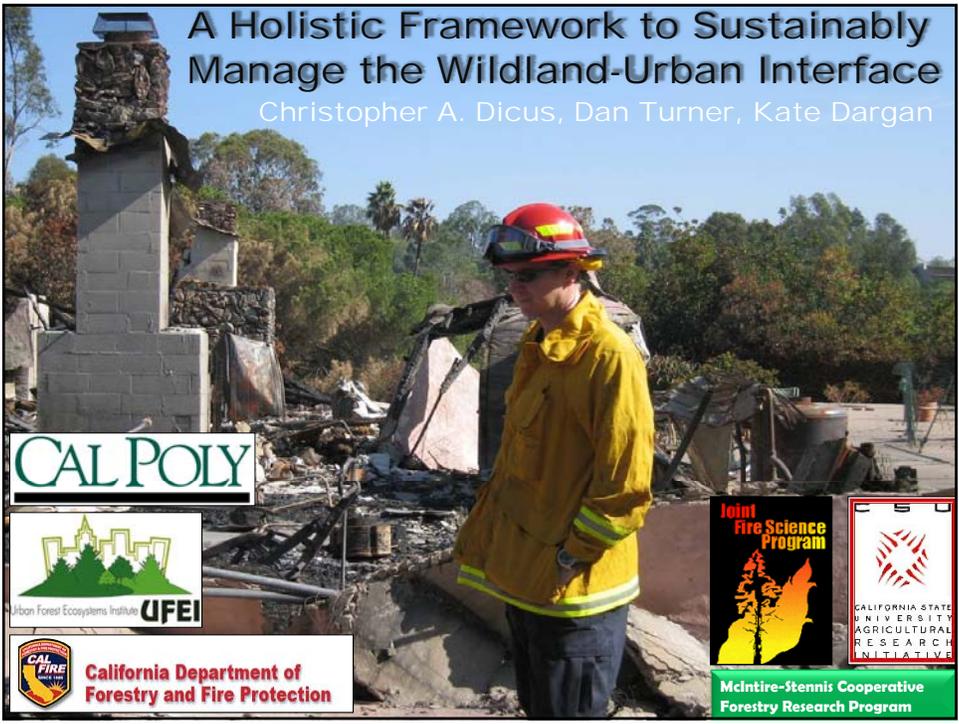


A Holistic Framework to Sustainably Manage the Wildland-Urban Interface

Christopher A. Dicus, Dan Turner, Kate Dargan



CAL POLY

Urban Forest Ecosystems Institute **UFEI**

CAL FIRE California Department of Forestry and Fire Protection

Joint Fire Science Program

McIntire-Stennis Cooperative Forestry Research Program

CALIFORNIA STATE UNIVERSITY AGRICULTURAL RESEARCH INITIATIVE

California dreamin'...

- Build it and they will come



California dreamin'...

- Build it and they will burn (2003)



Never
Again!!!

This slide features a satellite-style map of California with numerous red dots indicating fire locations in 2003. The text 'California dreamin'...' is at the top in yellow, followed by a bullet point '• Build it and they will burn (2003)' where 'burn' is underlined. The phrase 'Never Again!!!' is written in white on the left side of the map.

California dreamin'...

- Build it and they will burn (2007)



Never
Again!!!

This slide features a satellite-style map of California with numerous red dots indicating fire locations in 2007. The text 'California dreamin'...' is at the top in yellow, followed by a bullet point '• Build it and they will burn (2007)' where 'burn' is underlined. The phrase 'Never Again!!!' is written in white on the left side of the map.



Santa Barbara (May 2009)



WUI: An insurmountable task???



Need holistic approach

After Black Saturday 2009



Must consider

- Biophysical
- Sociopolitical

- Before the fire

- Prevention
- Mitigation
- Preparation

- During the fire

- ~~Response~~
 - Agencies
 - Residents

- After the fire

- Recovery
 - Biophysical
 - Socioeconomic



We must
prepare the
battlefield!!!



