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The Biswell Symposium: Fire Issues and Solutions in Urban Interface and Wildland Ecosystems

February 15-17, 1994

Walnut Creek, California



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These proceedings summarize the results of a symposium designed to address current issues about wildfire and prescribed fire in both the wildland-urban interface and in wildlands. Thirty-eight invited oral papers and 23 poster papers describing the issues and state-of-the-art solutions to technical, biological, and social challenges currently facing land and fire managers were presented at The Biswell Symposium held February 15-17, 1994, in Walnut Creek, California.

Retrieval Terms: community response, ecosystem management, fire ecology, fire management, fuel management, prescribed burning

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In Brief...

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Fire has been and continues to be both a threat and benefit to humans and ecosystems. Recent large or costly fires have occurred in both the wildland-urban interface and in the wildlands. These phenomena are not new events but merely recurrences of long-standing challenges. The values at risk include, but are not limited to, human life and property, rare or unique cultural and natural resources, and ecosystem health. Much progress has been made during the past several decades regarding fire's role in wildland systems, but many issues still remain to be resolved.

This volume presents the proceedings of the symposium, "Fire Issues and Solutions in Urban Interface and Wildland Ecosystems" held February 15-17, 1994 in Walnut Creek, California. The primary objective of the symposium was to describe fire issues and problems currently facing land managers and to present state of the art solutions that are currently being implemented by local, State, and Federal organizations concerned with fire management. The focal point of the symposium was the 1991 Oakland/Berkeley Hills "Tunnel Fire"; however, the issues and solutions described are certainly regional and national in scope.

Several key issues regarding the role of fire in wildlands and in the urban interface include social barriers, fire safety, fuel management, legal barriers, multiple jurisdictions,

program cost and benefits, wildland health, conflicts between wildland resources and residential structures, air quality, and liability. Social barriers include lack of general knowledge of fire's role, as well as recognition of its hazards and benefits. Legal barriers include laws, ordinances, and regulations that either restrict fire use or do not provide incentives for fire use. Implementing fire use on an ecosystem level requires cooperation between neighbors. The safety of structures built in urban interface settings or adjacent to wildland boundaries is an issue the owner faces; the liability associated with destruction by wildland fire is an issue that land managers face.

Because of the complexity of the issues regarding fire and its use, many different solutions have been developed. Researchers have identified social barriers and concerns that hinder adoption of fire safe practices by the general public. Educational efforts to prevent the public from forgetting the losses associated with catastrophic wildfires have been developed. Legal solutions to fuel management and fire hazard reduction have been developed in California and Florida to address liability issues. Community and neighborhood-based associations have developed to promote fire-safe wildland-urban interfaces. Interagency agreements were developed to apply prescribed fire at ecosystem levels to mutual benefit. Environmentally safe fire suppression techniques have also been developed.

Many proactive approaches to solving these and other fire issues were presented at the symposium. It is our hope that the symposium attendees as well as readers of these proceedings benefit from the array of topics discussed, and that the information gained from the technical sessions and this proceedings provides a starting point to solving local fire issues. This symposium presents a snapshot of the continually evolving dialogue about fire and its role as a shaper of ecosystems.

Preface

Fire has been and continues to be both a threat and benefit to humans and ecosystems. Recent large or costly fires have occurred in both the wildland-urban interface and in the wildlands. These phenomena are not new events but merely recurrences of long-standing challenges. The values at risk include, but are not limited to, human life and property, rare or unique cultural and natural resources, and ecosystem health. Much progress has been made during the past several decades regarding the recognition of fire's role in wildland systems, but many issues still remain to be resolved.

Dr. Harold "Doc" Biswell was a pioneering advocate for the study of the ecological role of fire, for the use of prescribed fire in land management, and for fuels management. He worked to reduce fire hazard in urban-wildland interface areas and lived to see one of his most dire predictions come true in the Oakland/Berkeley Hills "Tunnel Fire" of October 1991. A conference to honor Dr. Harold H. Biswell was proposed shortly after his death in January 1992. This symposium was organized to honor Dr. Biswell by addressing wildland and urban-wildland fire issues and solutions—subjects dear to his heart. We dedicate this symposium and proceedings to the memory of Dr. Harold Biswell.

