NAFC-FMWG working group in November 2008. (Bill de Groot, Dale Dague)

- **NEW** Activity: FMWG Charter – update names and official annual date change of chair to January 1st.

Action Item # 14 – NAFC-FMWG charter to be updated with current member names and the official annual date of chair switch to January 1st of each year as discussed. (Dale Dague)

- Develop a North American report summarizing key components of country reports
 - Discussed the idea of developing a template for North American countries to follow in terms for the consistency of statistical information that is reported from each country; i.e.) are we reporting on the same key things?

Action Item # 15 – Prepare a draft template to potentially assist in the preparation of country summary reports by November 2008 for Don/Dennis to have available for meeting with CIDA (Mike Hilbruner and Bill de Groot).

Questions were asked about the website: how many hits it receives? Who has access to the site (members or public)? Don comment that our work here shows the need for funding and cooperation between the countries. The projects we are committed to are great and we need to show our integrative work. The funding is critical to each phase, especially the later phases.

3. México Fire Management Information System Project

Some really good progress was made with the workshops in Edmonton. For background, Kerry Anderson (CFS) gave a presentation on the different phases of this project at the meeting Tuesday afternoon.

The México Fire Management Information System has been built and moved to México. There is enough money to finish the first two phases, but now we are looking at the next steps, particularly Phase 3 (in terms of science and research).

German commented that training is required to get the system working and the first step is to get the system more specific to México's conditions and needs. Arturo said that a link needs to be established between the Arcview scripts and FWI, then we can start on finishing Phase 2 and focus strictly on training. The software, hardware and people are all in place, but experts are required.

Discussion perused on costs and time frames. All consider this a great project, but it needs to be determined where funding money for the final stages of this project is going to come from.

- Dennis suggested that for the first time in 42 years, we request funding support from NAFC. They do have a small pot of money to allocate for projects of interest and this may be a good opportunity to test these waters. As previously mentioned in action item # 10, Dennis and Don will approach the Canadian International Development Agency (CIDA).
- Steve commented that this is about adaptation expansion in an international fire system. Bill recommended that this should also have some United States involvement to uphold tri-country participation; Dale agreed.
- A proposal will be developed and this will move forward from there.

4. Wildland Fire Advisory Group/Global Wildland Fire Network

NAFC members who attended this meeting were Dale Dague, Dennis Brown, Bill de Groot and Denny Truesdale. Background:

- The UN International Strategy for Disaster Reduction (ISDR) "Working Group on Wildland Fire" was phased out in 2003.
- The UN advisory function transition to the "Wildland Fire Advisory Group" and the "Global Wildland Fire Network", serving as a connection.

Meeting was held in July 2008 at the Global Fire Monitoring Centre in Freiburg Germany. This was a joint meeting with WFAG, ILC (International Liaison Committee) and Fire Management Actions Alliance Advisory Group, which provides support to the following:

- International Liaison Committee of the International Wildland Fire Conference
- 2nd International Wildland Fire Summit

- 5th International Wildland Fire Conference

Current Members:

- Global Fire Monitoring Centre (GFMC)
- UN Organizations (ISDR, FAO)
- Regional Wildland Fire Networks
- International Organizations (CTIF, ITTO)
- Science and Academia
- Ad hoc experts

Highlights from the meeting:

- Presentations from Regional Wildland Fire Networks and International organizations, representing the 14 attending countries and 3 international organizations.
- Reviewed the Wildland Fire Global Early Warning System.
- Field trip to the Freiburg Forestry University and the Environment Sciences Experiment Station in the Black Forest. Dale gave a brief presentation on the Cultural and Fire History in the Black Forest and Central Europe.

The XIII World Forestry Congress will be held October 18-25, 2009 in Buenos Aires, Argentina. Please keep these dates in mind as it is close to the next annual NAFC-FMWG conference and it is expected that someone from NAFC attends due to proposed regional consultation talks.

5. International Liaison Committee (ILC) Update & the 5th International Wildland Fire Conference Update

We have a responsibility to have global monitoring networks, and the 5th International Wildland Fire Conference will take place May 9-13, 2011 in Sun City (next to the Pilansberg National Park) in South Africa. This conference will be co-hosted by AfriFireNet and Working on Fire. They plan is to have a live fire in the National Park, an aerial firefighter show, as well as pre and post conference tours. Their biggest challenge right now is finances.

