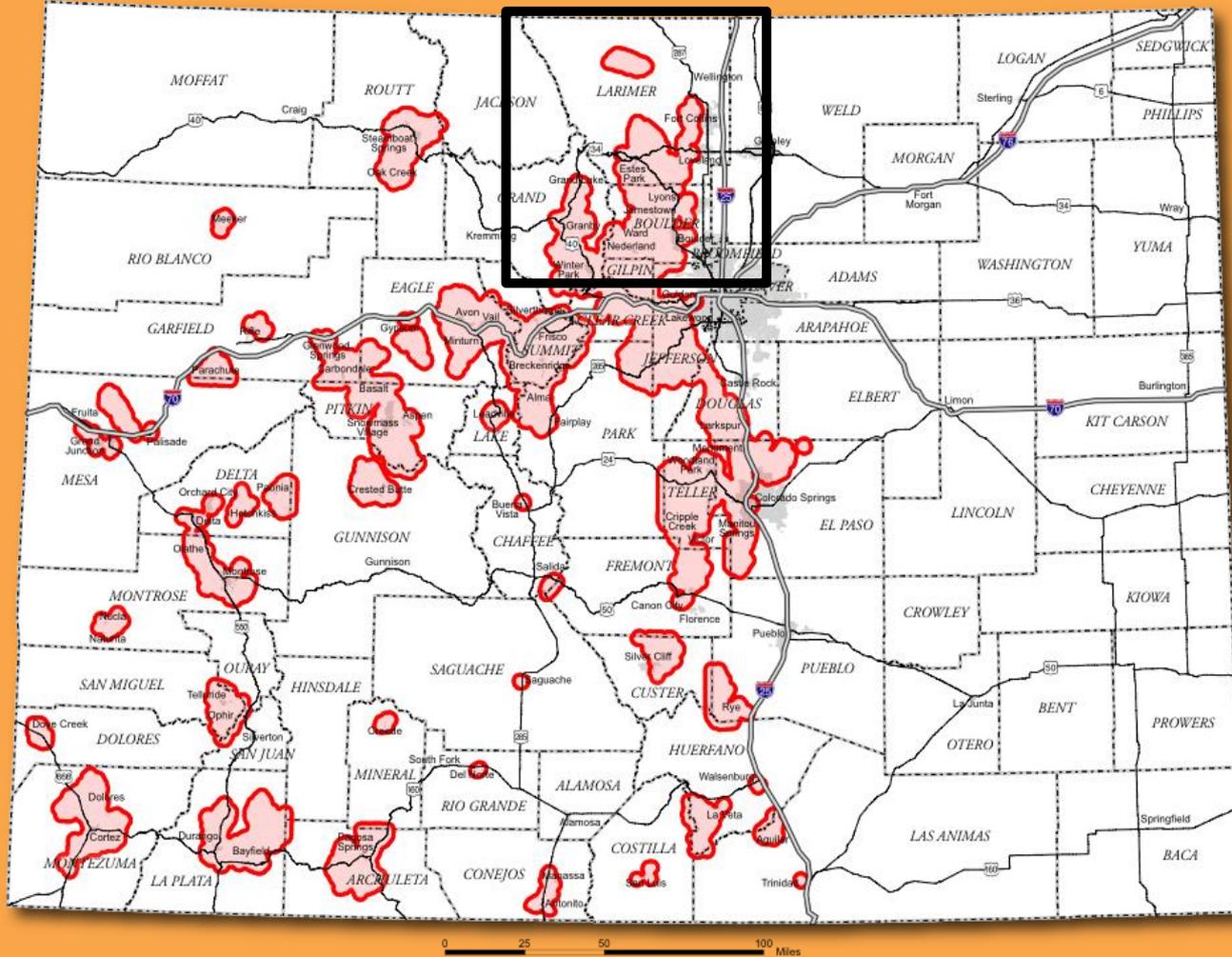


Boulder County, Homeowner Mitigation & Preparedness, and the Fourmile Canyon Fire

