

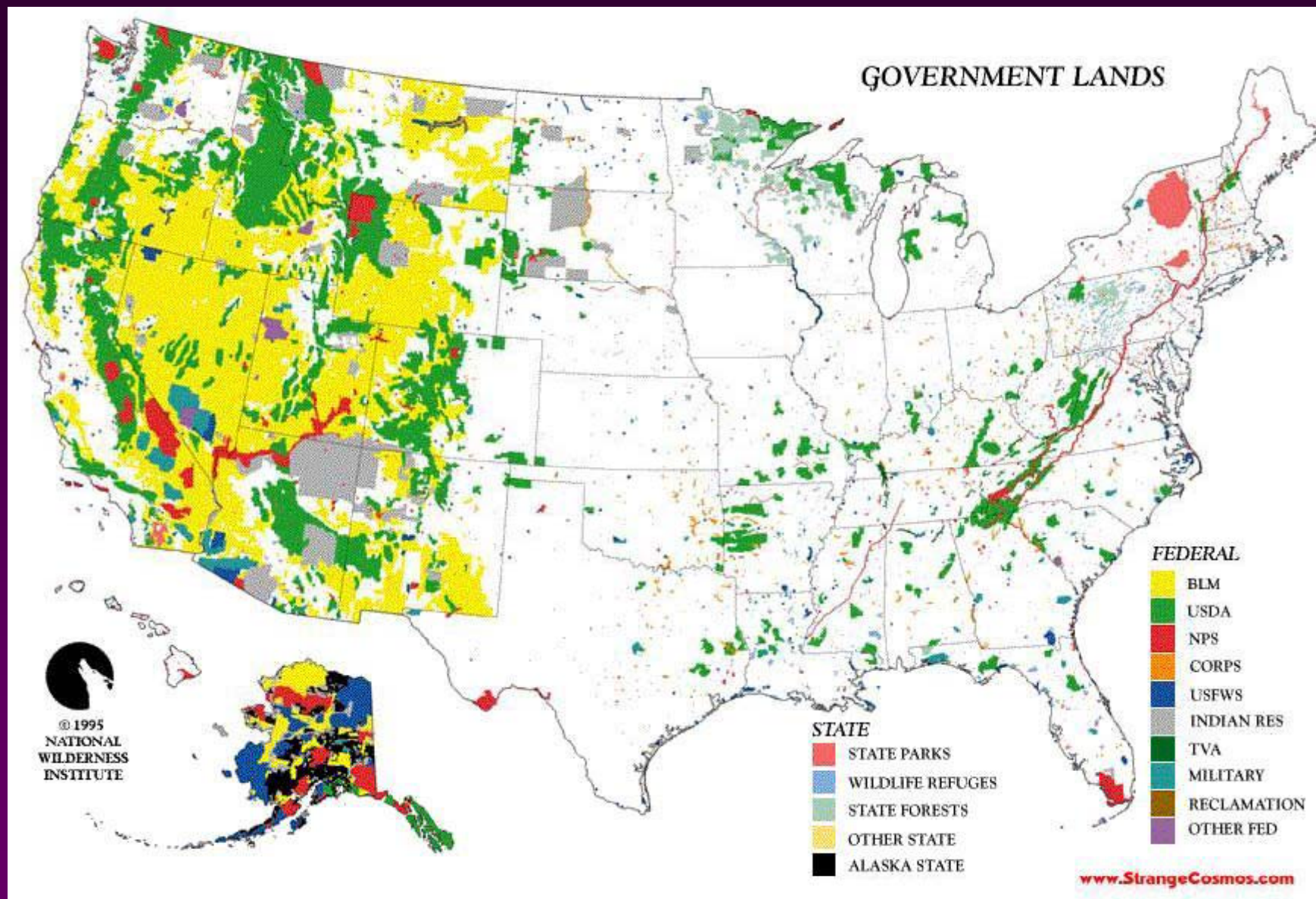
Social Science and Fuels Management: A US perspective