Prevention (Biophysical)

Arroyo Grande, CA 2009



Cause of 2 fires at Cal Poly

- Power line design and placement
 - Lights almost went out in SD County
- Spark arrestors
- Campfire ring design and placement

Prevention (Sociopolitical)



Erected AFTER 2009 bushfires



Scripps Ranch, CA

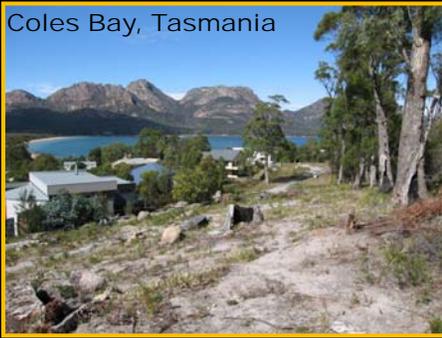
- Education
- No-burn days
- Arson and accident deterrents



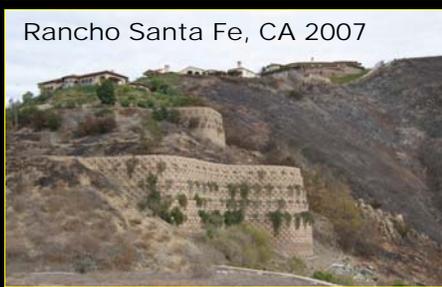
King Lake, Victoria, Australia

Mitigation (Biophysical)

Coles Bay, Tasmania



Rancho Santa Fe, CA 2007



- Fuels Management
 - Wildland
 - LANDSCAPING
- Construction Materials & Assembly
 - Radiant heat
 - Embers
- Setbacks

Mitigation (Sociopolitical)

My home in Hobart, Tasmania



- Land-use planning
- Incentives for community
- Code Enforcement



Roads scary on a good day



Cliff Hunter, Rancho Santa Fe FD

Preparation (Biophysical)



Pismo Beach, CA



"Non-combustible" water tanks (Marysville, VIC)

- Early fire detection
- Appropriate types and levels of suppression infrastructure
 - Water, engines, etc.
- Localized maps/data for non-local responders

Preparation (Sociopolitical)



"Firey" Women, South Australia



WUI Drill, Atascadero, CA

- Training
 - Agencies
 - Residents
- Mutual aid in place
- Insurance acquired

Response (Biophysical)



Successful defense by 76-year-old



Qualcomm Park 2007

- Agency tactics and strategies
- Community response
 - Evacuation
 - Stay & Defend
- Sheltering of evacuees

Response (Sociopolitical)



- Public information transfer
- Agency information transfer
- Cost containment and apportionment



Recovery (Biophysical)

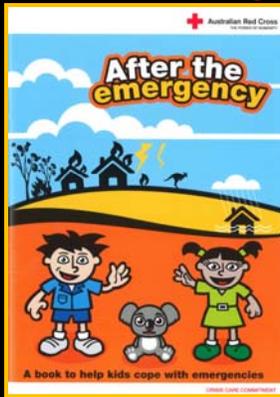


- Immediate physical needs of community
- Critical infrastructure restoration
- Secondary disaster avoidance

