Community Impacts and Solutions

Wildfires in the U.S.

Molly Mowery | Rocky Mountain Land Use Institute | 2012
Human Influence

Fire Exclusion and Ignition Sources
Early Wildfire Disasters

Wallace, Idaho

National forest

Photo credit: firedaily.com

Photo credit: "The Big Burn," Timothy Egan
80 Years in a Pine Forest

Long Term Fuel Buildup
Ecosystem Benefits

- Fire is an essential, natural process:
  - Replenishes soil nutrients
  - Removes dead and dying vegetation
  - Encourages healthy re-growth
Prescribed Burning

Photo credit: US Forest Service
Unintended Disasters
Ignition Sources
By the Numbers

Lightning Fires
- 10,249 fires (2011)
- 3.4 million acres/
- 1.4 million hectares

Human Fires
- 63,877 fires (2011)
- 5.4 million acres/
- 2.2 million hectares

Source: National Interagency Fire Center; www.nifc.gov/fireinfo/fireinfo_stats_lightning.html
U.S. Population Change

1980–1990

1990–2000

2000–2010

Wildland-Urban Interface
Why We Should Care

Threats to Community Sustainability
Wildfire disasters in U.S. over $1 Billion in past decade

- 2011: Texas, New Mexico, Arizona Wildfires; over $1.0 billion in total damages/costs; drought and extreme heat caused several historic wildfires across Texas, New Mexico and Arizona; over 3 million acres burned in Texas; 5 deaths
- 2009: Western Wildfires; over $1.0 billion in damages/costs (including annual fire suppression costs); 10 deaths
- 2008: US Wildfires; $2.0 billion in damage/costs; 16 deaths
- 2007: Western Wildfires; over $1.0 billion in damage/costs; at least 12 deaths
- 2006: US Wildfires; over $1.0 billion in damage/costs; 28 deaths, including 20 firefighters
- 2003: Southern California Wildfires; over $2.5 billion damage/costs; 22 deaths
- 2002: Western Wildfires; $2.0 billion in damages/costs; 21 deaths

Source: National Climatic Data Center
Economic Impacts

Affect Tourism, Business, Infrastructure, and Natural Resources
Social Impacts

Increased risk of wildland fire entering suburban environments threatens public health and safety

South Carolina (2009)  Photo credit: South Carolina Dept of Forestry
Social Impacts

Simultaneous ignitions overwhelms response capabilities, requires long-term recovery
Environmental Impacts

Decreases ability to manage landscapes with prescribed burning
Changing factors are increasing fire severity and extending burn seasons

- Climate change = Increased temperatures, longer wildfire seasons, droughts
- Pine Beetle = catastrophic fire conditions, increased firebrands, unhealthy forests
Human Solutions
Mitigation Opportunities
Mitigation Opportunities

Voluntary:
- Community Wildfire Protection Plans
- Education and Outreach:
  - Firewise Communities/USA® recognition program
  - Ready, Set, Go! community preparedness program

Mandatory:
- State and Local Hazard Mitigation Plans
- Building Codes
- Development Standards
- Vegetation Management Ordinances
Community Wildfire Protection Plans

Plans engage foresters, community leaders, fire officials, and the public to address:

- Community wildfire risk
- Structural ignitability
- Capacity and response
- Critical infrastructure
- Access, capacity, and response
Voluntary recognition program:

- Encourages homeowner and neighborhood activities that reduce wildfire risk
- 700+ Firewise Communities in 41 states
- Administered by NFPA
Codes & Regulations

Codes can address WUI hazard through regulation of:

- Land development & siting
- Vegetation & landscaping
- Building materials
- Access
- Water supply

Photo credit: South Carolina Division of Forestry
THANK YOU

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