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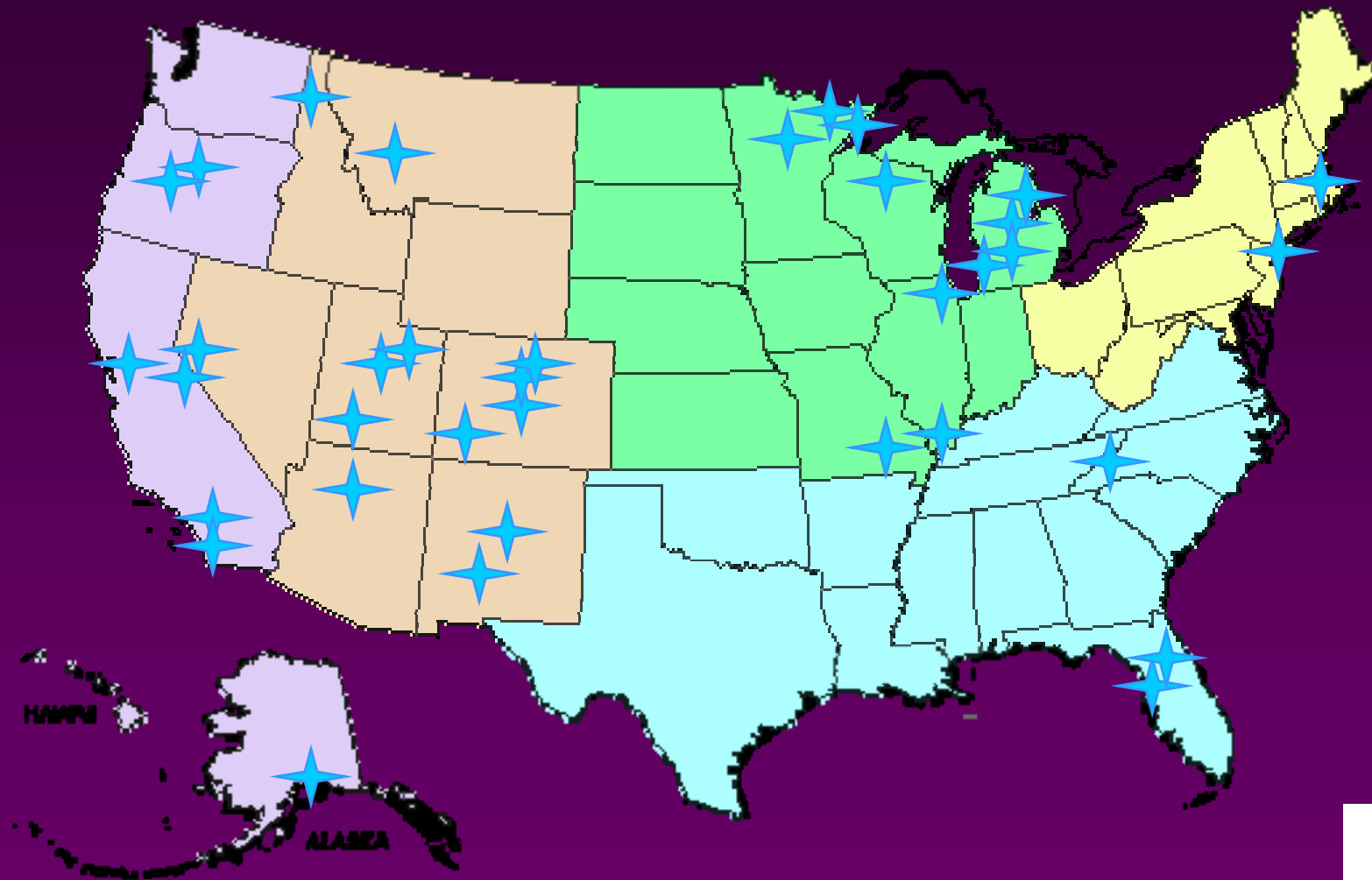
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Research Sites



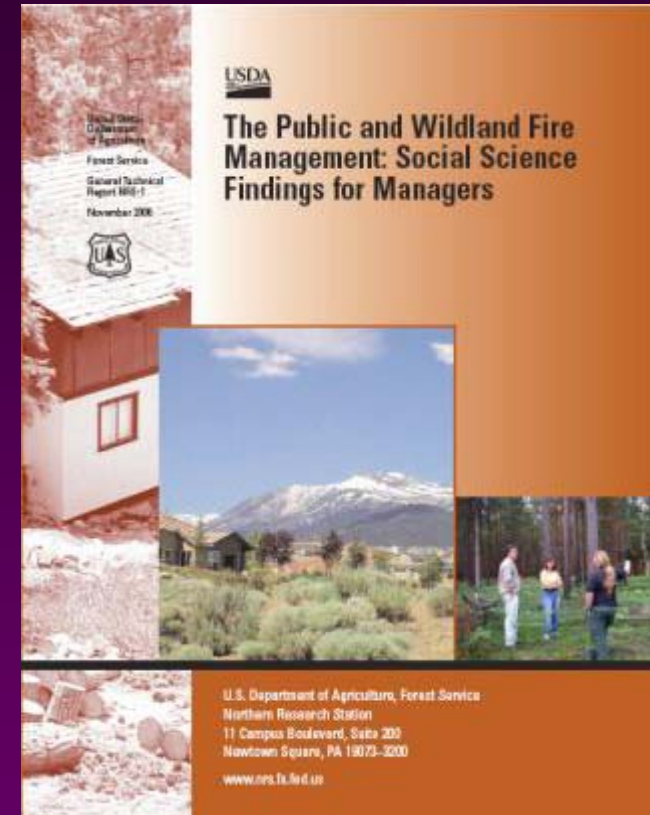
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Previous Research

