CHAPTER 1. INTRODUCTION

The purpose of this four-phase project is to identify changes needed in Federal wildland firefighting organizational culture, leadership, human factors, and accountability to improve firefighter safety over the long run. Too many wildland firefighters have died in the past decade from the same types of problems that had been seen in previous decades. It was decided by consensus of the five principal Federal agencies involved in wildland firefighting - the USDA Forest Service, USDI Bureau of Land Management, USDI National Park Service, USDI Bureau of Indian Affairs, and USDI Fish and Wildlife Service - that some underlying changes to the culture were needed.

Previous Phases

TriData Corporation of Arlington, Virginia and an associated team of consultants were selected to undertake this study in 1995. In Phase I, the perceptions of safety problems and potential solutions of approximately 1,000 wildland firefighters were obtained, 300 through one-on-one interviews and focus groups, and 700 through a detailed 25-page questionnaire. Phase I also included an extensive literature review on firefighter safety and on approaches used within and outside of firefighting to improve safety. [1]

With the findings of Phase I as a starting point, Phase II of the project formulated a set of 85 goals for improving wildland firefighting and defining a new organizational culture. It was based largely on the findings from the interviews and survey in Phase 1. The survey sought evaluation of 160 "solutions" that had been recommended by firefighters. The goal setting also drew on safety experts within and outside of wildland firefighting. A report detailing the goals was published in February 1997. [2]

Phase III

This report presents the results of Phase III of the project; it describes approaches to implement the goals identified in Phase II and provides further background and details on various recommendations. With 86 goals identified - one was added in Phase III - at various levels of detail, scope, and importance, there was a challenge as to what was the

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[1] *Wildland Firefighter Safety Awareness Study -Identifying the Organizational Culture, Leadership, Human Factors, and Other Issues Impacting Firefighter Safety,* October 1996.
[2] *Wildland Firefighter Safety Awareness Study - Setting New Goals for the Organizational Culture, Leadership, Human Factors, and Other Areas Impacting Firefighter Safety,* February 1997.

appropriate level of detail to discuss implementation within the time and budget of the project, and the patience of readers. The approach ultimately taken here was to propose some implementation strategies for every goal, and to go into more detail on some of the newer, more innovative and potentially more important changes to the culture. As an outside consultant, it was felt that we had more to offer by focusing on the newer ideas - the implementations that were less straightforward and less a follow-on of existing work We amplified some recommendations in even more detail in the Appendices. These cover a Center for Lessons Learned; On-the-Job Training; and Decision Skills Training.

Relation to Other Projects

This project is unique in the annals of wildland firefighting because of its systematic approach to listening to over one thousand firefighters at various levels; comprehensive, systematic thinking through of the changes needed in organizational culture, leadership, and human factors for safety; and identification of externalities that affect safety. This report represents a continuation of a body of work and ideas toward improving wildland fire fighting safety.. Most importantly, it builds on the reports that came out of the South Canyon fire in which 14 wildland firefighters were killed. It further builds on the Interagency Management Review Team report, the milestone 1995 Wildland Human Factors Workshop, the work of Ted Putnam on crew dynamics, the Snowbird Conference, the continued evolution of wildland firefighter training materials, and the extensive safety literature (which was summarized in the Phase I report Appendices).

Another unusual aspect of this project was the ability to draw on several groups of senior people over a several year period who contributed to the project from development of the Request for Proposal through intellectual contributions to the content and review of the reports. This included the five fire program directors; the members of the FF AST (Federal Fire and Aviation Safety Team), co-chaired by David Aldrich (of FS) and Paul Broyles (of NPS); a project steering committee chaired by Mark Boche (of FS); Carl Halgren (of Occupational Safety and Health Administration); and others listed in the acknowledgments. Many of these people "rolled up their sleeves" to not only review the reports and questionnaires, but also to participate themselves in extensive meetings and interviews with the members of the project team.

It was the responsibility of the contractor to pull the ideas together from various sources, make the decisions as to the overall package, and ultimately, to articulate the final recommendations.

To facilitate searching the Phase II report for the antecedent research, we kept the organization of chapters and order of goals close (but not identical) to those used in Phase II. Phase II, in turn, was consistent with the grouping of findings in Phase I. In developing an action plan for implementation, a further regrouping of recommendations by type of action might be desirable (e.g., all changes to training courses; all elements of a professional code of conduct).

Report Organization

In the Executive Summary, "pillars of wisdom" (or principles) are identified upon which to base much of the change needed in organizational culture.3 In the remainder of the report, each of the 86 recommended goals is described in detail, with implementation strategies (i.e. recommendations) for each. There are over 200 implementation strategies in total. Some implementation strategies apply to more than one goal. Rather than be pedantic, we cross-referenced from one goal to another where that was appropriate instead of repeating the discussion of an implementation strategy in toto.

The body of this report follows the same general organization used in the Phase I and Phase II reports. After a discussion of Methodology (Chapter 2), separate chapters address implementation strategies for goals dealing with Organizational Culture (Chapter 3), Leadership (Chapter 4), Human Factors (Chapter 5), and External Influences (Chapter 6).

For each goal in Chapters 3-6 there is at least some brief background information on the issue, and one or more implementation recommendations for reaching the goal.. In several cases, additional background or ideas for implementation of a goal are discussed in much more detail in an appendix. We did not repeat here all of the information in the Phase I and II reports, and their Appendices. They are still important reports to read to understand the motivation for the goals here.

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3 With apologies to T.E. Lawrence, the famous Lawrence of Arabia, who wrote a book by that name.

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