Patricia Champ, Hannah Brenkert-Smith, and Jim Webster
Backyards & Beyond
October 2011
Denver



Interface Areas of High Wildfire Risk in Colorado



-  Red Zone
-  Cities
-  County
-  State
-  Interstate
-  US Highway

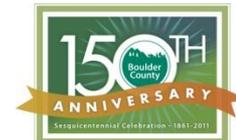
Red Zone Population:
748,350 (1990 Census)
979,851 (2000 Census)

Homes in Red Zone:
370,000 (1990 Census)
474,000 (2000 Census)

Red Zone Acres:
6,300,000 (2000)



Map Created September 2004
Colorado State Forest Service

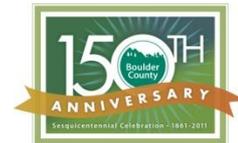




WUI Household Survey Data

2007 Survey

- Random sample of Boulder & Larimer County WUI households
- Survey developed in collaboration with Boulder and Larimer County wildfire experts.
- Funding for study from Boulder & Larimer Counties
- 747 completed household surveys (728 usable)
- Response Rate:
 - Boulder 37% (75% web; 25% paper)
 - Larimer 36% (63% web; 37% paper)



2010 Fire season



Fourmile Canyon Fire

- 6-16 Sept
- 6179 acres
- 169 structures
- 4086 parcels

Reservoir Road Fire

- 12-16 Sept
- 710 acres
- 350 homes evacuated
- 2 structures

Peewink Mtn Fire

- 17 Sept
- 10 acres
- 465 homes evacuated

Dome Fire

- 29 October
- 144 acres
- 1600 homes evacuated





2010 follow-up survey

- Starting 15 November (2 months after fire)
- Mailed surveys to 747 original 2007 survey respondents in Larimer and Boulder Counties
- Funding from CSFS & NCAR
- Web/Mail options
- 64% Response rate (n=449 overall)

DATA

- The data discussed in this presentation will be limited to responses among Boulder County participants (n=222).
- The data do not include new owners (n=8 for Bo Co)
- For attitude/belief questions, we eliminated responses in which the gender reported was not the same in 2007 and 2010 (n=25 for Bo Co).
- For household-level behavior (mitigation) we included responses even if gender of respondent not the same 2007 and 2010.



Respondents (Boulder County, 2007 and 2010 respondents)

- Demographics (n=222)
 - Average age: 56 Years
 - 53.9% men/ 46.1% women
 - 97.5% White
 - 73% married; 26% not married (divorced, never married, widowed)
 - 42.4% employed full-time; 24.9% retired
 - 35.3% earn less than \$75,000; 53.7% earn less than \$100,000



