MANAGING FIRE
IN THE URBAN WILDLAND INTERFACE

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Before you rely on the information in this book, be sure you are aware that some changes in the statutes or case law may have gone into effect since the date of publication. The book, moreover, provides general information about the law. Readers should consult their own attorneys before relying on representations found herein.

A STRATEGIC GUIDE—
with Tools for Local
Government • Planners •
Developers • Property
Owners • Fire Authorities

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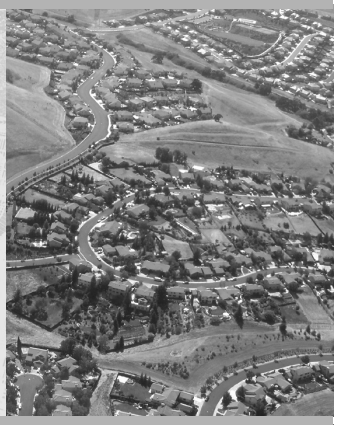

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Cheryl Miller
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by Kenneth Blonski, Cheryl
Miller, and Carol L. Rice

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N O T I C E

This book is designed to assist you in
understanding fire management law
and practice. It is necessarily general
in nature and does not discuss all exceptions
and variations to general rules. Also, it may
not reflect the latest changes in the law.
It is not intended as legal advice and should
not be relied on to address legal problems.
You should always consult an attorney for
advice regarding your specific factual situation.

Dedication

This book is dedicated to the memory of Battalion Chief John Eliff, California Department of Forestry and Fire Protection. John's passion for fire safety inspired our community and his peers to embrace the need for planning and practical implementation.

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Preface

Fire is a natural, reoccurring event in many wildland ecosystems. As a natural event, wildfire is not necessarily a disaster. When wildfire interacts with the human-made vulnerabilities at the edge of an urban area, however, it can result in catastrophe. Where human settlement has created communities that adjoin wildland areas, it is critical to recognize the force of fire and act to minimize the potential damage before a fire begins.

Land use decisions, building codes and standards, fuel management, and preparedness all influence a community's vulnerability. A fire's impact on human life, property, and natural resources can depend on whether the community is primarily residential or institutional and whether it adjoins a watershed, open space, or park lands. The types of structures and vegetation associated with human habitation can help determine the extent of damage from fire. Reduction of these vulnerabilities is a community-wide, multi-disciplined responsibility that is most effective when coordinated regionally.

Goals of This Book

Managing Fire in the Urban Wildland Interface is intended to increase the reader's understanding of the fire problem in the UWI and to present strategies and practical solutions that can be customized for a specific community's fire threats. Designed as a reference, the book is laden with constructive examples and leading questions. It provides information on codes and laws, and includes case studies as well as tables, suggested websites, and other source material.

The goal is to present strategies and practical solutions that foster a respectful relationship to fire. Achieving this vision requires proactive strategies that focus on prevention and mitigation actions that reinforce one another. Ideally, periodic wildland fires should be able to burn through a

community without burning out the residents, destroying homes, or causing undue damage to the environment. This requires actions within the community and also in the natural environment so that both urban and wildland areas bear the burden of eliminating possible catastrophic fire.

Throughout the book we express a belief in the strength of shared responsibility and community-wide planning, as well as the need to identify issues and develop solutions collaboratively. Its goal is to be equally useful to individuals who want to reduce the threat of fire around their homes, resource managers developing a vegetation management program, or consultants writing a fire management plan for a new subdivision.

The examples draw heavily on our experiences with UWI fire in California. Many of the best practices are specific to the state's environmental conditions, legal system, land planning processes, and local attitudes. Across the nation, however, UWI fire threats may be similar, with solutions more alike than different and community values reflective of collective concerns. That said, individual communities–even if separated by only a city limit–will need to customize their approach to address their unique set of threats and develop acceptable solutions within their own legal, political, and social framework. The authors also recognize the critical value of the individual landowner and the importance of managing land in collaboration with public agencies, nonprofit organizations, and others. The book will help the reader understand various approaches that have worked successfully and how these ideas might be tailored to a specific community or fire threat.

How the Book Is Organized

The book is divided into four parts that describe a sequential process:

- Part One presents an overview of the threat and key elements of UWI fire
- Part Two describes a range of threat assessment methods and illustrates the process of customizing solutions for local circumstances
- Part Three sets forth practical solutions and best practices
- Part Four focuses on strategies to overcome implementation challenges

For those who are beginning a planning process, sequential steps are presented that will help develop a collaborative community-wide program to address UWI fire threats.

Who Can Benefit?

Managing Fire in the Urban Wildland Interface is meant to meet the needs of professionals, interested lay-people, and advocates for community fire safety and fire use. We believe that a wide breadth of disciplines should be

involved in reducing the threat from UWI fire. Until now, too few people and too few disciplines have offered their expertise and perspectives in important planning and implementation needed for fire-safe communities. This book attempts to bridge the gap between disciplines for better communication and fire safety outcomes. People who will benefit might include any or all of the following:

- State and federal agency staff
- City, county, or regional planners, as well as planning commissioners or members of a design review board active in community planning or resource planning who are updating a general plan, preparing a land management plan, developing a specific plan, involved in a CEQA or NEPA environmental review process, or reviewing new construction
- Developers, land planners, architects, or landscape architects involved in pre-planning or project-specific design for new developments
- Code officials reviewing those plans
- Individual property owners or homeowners building a new home or who have existing homes they want to renovate or better maintain
- Fire protection engineers interested in threat assessment and best management practices
- Fire chiefs, fire marshals, and fire prevention and emergency services officers responsible for community safety at an operations level
- Elected officials or their staff members who want a better understanding of wildland fire, stakeholder interests, and potential community-based solutions
- Attorneys interested in best practices, legislation, policies, laws, codes, and standards that guide UWI fire planning
- Land managers and policymakers (managers of open space, parks, or watersheds or other large landowners, etc.) responsible for managing wildlands or siting new facilities or uses
- Insurance company management interested in reducing exposure to loss from UWI fires
- Business and community leaders

Should You Read This Book?