2011 Conference Program Pillars are as follows:

- Fire awareness/fire prevention
- Prescribed burning
- Resource sharing & coordination*
- Fire detection
- Fire suppression
- Fire damage rehabilitation
- Community empowerment
- Fire science, policies & strategies

*Dennis suggested that perhaps we consider our three countries preparing a report on the resource sharing that occurs in North America.

Development to date:

- 2011 business plan is ongoing
- Conference venue is secured
- Quotes in place for translation, air show, transport, dinner, etc.
- Budget accommodations are available
- Website is under construction and Dennis will provide link when it becomes available
- Organizing team is in placed
- Potential sponsors have been contacted

Websites of interest:

- www.fire.uni-freiburg.de/GlobalNetworks/Africa/Afrifrenet.html
- WoF South Africa: www.workingonfire.org
- WoF International: www.wof-int.com
- FireWise South Africa: www.firewisesa.org.za
- Contact: alex@wof-int.com

Discussed and all agreed for the NAFC-FMWG to provide a letter of support to the 5th International Wildland Fire Conference and allow logo use.

6. NAFC-FMWG History Report

Report has been drafted, reviewed and approved. Currently we are at a point where we are only looking for show stoppers before proceeding. Comments are that the history report looks very good.

Dale suggested that we need a clear consensus on when chairmanship should change. Bill suggested that January 1st of each year would be best to allow the chair time to clean up after the annual fall meeting. All attending agreed to this by adding it to the work plan (see action item # 13).

Juan commented that he would like to see a list of acronyms. Dale believes that this was already done throughout the document when the first time that something was reference it was typed out in full with the acronym in brackets behind it. Confirmed that there are no required changes to the document and everyone is in agreement to accept the document and replace it on the website.

Dale felt that we should recognize Erin Small, who helped prepare the History Report and suggested that perhaps a letter of thanks be sent from the Chair. Bill will draft and send prior to years end and added this task to the working plan (see action item # 12).

7. Australia/New Zealand Study Tour 2009

These study tours give us a better understanding of fire problems in other countries and methods to solve these problems. Host country exchanges information, while the sending countries learn and share with their home country.

In the spring of 2009 North America will take its turn in sending people to Australia/New Zealand. Likely starting in April/May, this will be 4 - 5 week study tour. Between now and the end of 2008 we will need to select activities, locations, and tour participants so that arrangements can be made in early 2009. Items have been added to work plan (see action items # 6, 7 & 8).

Theme is to be selected and communicated to Australia/New Zealand prior to years end. It needs to define what it is we want to get out of this as a continent and what they have to offer that we do not have access to. Suggestions on themes were wildland urban interface & community volunteer involvement.

Participants should be future leaders of agencies and we should be sending a total a maximum of 10 and a minimum of 6. Traditionally, sending researchers and fire managers together have not worked out in the past because they want to see different things. Dennis mentioned that there is a major Wildland Fire Training Conference being held in May of 2009, and perhaps we consider sending individuals to both.

Action Item # 16 – Conference call to be scheduled for November 14, 2008 to discuss and decide themes for the 2009 Australia/New Zealand study tours. Details will be forwarded. (Dale Dague)

8. 43rd FMWG Meeting in USA (2009)

Proposing the following:

- Location: Sacramento and South Lake Tahoe at the Wildland Fire Training & Conference Centre (WFTC) in McClellan, California.
- Dates: October 6-8, 2009 (Monday and Friday will be travel days)
- Lodging: Sacramento, California (which has international airport).
- Fieldtrip: Angora Fire which occurred in June 2007 near South Lake Tahoe (near the California/Nevada border). It is 2 hours from Sacramento, burnt over 1250 acres and 250 homes. Notes of interest on this fire are fuel treatment effects on behaviour, suppression effectiveness and interagency coordination.

Dale does not want this conference to interfere or provide time constraints with the XIII World Forestry Congress being held just weeks after in Argentina, but will

continue with winter planning effort/preparations for next years meeting. Mid-term teleconference will be planned for February 2009 (see action item # 12). Group likes the location and suggests possibly building another theme into the conference. If any one has suggestions for a theme, please contact Dale. Hopes the agenda will continue with the research sessions to allow for a good mix.