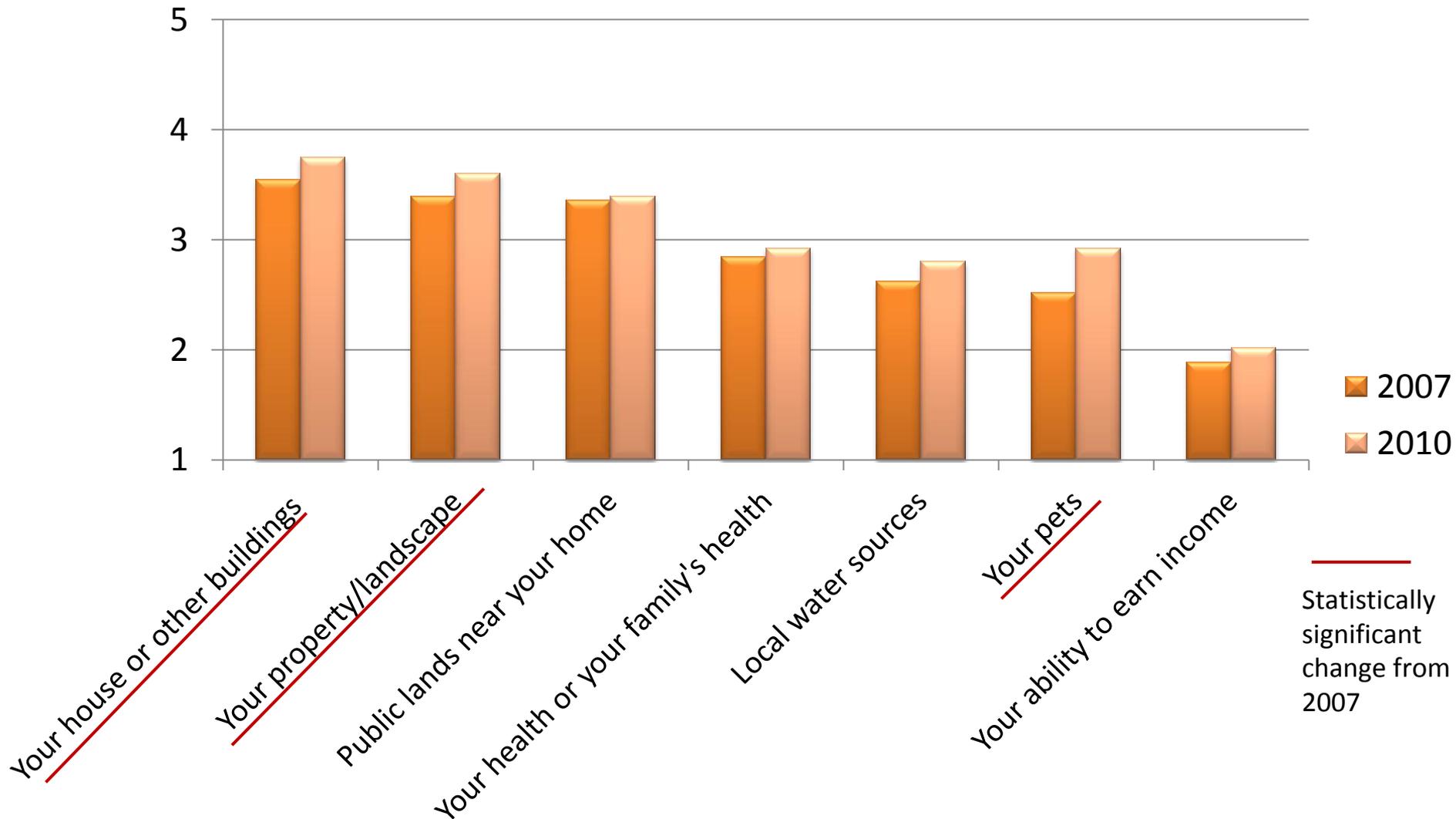
Fire Experience

	2007	2010
Fire less than 10 miles away	70.9%	83.3%
Fire on property	6.1%	10%
Fire and smoke damage	2.2%	3.9%
Evacuated	23.3%	61.6%