Public views and acceptance of fuels management

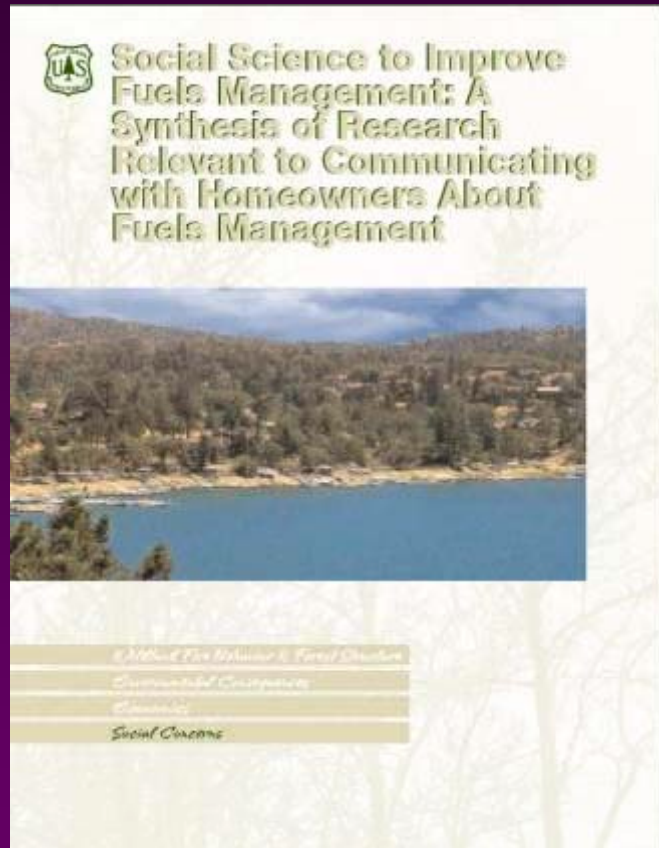
- Acceptability of prescribed fire, thinning, defensible space
- Perception of wildfire risk
- Role of forest context, aesthetics, and future conditions



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Previous Research



Working with homeowners and communities

- Effective communication programs
- Role of community leaders and neighborhood organizations

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Be Careful of Conventional Wisdom

Smokey has taught the public to think all fire is bad.

But.....

80% see prescribed fire and thinning as appropriate management tools

- Roughly 30% give strong approval & another 50% give qualified approval
- Thinning generally slightly higher approval

Defensible Space

65-75% removed vegetation on their property.

Concerns about **privacy**, seeing **wildlife**, **aesthetics**, and **naturalness** shape willingness to modify vegetation.



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CW - Risk - They don't understand it...

(Actually they do, but.....)

- Risk is a complex and subjective concept
- Risk = Probability + consequences
 - Technical assessment vs. Lay assessment
 - Factors to consider – timeframe, spatial extent, type of damage
- Higher risk perception does not necessarily lead to action. It is a necessary but not sufficient condition

Risk Perception

What goes into public conception of fire risk?

1. Environmental factors
2. Ignition sources, generally people (stupid ones) but also lightning
3. Impact
 - Human – homes, lives, health, – stronger emphasis on human damage
 - Environmental – the forest, wildlife

Risk Perception

- Clear pattern of vicinity residents having a higher RP than interface and intermix
 - **Balancing benefits and self-selection.....**

Mary: We aren't allowed to burn at all at my house.