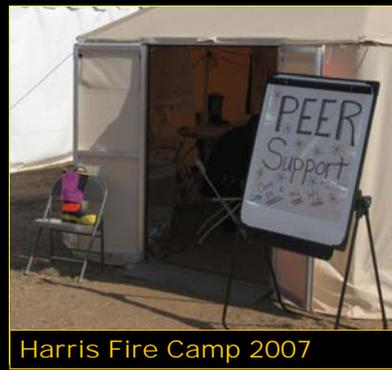
Del Zura, CA 2007

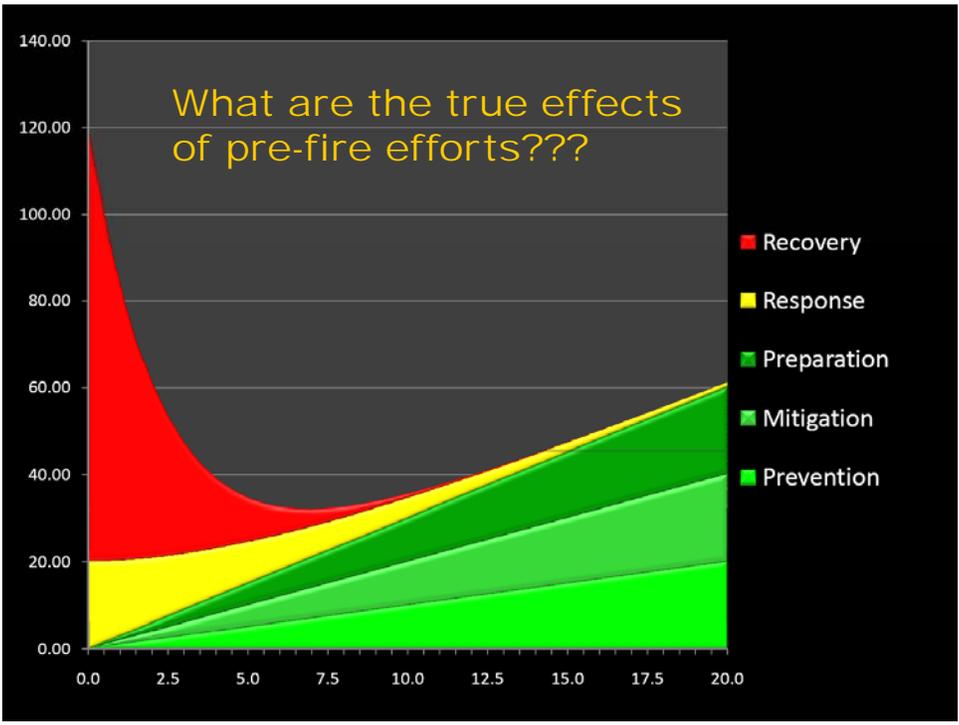
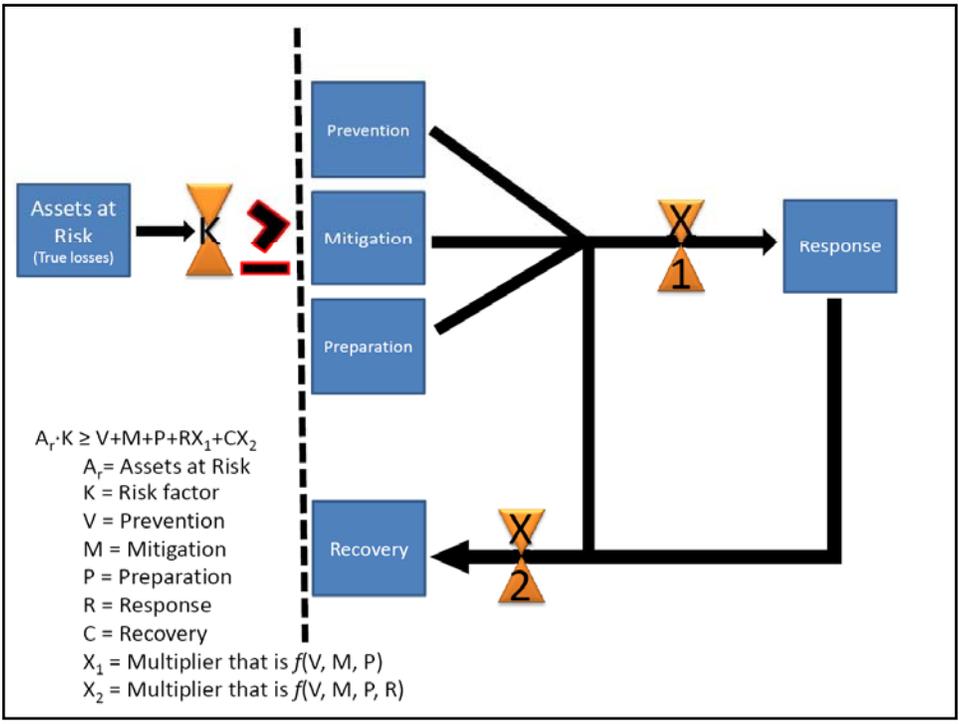


Recovery (Sociopolitical)



- Counseling services
 - Residents
 - Agencies
- Resident grants and low-cost loans
- Agency cost-recovery







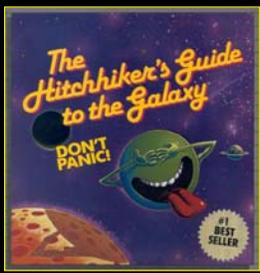
Other considerations



Interviewing Black Saturday Survivors

- One size does NOT fit all
 - Existing vs. yet-built communities
 - Demographics
- Community participation and buy-in is CRITICAL
- New approaches **MUST** be explored
- Will be losses, even if everything done right
 - Baseball no-hitter analogy

Human beings, who are almost unique in having the ability to learn from the experience of others, are also remarkable for their apparent disinclination to do so.
-- Douglas Adams, 1952 - 2001



Hobart, Tasmania 2006



We **CAN** break the cycle...
Fires are necessary, fire disasters are not.

- Biophysical critical
- Socioeconomic critical

A photograph showing the aftermath of a fire. In the foreground, there is a large, black, charred tree trunk. In the background, a building has been destroyed, with its roof and walls collapsed. A person in a high-visibility vest is standing near the ruins. The surrounding area is filled with trees, some of which are charred and blackened.