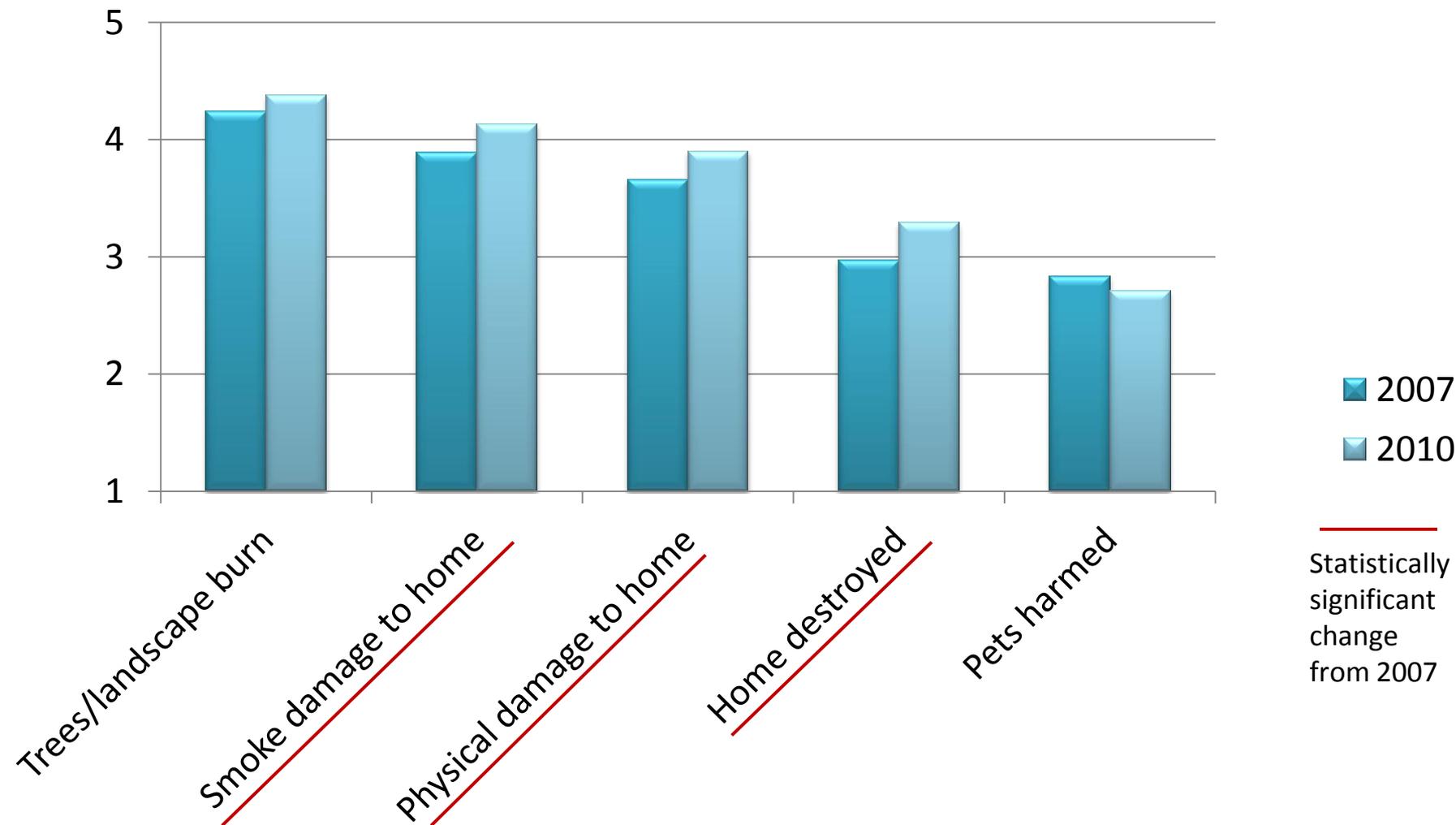
Concern about wildfire 2007 - 2010

How concerned are you about wildfire damaging or affecting the items listed below? [5 point scale: Not at all (1) – Extremely concerned (5)]