*Alice: Well, you are in a canopy. You are right there in a canopy. **That's one reason we didn't buy up there, I was terrified.***

(Flagstaff)

Demographic Conventional Wisdom

No consistent evidence that:

- Experiencing a wildfire increases proactive attitudes
- Longer term residents are more aware and/or active in relation to fire mitigation
- Seasonal homeowners are less likely to understand fire risk than permanent

Understanding = Acceptance

Ecological benefits particularly important
in acceptance



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Understanding = Acceptance

- **Massachusetts: Knowledge most significant predictor of support for prescribed burning**
 - Those with some knowledge of PB were *less likely* to:
 - think it was too dangerous a practice to be used,
 - be concerned about prescribed fires near a home, and
 - be concerned about smoke, appearance, and its effects on wildlife and wildlife habitat.

Understanding = Acceptance

Support for fuels management practices often are not directly related to reducing the fire hazard.

Fuels management: Forest health & wildlife habitat (WI, MN, MI survey)

- 40% rated managing healthy forests as the most important management issue
- 12% rated reducing wildfire risk as most important

Prescribed Fire Acceptance - Escape

- Vogt/Winter study concern about escape was negatively related to acceptance (MI, MO, FL, CA)
- But part of issue may be views based on a limited sample – only hear about escapes – not successes
 - *The only time you hear it is always the bad fires. I think that they (prescribed burns) are helping us a lot. I would say approximately 5% goes out of hand. (San Bernardino)*
 - *I think we need to know more. Just like John said, if 90% of them are successful, we need to know about it. But we just hear about the ones that aren't. (Reno)*

Prescribed Fire Acceptance - Smoke



- Health problem in 1/3 of households

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Non-Fire Concerns Are Important

Not everyone is motivated by fire risk.

- Defensible Space often exists for reasons other than wildfire protection -- wind damage (tornado, windstorms), termites, beauty and aesthetics, recreational values, etc..
 - *“I took out 19 trees near the house; 5 big ones. I took them out at that time to reduce the number of needles in the pool and for hurricane protection” (Florida).*

Trust is important in acceptance

- Treatments generally are acceptable provided they are done by knowledgeable people, preferably locals familiar with the area
- If a practice is established, and there are high trust levels in those who are implementing the practice, acceptance will be high.
- In essence....people are willing to respect expertise but in return want their point of view and desire to be informed to be respected

In Summary

- People understand the Fire Risk
- A majority are taking some mitigative action
- But.....
 - Don't necessarily understand how actions help protect their house = misplaced actions
 - Emphasis is on vegetation management



- Picture of a Successful Program

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Overall Fire Management?

- Fire Management = Forest Management
- Much more confusion around issues of actually fighting fires
 - **A great deal of faith in firefighting resource availability and aerial suppression**
- Supportive of WFU IF understand process
 - reasons and amount of planning that goes into it

US – Reasons to Consider LEOSAD

- Evacuation Concerns
- People are Staying
- Improve Preparedness
- Limited Resources
- Public as Partners, equal responsibility
- Fire Adapted Communities

Not necessarily the same as Shelter-in-Place

Shelter = Passive



LESD = Active



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US-OZ Differences? – *Fire Risk*

- Topography
- Vegetation
- Construction
- Development Patterns

Much is similar but more diversity in US means likely more situational

Differences? – *Fire Risk*

Development Patterns** – likelihood of house to house ignition



Chronicle / Brant Ward

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Differences – Institutional**

- Emergency Preparedness vs. Land Management Agencies
- Complexity
 - US – Numerous fire agencies
 - Australia – limited # of fire agencies

Victoria



California



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Differences?

- Cultural
 - Expectations of protection?
 - Responsibility?
 - Liability?
 - Understanding?

The same issues/concerns
are raised in both countries

US Study

Sarah McCaffrey – USFS

Alan Rhodes – Country Fire Authority, Victoria

■ Three Sites & 3 Levels of Initiation

- Ventura and Santa Barbara Counties – County Fire Department
- Santa Fe – City Fire Department
- Montana – Painted Rocks Volunteer Fire Dept (made up of local homeowners)



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Different Initial reasons

- Ventura County – recognition of limited resources, that people are staying, and good enforced veg management



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Different Initial reasons

- Painted Rocks – Homeowners experience in 2000 fires (dislike loss of control)
- Santa Barbara and Santa Fe – Recognition of evacuation risks

US Study

■ Different approaches

- Santa Barbara and Santa Fe – Stay as Last Resort
(fairly passive provision of information about what to do if don't evacuate)
- Ventura – Leave Early or Stay and Defend (early stages of development, preference for leaving)
- Painted Rocks – Very parallel to Australian approach



