FOREWORD:

Why “Human Factors Ten Years Later”? 

In 1997 the International Association of Wildland Fire (IAWF) held the first international wildland fire safety summit in Rossland, British Columbia, Canada, from September 29 to October 2. Six additional summits have been held since that time:

- Winthrop, Washington, USA, October 26-29, 1998
- Sydney, New South Wales, Australia, November 2-5, 1999
- Edmonton, Alberta, Canada, October 8-10, 2000
- Missoula, Montana, USA, November 6-8, 2001
- Luso, Portugal, November 18-23, 2002
- Toronto, Ontario, Canada, November 18-20, 2003

The general goal of the IAWF international wildland fire safety summits has been to bring together wildland firefighters and managers from different countries, agencies, and levels to discuss common problems and determine a variety of approaches to solving them.

Proceedings have been produced in one form or another from all of the summits except the second one in Winthrop (Greenlee 1998; IAWF and NSW Rural Fire Service 1999; Butler and Shannon 2000; Butler and Mangan 2001; Viegas 2002; IAWF and OMNR 2003). We have endeavored to include as much written documentation (e.g., recommendations, breakout group discussions) of these past summit in the proceedings from this the eighth safety summit, including the program and abstracts for the Winthrop summit, in the interest of creating an institutional memory for the IAWF and in turn the entire global wildland fire community.

Unfortunately the U.S. wildland fire services have a long history firefighter fatalities associated with burnovers and entrapments as evident by the graph adapted from Thorburn et al. (2000) presented below covering the period 1910-2001 representing 419 fatalities over 92 years. On July 6, 1994, 14 wildland firefighters were overrun and subsequently killed by the major “blowup” on the South Canyon Fire in western Colorado. This incident represented the single highest fatality fire in North America in 40 years (i.e., since the 1953 Rattlesnake Fire in California involving 15 firefighter fatalities). The entire global wildland fire management community mourned the loss. An assessment carried out by U.S. Forest Service fire researchers concluded that the extreme fire behavior associated with the South Canyon Fire was normal given the prevailing fire environment conditions (Butler et al. 1998). The South Canyon Fire, coupled with the deaths of 20 additional firefighters during the 1994 fire season, probably more than any event finally brought to light the role that “human factors” or the people dimension play in firefighter fatalities. Some of the human factor issues surrounding the South Canyon Fire were documented in a book by John Maclean (1999).
Less than a year after the South Canyon Fire the USDA Forest Service’s Missoula Technology and Development Center (MTDC) hosted a 5-day “Wildland Firefighters Human Factors Workshop” in Missoula, Montana (Putnam 1995). The theme of the workshop was “Improving Wildland Firefighter Performance Under Stressful, Risky Conditions: Towards Better Decisions on the Fire and More Resilient Organizations”. This workshop explored firefighter psychology, interactions among firefighters and among fire crews, and better ways to organize firefighters.

After several days of discussions and a field trip to the scene of the 1949 Mann Gulch Fire, the workshop participants developed a series of recommendations for beginning to implement changes that would improve fire organizations and firefighter safety. A copy of the workshop report/proceedings (Putnam 1995) is included within these proceedings; the publication can also be downloaded from the USDA Forest Service’s Technology and Development Program website (http://www.fs.fed.us/eng/t-d.php) -- after requesting and subsequently receiving your user name and password go to "T&D Pubs", then "Fire" and then scroll down to Putnam (1995).

Human factors and wildland firefighting are not new subjects. For example, Kowski and Walker (1953) discussed the importance of effective leadership to safe and productive fire suppression more than 50 years. What is new is the acceptance and growing recognition of the importance of human factors to ensuring the safety of wildland firefighters rather than just blaming a fatality fire on Mother Nature.
Scene from the field trip to site of the 1949 Mann Gulch Fire in northwestern Montana on June 14, 1995, associated with the original Wildland Firefighters Human Factors Workshop (from Putnam 1995). The workshop organizer, Ted Putnam is located at centre (seated) and the workshop moderator, Dave Thomas is located on the left. The person to the right is Dave Turner, who served as local guide/interpreter during the field trip.
Current IAWF President Dick Mangan, who was the MTDC Fire Program leader at the time of the original 1995 Wildland Firefighters Human Factors Workshop, has pointed out that “The Workshop, and its resulting Proceedings, were not only well received by the fire community, but became the benchmark for all other efforts looking at the Human Dimension of fighting wildland fires” (Mangan 2004). Following the 7th International Wildland Fire Safety Summit in Toronto, the newly elected IAWF President suggested that it would be appropriate to mark the occasion of the tenth anniversary of the original 1995 Missoula workshop by featuring the theme “Human Factors Ten Years Later” for the 8th International Wildland Fire Safety Summit in 2005 and to also hold it again in Missoula. The IAWF Board of Directors conceded that this was indeed appropriate for a “… professional association representing members of the global wildland fire community” whose purpose it is “… to facilitate communication and provide leadership for the wildland fire community”.