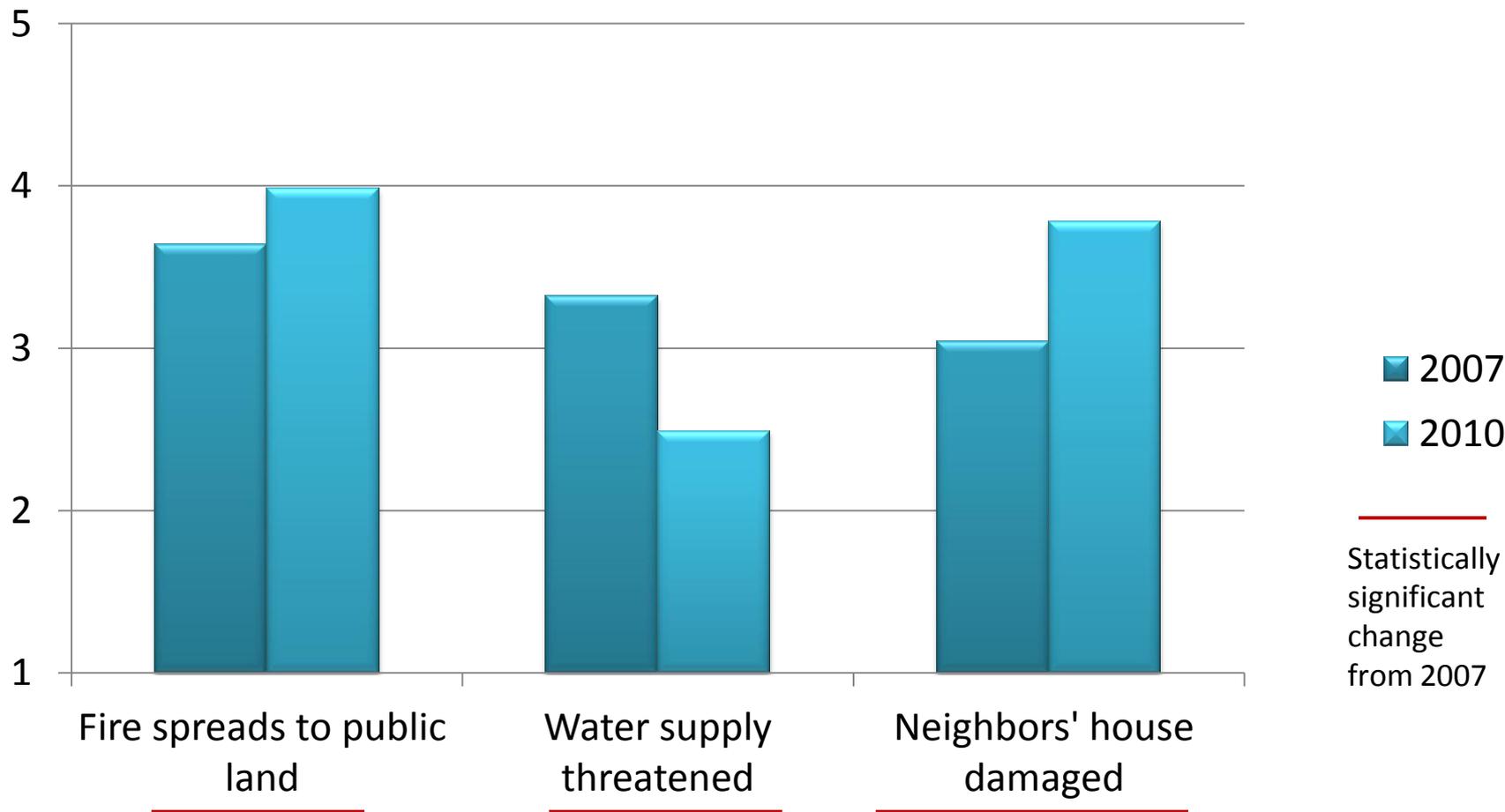
If there is a wildfire on your property, how likely do you think it is that the following would occur?

