



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



Photo credit: firedaily.com

National forest



Photo credit: "The Big Burn," Timothy Egan

80 Years in a Pine Forest

1909 1948 1958 1968 1979 1989



Long Term Fuel Buildup



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Ecosystem Benefits

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



Prescribed Burning

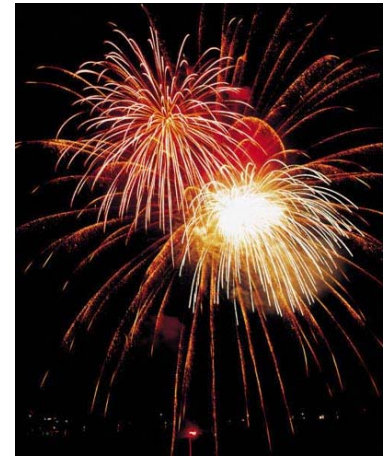


Photo credit: US Forest Service

Unintended Disasters



Ignition Sources



By the Numbers

Lightning Fires

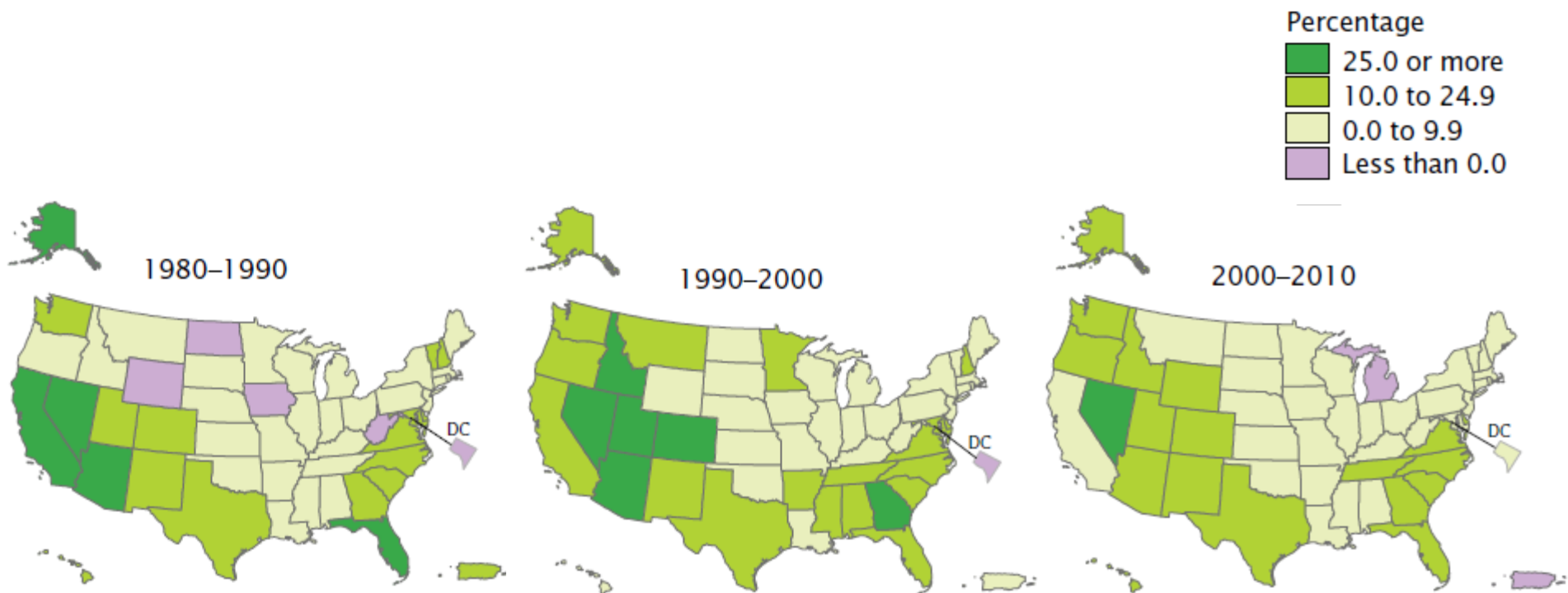
- 10,249 fires (2011)
- 3.4 million acres/
- 1.4 million hectares

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



Source: U.S. Census Bureau, 2010 Census, Census 2000, 1990 Census, and 1980 Census

Wildland-Urban Interface



Why We Should Care

Threats to Community Sustainability

Economic Impacts

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



Environmental Impacts

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



Firewise Communities/USA®

Voluntary recognition program:

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



Photo credit: Firewise Communities/USA Program

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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