

United States
Department of
Agriculture

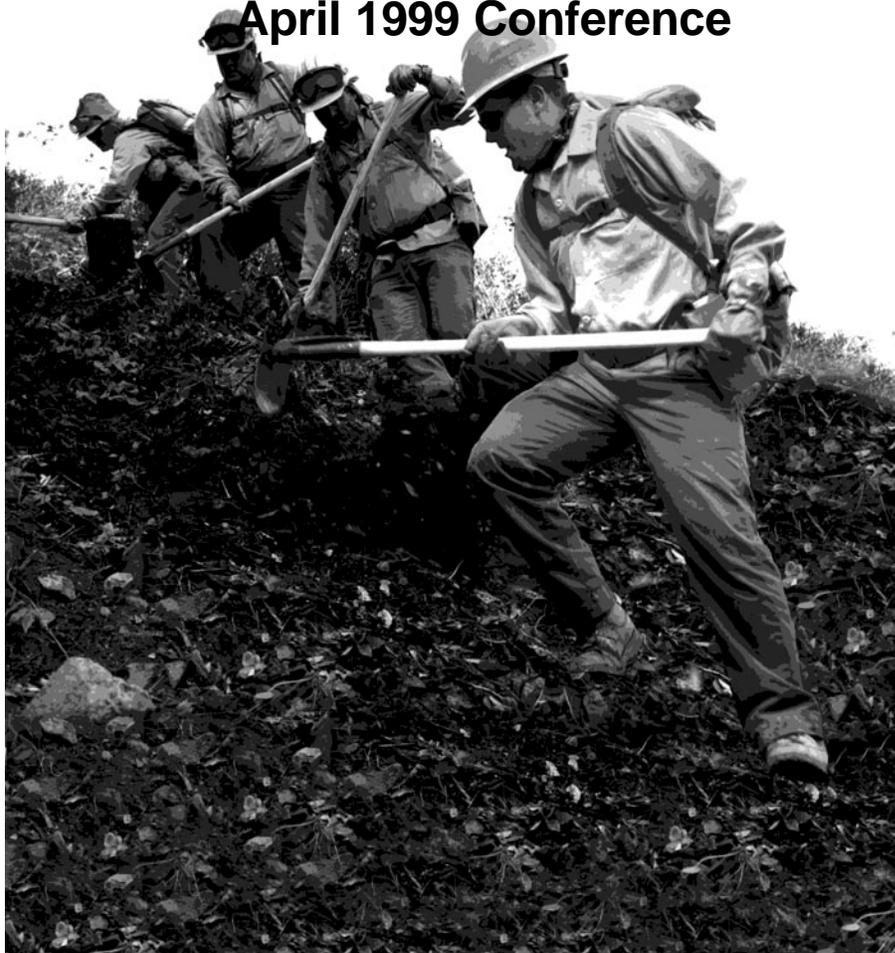
Forest Service

**Technology &
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Program**

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Wildland Firefighter Health and Safety Recommendations of the April 1999 Conference

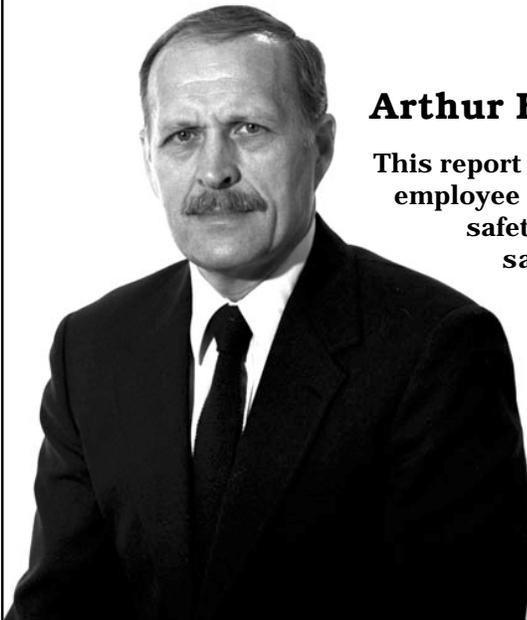


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Missoula, Montana**

9E92P47—Wildland Firefighter Health and Safety

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Dedication

Arthur H. Jukkala 3/30/35–7/12/99

This report is dedicated to the memory of Arthur H. Jukkala, an MTDC employee who spent his career working to improve the health and safety of wildland firefighters. As program leader for the fire and safety and health programs, he was responsible for the development of uniforms, personal protective equipment, tools, nutrition, hydration, fitness, employee health, and other health and safety projects. After his retirement in 1990 he served as consultant on the development of the Pack Test, and was active in the Smokejumper's Association. Family, sculpting, woodworking, travel, and vigorous outdoor pursuits filled his retirement years. He came to rest in his favorite place, the Bob Marshall Wilderness, while leading a volunteer trail crew composed of exsmokejumpers.

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Introduction



Wildland firefighting is arduous work, performed for long shifts in difficult environmental conditions. The work can be dangerous, due to the fire and the working conditions. Heat, smoke, rolling rocks, falling snags, and other hazards threaten the worker. Those hazards include mountain travel, sharp tools, heavy loads, and aerial operations. Fatigue can impair performance and decision making, increasing the risk of injuries. Prolonged exposure to fatigue, stress, smoke, and poor nutrition has the potential to increase the incidence of upper respiratory illness and other illnesses.

Since the 1960's, the Missoula Technology and Development Center (MTDC) has been involved in projects related to the health and safety of wildland firefighters. Past work has involved field studies of the metabolic, cardiovascular, and thermal strain associated with the work, uniforms, heat stress, hydration, nutrition, work/rest cycles, smoke, and other factors related to firefighter safety, health, and performance. MTDC has developed two

generations of work capacity tests and training programs for firefighters, and employee health (wellness) programs for agency employees.

The National Wildfire Coordinating Group (NWCG) coordinates wildfire activities among federal and State agencies throughout the United States. Its Safety and Health Working Team (SHWT) oversees the safety and health of wildland firefighters. On April 27 to 29, 1999, the SHWT and MTDC cosponsored a national conference to explore ways to enhance the health and safety of wildland firefighters. The conference, held in Missoula, featured invited speakers, panel discussions, and open forums designed to identify and discuss current and emerging issues. Based on the presentations and discussions, conference participants met in working groups to develop recommendations. The recommendations are intended for immediate implementation, for field evaluation, or for future research and development. This report includes the papers presented at the conference, and the recommendations of the conference participants.