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Homeowners

- Receptive to idea of staying –
 - Recognize risk, but not sure safest action if can't evacuate (hunkering down in basement, or running over the ridge)
 - May not plan on staying but want the information and the choice
 - “Thank you for treating me like an adult”
- Sense of responsibility
- Desire for control
- Recognition of resource limitations

Fire Departments

Variable – generally ambivalent

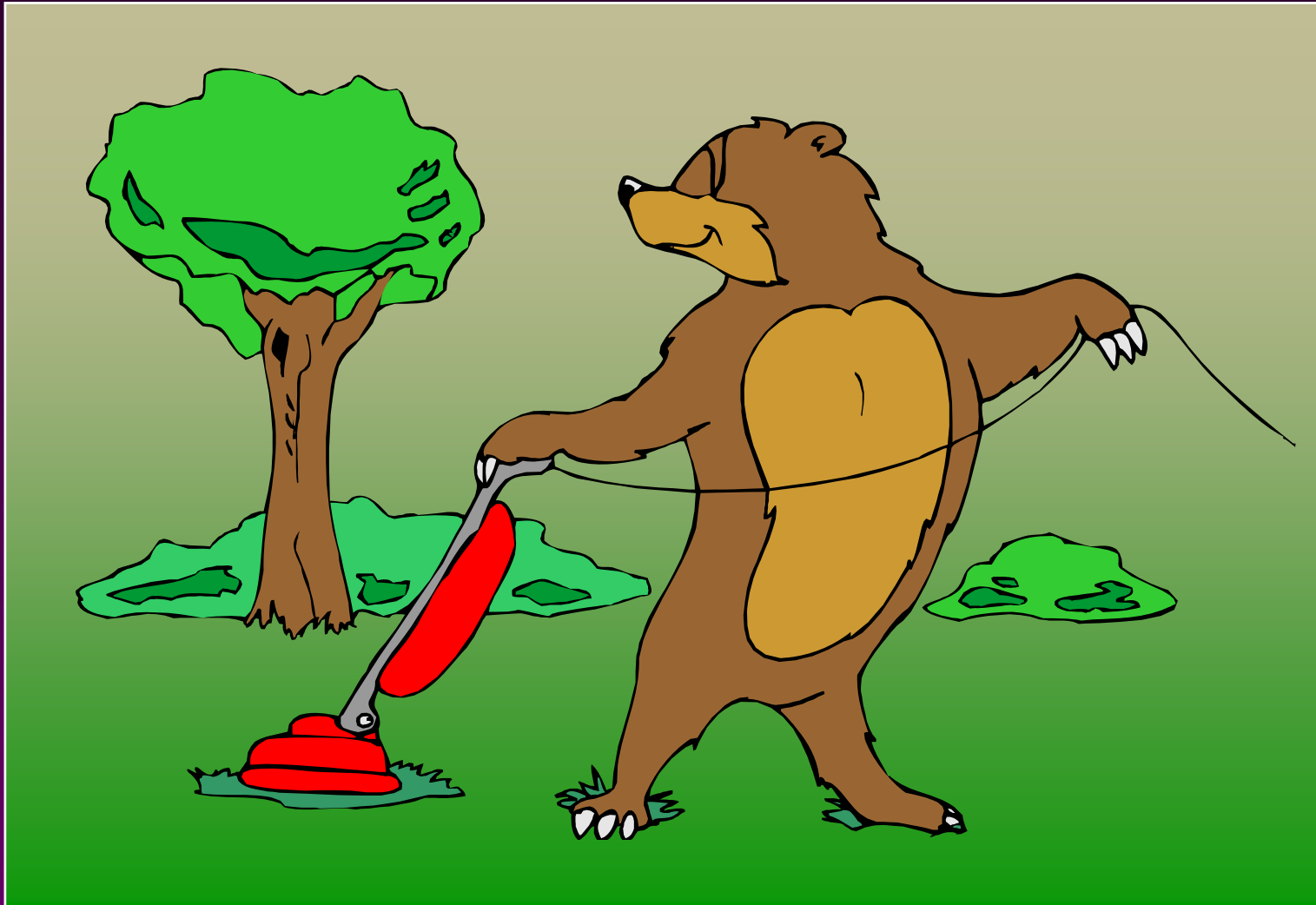
- Focus on life safety
 - Moral need to provide information about how to stay safely but ultimately want everyone to evacuate
- Loss of control
- Unclear understanding of how houses ignite in a wildfire

Current Status in US?

- Growing interest but.....

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