9. Regional Consultation Meeting (2009 or 2010) – NAFC-FMWG and other Regional Wildland Fire Networks (Central America/Mesoamerica, Caribbean, South America)

There was discussion on what exactly these Regional Consultations are supposed to entail. Bob Bailey attended the 1st Summit in Sydney where this was discussed in more length and suggestion was made that perhaps he should be contacted for more information on the discussion from that meeting. Group feels more background is required and there is a need to start engaging other regions, making connections and sharing with them the good things we have going on.

Bill said he got the impression that the purpose was to get 13 global regions together to discuss current issues and problems, as well building for the future. FMWG would likely play a mentoring role to get other networks engaged in fire management.

Don thinks these regional consultations are a great idea. Argentina has contacted Alberta for information on training, knowledge transfer, & resource sharing. He suggested that we perhaps consider adding this to the 2010 agenda as a one day workshop. Comments on this idea:

- 2010 makes sense, as Mexico is hosting the event and that would build a natural connection in terms of language and location. It also provides lead time to ensure that it is a resounding success. Roberto wants time to consider this and needs the support from upper management in Mexico (see action item # 11).
- Further to that, as we reach out, we will want to be as prepared as possible and make the consultation a success. There needs to be a group effort from all three countries and Mexico will not need to prepare this alone.
- Perhaps a one day separated meeting could be tied on to the 2010 NAFC-FMWG conference. It would be a good experience for them to see how the conference works.
- Concluded discussion by saying that it does not have to be in conjunction with NAFC-FMWG meeting, but it does make logistical sense.

10. Bin Items Close Out

Change of Chairmanship

- Dale suggested that because it was agreed to change the date of exchanging chairmanship, there is an opportunity to change the names listed on the bottom of the FMWG charter. Group agreed they would like this updated and Dale agreed to make the changes to the document. He also mentioned that the charter is available on the web and if anyone requires change to it, they can contact him. Juan commented that it is important to advise the group each and every time the charter changes so other agencies can be notified in a timely manner.

Website Updates

- Dale asked if any changes were required to the website and no one reported any issues, so it will remain status quo.

Thursday October 9th meeting adjourned

LIST OF DELEGATES

October 7, 2008

NAME	TITLE	AGENCY	E-MAIL
Allan Carroll	Research Scientist, Pacific Forestry Centre	CFS	acarroll@nrca-nrcan.gc.ca
Bill de Groot	Research Scientist, Great Lakes Forestry Centre	CFS	bdegroot@nrca-nrcan.gc.ca
Brent Schleppe	Area Manager - Foothills	Alberta SRD	brent.schleppe@gov.ab.ca
Brian Simpson	Director, Forest Protection Program	BC Forest Service	brian.simpson@gov.bc.ca
Bruce Mayer	Executive Director, Forestry Business Services	Alberta SRD	bruce.mayer@gov.ab.ca
Butch Shenfield	Forestry Manager, Clearwater Area	Alberta SRD	butch.shenfield@gov.ab.ca
Chao Li	Research Scientist, Northern Forestry Centre	CFS	cli@NRCan.gc.ca
Cliff Henderson	Assistant Deputy Minister (retired)	Alberta SRD	
Cliff White		Banff National Park	cliff.white@pc.gc.ca
Colin Hardy	Program Manager - Fire, Fuel and Smoke Science Program	US Forest Service	chardy01@fs.fed.us
Dale Dague	Branch Chief International Fire	US Forest Service	ddague@fs.fed.us
David Gray	Ecology for Spatial Dynamics of Forest Inset Outbreaks	CFS	dgray@nrca-nrcan.gc.ca
Dan Lux	Forest Health Manager	Alberta SRD	daniel.lux@gov.ab.ca
Dennis Brown	Director, CIFFC	CIFFC	director@ciffc.ca
Dennis Balkin		Alberta SRD	
Don Harrison	Acting Assistant Deputy Minister	Alberta SRD	Don.Harrison@gov.ab.ca
Isidoro Solís	Fire Management Program Fire Training & Capacity Coordinator	US Forest Service	isolis@fs.fed.us
José Germán Flores Garnica	Researcher	Forest, Agricultural & Cattle Researching National Institute	flores.german@inifap.gob.mx
Juan Arturo Raygoza Martínez	Fire Prevention Assistant manager	CONAFOR	araygoza@conafor.gob.mx
Juan Manuel Frausto Leyva	Fire Management and Restoration Program Manager.	Mexican Nature Conservation Fund	JFrausto@fmcn.org
Keith Lyseng	Acting Executive Director, Forest Protection Branch	Alberta SRD	keith.lyseng@gov.ab.ca
Ken Colbert	Director, Wildland Fire Management	Yukon Community Services	ken.colbert@gov.yk.ca
Kerry Anderson	Fire Research Officer, Northern Forestry Centre	CFS	KAnderso@NRCan.gc.ca
Michael Brady	Project Leader, Wildland Fire Information Systems	CFS	MBrady@NRCan.gc.ca
Ralph Wheeler		Ontario Ministry of Natural Resources	ralph.wheeler@ontario.ca
Rob Harris	Forestry Information Coordinator	Alberta SRD	rob.harris@gov.ab.ca
Robert Keane	Scientist, Missoula Fire Lab	US Forest Service	rkeane@fs.fed.us
Roberto Martinez Dominguez	Forest Fire Protection Manager	CONAFOR	Rmartinez@conafor.gob.mx
Serge Poulin	Operations Manager	CIFFC	operations@ciffc.ca
Steve Roberts	Executive Director, Fire Management & Forest Protection Branch	Saskatchewan Environment	steve.roberts@gov.sk.ca
Tom Zimmerman		US Forest Service	tomzimmerman@fs.fed.us