Managing Fire in the Urban Wildland Interface may be useful if:

- A catastrophic fire in your community provides an opportunity for new codes and practices for rebuilding structures and infrastructure
- You are proposing a new development
- Your community is concerned and has a new perception of fire threat due to fires elsewhere

- You are developing land management plans such as a general plan, specific plan, resource management plans, project-specific plans, or the safety element of a general plan
- A new development is planned near your existing community
- You are new to the area and want to know if wildland fire is an issue for you and your home
- Your fire management/mitigation plan is highly contested and you need to salvage at least part of it to get back on track
- Someone made you do it:
  - You are required to complete a Fuels Management Plan as a condition of approval for a new development
  - To receive funding, you must identify fuel reduction projects and gain approvals for a plan created by a collaborative planning process, such as a Community Wildfire Protection Plan
  - Your city wants to comply with an existing law such as the Disaster Mitigation Act 2000 (DMA 2000) to maintain eligibility for funds from the Federal Emergency Management Agency

Unique Features

While many of the strategies and practical solutions discussed here are not new, the book presents a number of unique features. Readers will find useful summaries and analytical tools not found in other references dealing with UWI fire mitigation, including:

- A comparison of the many threat assessments to help find the method most appropriate for a particular setting, available data, resources, and vulnerabilities; chapters 5 and 6 describe how to choose the right method from various assessment methods that already exist
- Components of a successful collaboration; chapter 8 identifies the two phases necessary to achieve long-term solutions and offers tips to achieve the most effective process
- Ways to further reduce the potential impact of UWI fire by stretching the roles of key community members in responding to the cycle of loss; chapter 8 shows how to develop support for solutions at every level during each of the four stages in the cycle of loss
- Four separate categories of tools that can be used to reduce various elements of threat: awareness, policy planning, community design, and response; chapter 9 summarizes the tools available and describes the potential for various levels (individuals and community, regional, state, and national entities) to participate in making a community more resistant to wildland fire
- Best practices with practical solutions that can be directly applied to projects; Part Three (chapters 10 through 19) is devoted to best

practices, with each chapter not only explaining issues, goals, and objectives, but also when the practices are most helpful, potential alternatives, and issues related to adoption and sustainability

- Strategies for implementation and ways to overcome common challenges; Part Four (chapters 20 through 24) addresses issues such as vested interests, environmental challenges, biomass, behavior change, and funding
- Fuel mitigation projects and potential environmental impact; chapter 21 provides a quick checklist
- Key characteristics of different common funding strategies; chapter 24 presents various funding strategies, including "Funding Mechanisms at a Glance"
- Details the six most commonly used techniques for wildland fuel management; Appendix B describes these techniques, which encompass hand labor, mechanical treatments, tree removal, prescribed burning, grazing, and chemical treatment

Keys to Success

Managing Fire in the Urban Wildland Interface lays out proactive mitigation strategies for achieving community-wide protection. Success hinges on a number of key factors. First, strategies have to be accepted not only at a personal level, but throughout the community, and that takes more than a few homeowners, land managers, or government officials. Secondly, the community must develop both the desire and ability to manage the inherent wildfire risk to its community and adjacent wildlands.

- Dialogue to change the traditional ways of addressing fire and its increasing risk must be fostered. This means discussing issues such as expectations for the future of adjacent wildlands and the health of that environment. Does the community want a natural fire regime? Can it accept the attendant disturbance, potential risk of damage to life and property, and a change of aesthetic?
- Aesthetics of urban sections of the community must be examined, including preferences for wood structures, dense vegetation, or narrow roads. Can the aesthetics be met by methods that also increase structure survivability and reduce landscape flammability?
- Private property rights versus established codes and rules as well as the desire to develop fire protection plans and requirements must be addressed. Is the community willing to establish new standards to reduce fire hazards that can be enforced on private land?
- Cost and the issues associated with implementation of mitigation measures should be reviewed. Is the community willing to help finance additional mitigation on public land? Can it provide new financial

aid for those on a fixed income to reduce hazardous vegetation on private property?

Finally, in the end, the actual actions a community undertakes to reduce fuels and make structures more survivable are what is most crucial in being able to live more compatibly with the risk of fire.

About the Authors

The authors of *Managing Fire in the Wildland Interface* offer expertise in a wide range of subject matters spanning from fire suppression, natural resource management, fire science, urban planning, landscape architecture, policy planning, with experience in both the private and public sector. They have delivered technical papers and presentations, both jointly and as individuals, to various audiences including local neighborhoods, the League of Cities, American Planning Association, National Fire Prevention Association, and the International Association of Fire Chiefs. It is the combination of these disciplines that make this book unique.

Kenneth Blonski is a Fire Chief with the East Bay Regional Park District responsible for fire management in more than 65 parks and 100,000 acres in the urban wildland interface. As a career U.S. Forest Service employee he served on the Redding Hot Shot Crew, as Fuels Management Officer on the Plumas and Lassen National Forests, Pacific Southwest Regional Fire Suppression Coordinator, Fire Planner for the region, Type I Operations Section Chief, and finally as Deputy Director Fire Management. He joined the University of California Extension to create a program that addresses urban wildland fire issues and has served on the Board of the California Fire Safe Council and the Advisory Council of the Bay Area Air Quality Management District.

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