As Mangan (2004) has also pointed out in the preliminary conference notice, the 2005 summit will provide an opportunity to “… look at progress that has been made over the past 10 years, and develop a course of action that will incorporate the concepts of “Human Factors in Wildland Firefighting” into the wildfire culture around the world well into the 21st Century”.

This year’s summit is a continuation of IAWF’s efforts in aiding communication concerning wildland fire safety issues since the first summit was held in Rossland, British Columbia, Canada, back in 1997. As presented in the conference program, the 8th International Wildland Fire Safety Summit featured some 28 oral presentations and 19 poster presentations covering topics pertaining to the culture of wildland firefighting, the role of leadership in wildland firefighting, the physiological and sociological aspects of wildland firefighting, liability and legal implications, recent initiatives, best practices, and new tools and technology for wildland firefighting. Invited presentations from Dr. Karl Weick, Dr. Ted Putnam, Dave Thomas and Attorney Mike Johns provided conference attendees with a broad perspective of the many facets of wildland fire and human factors.

Undoubtedly one of the highlights of the summit will be Author John N. Maclean’s banquet presentation taking about change or the lack of it since the 1994 South Canyon Fire. The interactive panel discussion led by Mike DeGrosky will provide the opportunity for the conference attendees to voice their opinions and help to formulate a set of recommendations for the future as they are asked to comment on the following:

- What is the single most pressing human factors issue facing wildland fire agencies today?
- What needs to be done to address this issue?
- Who needs to act (e.g., USFS Washington Office, NWCG—Safety & Health Working Team)?

These proceedings contain the papers as submitted by the authors. Except for some editing to try and instill a common format, these papers are as submitted by the authors and have not gone under any peer-review by the IAWF other than undertaken by the authors themselves prior to submittal. As stated previously, we have attempted to include
as complete a collection as possible of records from previous safety summits. As with any written document of this length and complexity we acknowledge that errors will exist, we have attempted to keep the manuscripts as close as possible to the original form submitted by the authors while formatting within a general set of guidelines. We apologize ahead of time for any errors that may be due to our negligence. We did have problems with some of the files from the 2002 safety summit. As a result not all of the papers can be accessed through this document. We apologize to the authors of those papers, but due to time constraints were not able to secure uncorrupted files.

In closing we would like to acknowledge the following individuals and organizations who contributed to the success of this summit. Five scholarships of $100 each were provided by The National Center for Landscape Fire Analysis to assist with registration costs for five applicants. Additional financial support was provided by The National Center for Landscape Fire Analysis, the National Fire Protection Association, The Northern Rockies Coordinating Group and the National Wildfire Coordinating Group-Safety and Health Working Team. Special thanks go to those who served on the Steering Committee and support group for the 8th International Wildland Fire Safety Summit: they include Dick Mangan (Chair), Wayne Cook, Colleen Finneman, Michelle Ekstrom, Diane Trehewey, Dan Jimenez, Ian Grob, Paul Sopko, Bill Gabbert, Howard Dupuis, Mike DeGrosky, Leslie Anderson, Rick Gale, Mike Apicello, Don Sari and Jim Tidwell. International supporters included Keith Harrap, Tony Blanks, and Domingos Viegas. We are also grateful for the willingness of Kathy McAllister, Dick Rothermel, and Tim Love to serve as session chairs and to Ted Mead of the Montana DNRC for welcoming the Eighth Safety Summit to Missoula. Appreciation is also extended to Chuck Bushey who chaired the IAWF standing committee to select the recipient of the 2005 IAWF International Wildland Fire Safety Award.

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Editors
8th International Wildland Fire Safety Summit

References