LIST OF DELEGATES

October 9, 2008

NAME	TITLE	AGENCY	E-MAIL
Bill de Groot	Research Scientist, Great Lakes Forestry Centre	CFS	bdegroot@nrcan.gc.ca
Dale Dague	Branch Chief International Fire	US Forest Service	ddague@fs.fed.us
Dennis Brown	Director, CIFFC	CIFFC	director@ciffc.ca
Don Harrison	Acting Assistant Deputy Minister	Alberta SRD	Don.Harrison@gov.ab.ca
Isidoro Solís	Mexico Fire MGT Program Fire Training and Capacity Coordinator	US Forest Service	isolis@fs.fed.us
José Germán Flores Garnica	Researcher	Forest, Agricultural & Cattle Researching National Institute	flores.german@inifap.gob.mx
Juan Arturo Raygoza Martínez	Fire Prevention Assistant manager	CONAFOR	araygoza@conafor.gob.mx
Juan Manuel Frausto Leyva	Fire Management and Restoration Program Manager.	Mexican Nature Conservation Fund	JFrausto@fmcn.org
Ken Colbert	Director, Wildland Fire Management	Yukon Community Services	ken.colbert@gov.yk.ca
Ralph Wheeler		Ontario Ministry of Natural Resources	ralph.wheeler@ontario.ca
Roberto Martínez Domínguez	Forest Fire Protection Manager	CONAFOR	Rmartinez@conafor.gob.mx
Serge Poulin	Operations Manager	CIFFC	operations@ciffc.ca
Steve Roberts	Executive Director, Fire Management and Forest Protection Branch	Saskatchewan Environment	steve.roberts@gov.sk.ca

Summary of Action Items

Action Item # 1 – 2007 meeting minutes from Guadalajara are to be posted to the NAFC-FMWG website.
(Bill de Groot)

Action Item # 2 – Glossary of common wildfire terms to be completed for 2009 NAFC-FMWG conference.
(Dennis Brown)

Action Item # 3 – Electronic draft compendium of research activities in North America to be completed for October 2009 NAFC-FMWG conference.
(Dennis Brown, Bill de Groot, Mike Hilbruner & German Flores)

Action Item # 4 – One page outline for Phase III of the México Fire Management System Implementation to be completed by November 15, 2008.
(German Flores & Kerry Anderson).

Action Item # 5 – Present proposal to NAFC in February 2009.
(Dennis Brown, Roberto Martinez & Dale Dague)

Action Item # 6 – Official invitation to be sent to México to partake in the planning process of the Australia/New Zealand fire study tour.
(Dale Dague & Bill de Groot)

Action Item # 7 – Select the theme of the 2009 Study Tour by November 14, 2008.
(Dennis Brown, Roberto Martinez & Dale Dague)

Action Item # 8 – Tour member nominations to be submitted by December 31, 2008.
(Dennis Brown, Roberto Martinez & Dale Dague)

Action Item # 9 – Complete research on regional consultations and report back to group at mid-term meeting (Feb 2009).
(Don Harrison & Bill de Groot)