Approximately 350 managers, researchers, planners, former students of Dr. Biswell and other individuals attended the symposium in Walnut Creek, California. Because the wildland and structural fire communities were equally represented in attendance, the goal to bring both groups together in a common forum was accomplished. The symposium consisted of two and one-half days of technical presentations, a one-half day field trip touring the 1991 Oakland/Berkeley Hills "Tunnel Fire," a poster session, and an evening session dedicated to Dr. Biswell's life and legacies led by Dr. James K. Agee. The technical presentations were structured around issues/problems and solutions in both wildland and urban interface ecosystems. The major topics were developed by a Steering Committee representing Federal, State, and local agencies, and university and non-governmental organizations. Speakers were selected to address the major topics. Each technical session was chaired by a moderator and included the following topics:

- History, safety, and legal and social barriers to prescribed fire (moderator—Sue Husari, USDA Forest Service)
- Wildland topics including funding of fire programs, ecosystem management, and prescribed fire (moderator—Tom Nichols, USDI National Park Service)
- Urban-wildland interface topics including use of foams, neighborhood action groups, and fire safety (moderator—Steve Bakken, California Department of Parks and Recreation)
- Legislation and ecosystem management solutions (moderators—Bruce Kilgore, USDI National Park Service; Carol Rice, Wildland Resource Management, Inc.).

The technical sessions included expert panel discussions. In addition to the session moderators, the panel moderators included Dr. Ron Wakimoto, University of Montana; Chief Neil Honeycutt, California Office of Emergency Services; and Chief Rich Aronsen (retired), California Office of Emergency Services.

In addition to the technical sessions, the conference featured a keynote speech by Chief Lamont Ewell, Oakland Fire Department, describing the 1991 Oakland/Berkeley Hills "Tunnel Fire" and a banquet with a memorial dedication to Dr. Biswell by Dr. James Agee, University of Washington. The symposium concluded with a summary of the events and issues by Robert Mutch, USDA Forest Service (retired).

Acknowledgments

A conference and proceedings of this size require a great deal of effort from many individuals. We thank the members of the Symposium Steering Committee—Rich Aronsen, Steve Bakken, Todd Bruce, Neil Honeycutt, Sue Husari, Ken Nehoda, Tom Nichols, Carol Rice, Joe Rubini—for putting together a dynamic and interesting symposium agenda. The Steering Committee was organized using the Incident Command System as the basic organizational framework. Robert Martin initiated the idea for the conference, organized the Steering Committee and served as Incident Commander (Symposium Chair); Carol Rice (Operations) was assisted by Ken Nehoda; Joe Rubini (Logistics) was assisted by Neil Honeycutt and Todd Bruce; Sue Husari (Finance) was assisted by Tom Nichols and Steve Bakken; and David Weise (Planning) was assisted by Rich Aronsen. The efforts of Sandy Cooper and Bruce Winner, University Extension - University of California, Davis, were key to providing the logistical support of program materials, registration, hotel negotiations, bus negotiations, and other activities too numerous to mention. Joe Rubini and Neil Honeycutt with the assistance of University of California, Berkeley graduate students David Sapsis, Scott Stephens, Robert Schroeder, and Maria Gutierrez developed an informative tour of the 1991 "Tunnel Fire" and fuel management activities in the Oakland/Berkeley Hills.

We further acknowledge the efforts of Eugene Hanson and Bonnie Corcoran, Prescribed Fire Research Unit located at the Forest Fire Laboratory in Riverside, California in assembling the proceedings, and the editorial and graphics assistance of Sandy Young, Laurie Dunn, Kathy Stewart, and Robert Robinson of the Station's Research Information Services. Thanks to all the authors during the long process of manuscript preparation, editing, and production. Lastly, we acknowledge the support provided by the following sponsors: University of California at Berkeley; Bay Area Wildfire Forum; City of Oakland; East Bay Regional Parks; California Departments of Forestry and Fire Protection, Parks and Recreation, Emergency Services, and the Fire Marshall's Office; USDI National Park Service; USDA Forest Service, Region 5; USDA Forest Service, Pacific Southwest Research Station; and the Society of American Foresters.