[5 point scale: Not likely (1) – Very likely (5)]



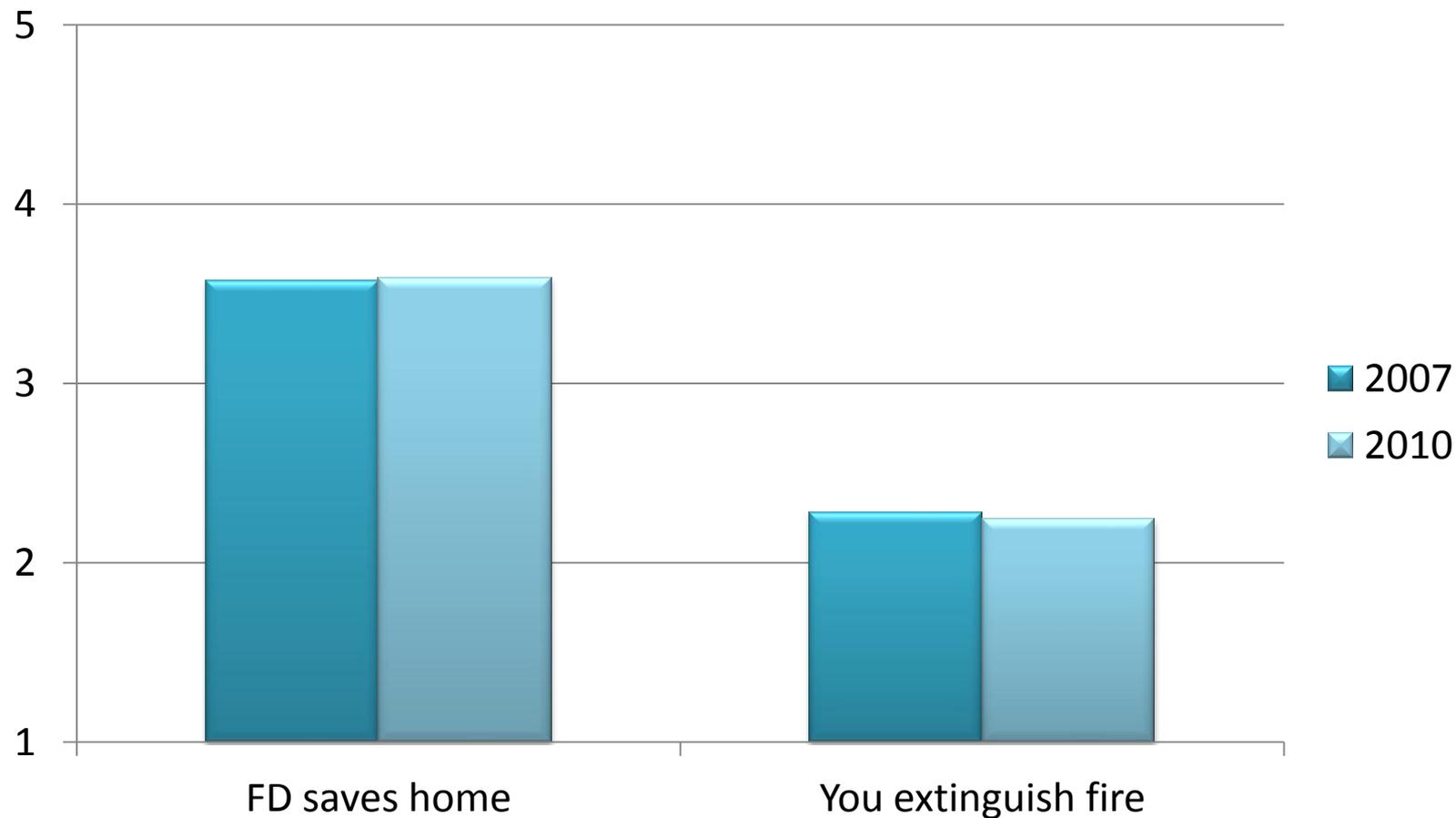
If there is a wildfire on your property, how likely do you think it is that the following would occur?