Action Item # 10 – Contact the Canadian International Development Agency (CIDA) to pursue funding for regional consultation projects and report back at mid-term meeting (Feb 2009).
(Dennis Brown, Don Harrison & Bill de Groot)

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(Roberto Martinez)

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(Dale Dague)

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(Bill de Groot & Dale Dague)

Action Item # 14 – NAFC-FMWG charter to be updated with current member names and the official annual date of chair switch to January 1st of each year as discussed.
(Dale Dague)

Action Item # 15 – Prepare a draft template to potentially assist in the preparation of country summary reports by November 2008 for Don/Dennis to have available for meeting with CIDA.
(Mike Hilbruner & Bill de Groot).

Action Item # 16 – Conference call to be scheduled for November 20, 2008 to discuss and decide themes for the 2009 Australia/New Zealand study tours. Details will be forwarded.
(Dale Dague)

2008 FMWG Workplan

Objective	Activity	Deliverable	Timeline	Responsible	
Improve cooperation on wildland fire between Canada, Mexico, & USA	Assessment of fire policy in North American countries through review of final draft paper by Hayley Hussein	International fire policy publication	Completed	FMWG members	
	Develop glossary of common wildfire management terms	Initial review/draft proposal	Oct 2009	Dennis Brown, German Flores, Dale Dague to provide contact	
	Enhance international /trilateral fire science cooperative	Endorse fire behavior science meeting	Completed		Mike Hilbruner, Bill de Groot, Germán Flores
		Provide a compendium (electronic copy) of ongoing research activities in NA	Draft review Oct 2009		CIFFC (Bill de Groot), Mike Hilbruner, German Flores,
		Contact FAO to provide link	After compendium is compiled		Dale Dague, Dennis Brown
		Mexico Fire Management Information System	Prepare 1-page outline for Phase III (Nov 15); full proposal for mid term conf call (Feb 2009)		German Flores, Kerry Anderson
		Tri-country project proposal to NAFC	Feb 2009 conf call		Dennis Brown, Roberto Martinez, Dale Dague
		Develop NA fire science directory (web accessible)	Incorporated within research compendium task		
Undertake and/or support cooperative global fire activities	Design session track in cooperation with Australasian for the 4 th International Fire Congress in Seville, Spain in 2007	Report back to FMWG in February 2007	Completed	Dennis Brown, Dale Dague, Roberto Martinez	
	Engage Mexico in the Australia/New Zealand fire study tour.	Participation by Mexico in study tour planning	Send invitation to Mexico for next study tour 2009	Dale Dague or Bill de Groot	

2008 FMWG Workplan

Undertake and/or support cooperative global fire activities (cont'd)	Spring 2009 Study Tour of Australia and New Zealand	Select theme; Tour member Nominations	Nov. 14/08 Dec 31/08	Dennis Brown, Roberto Martinez, Dale Dague
	Regional Consultation	Contact CIDA to pursue funding for Regional Consultation	Provide report by mid-term meeting (early 2009)	Dennis Brown, (Don Harrison), Bill de Groot
		Discuss hosting in Mexico in 2010	Feb 2009 conf call	Roberto Martinez
		Background search on guidelines, purpose, etc;	Discuss at mid-term meeting at Feb 2009	Bill de Groot, Don Harrison
	Invite CIDA and USAID to 2007 meeting	Assessment of potential funding assistance from development agencies	Completed	Dale Dague, Bill de Groot
Enhance FMWG committee efficiency and effectiveness	Conduct a mid-term conference call	Update on action items	February 2009	Dale Dague, Roberto Martinez, Bill de Groot
	Complete, centralized collection/record of minutes/reports/activities	Additions to web site (archive)	Completed	Bill de Groot, Dale Dague, Roberto Martinez
	Locate notes of annual FMWG presentations to NAFC	Use FMWG website as historical reference	Deleted	Dale Dague, Roberto Martinez, Bill de Groot
	FMWG history report	Finish report, send letter of thanks to Erin from FMWG	Nov. 2008	Dale Dague, Bill de Groot
	FMWG Charter	Update names and official date for change in chair to Jan 1	Feb 2009	Dale Dague
	Develop a North American report summarizing key components of country reports	Draft template for annual summary report.	Draft template February 2009	Mike Hilbruner, Bill de Groot