[5 point scale: Not likely (1) – Very likely (5)]

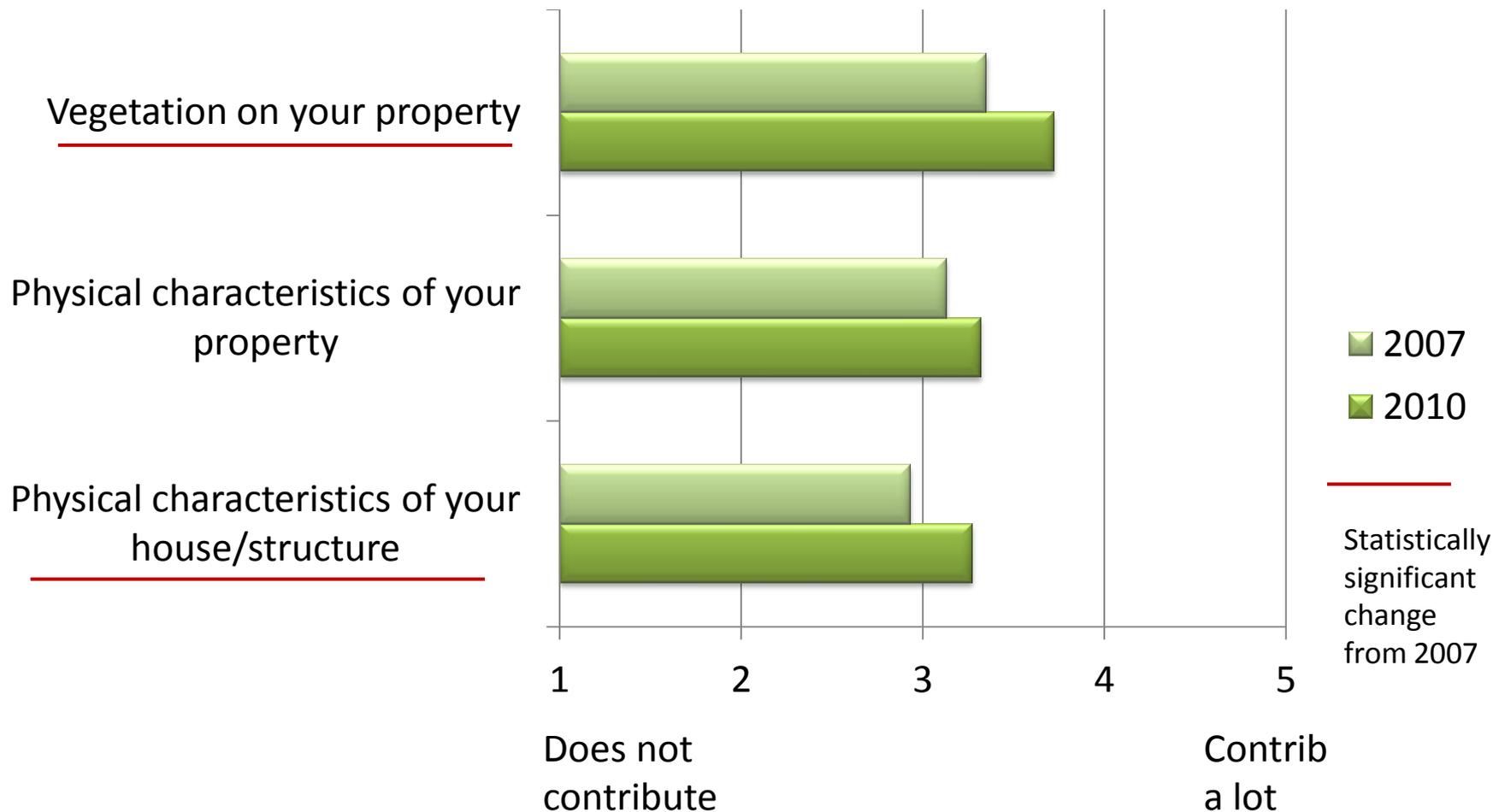


If there is a wildfire on your property, how likely do you think it is that the following would occur?

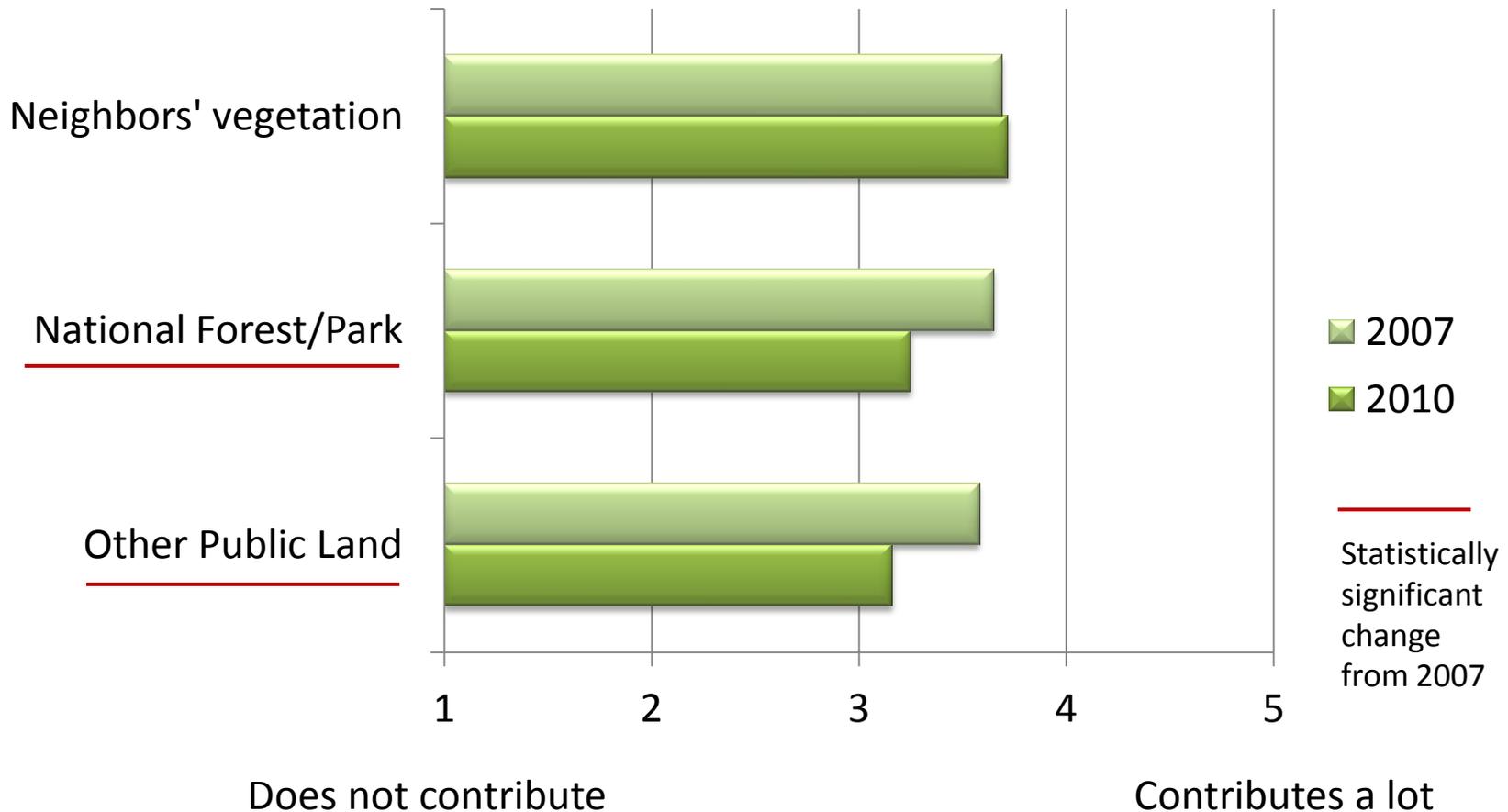
[5 point scale: Not likely (1) – Very likely (5)]



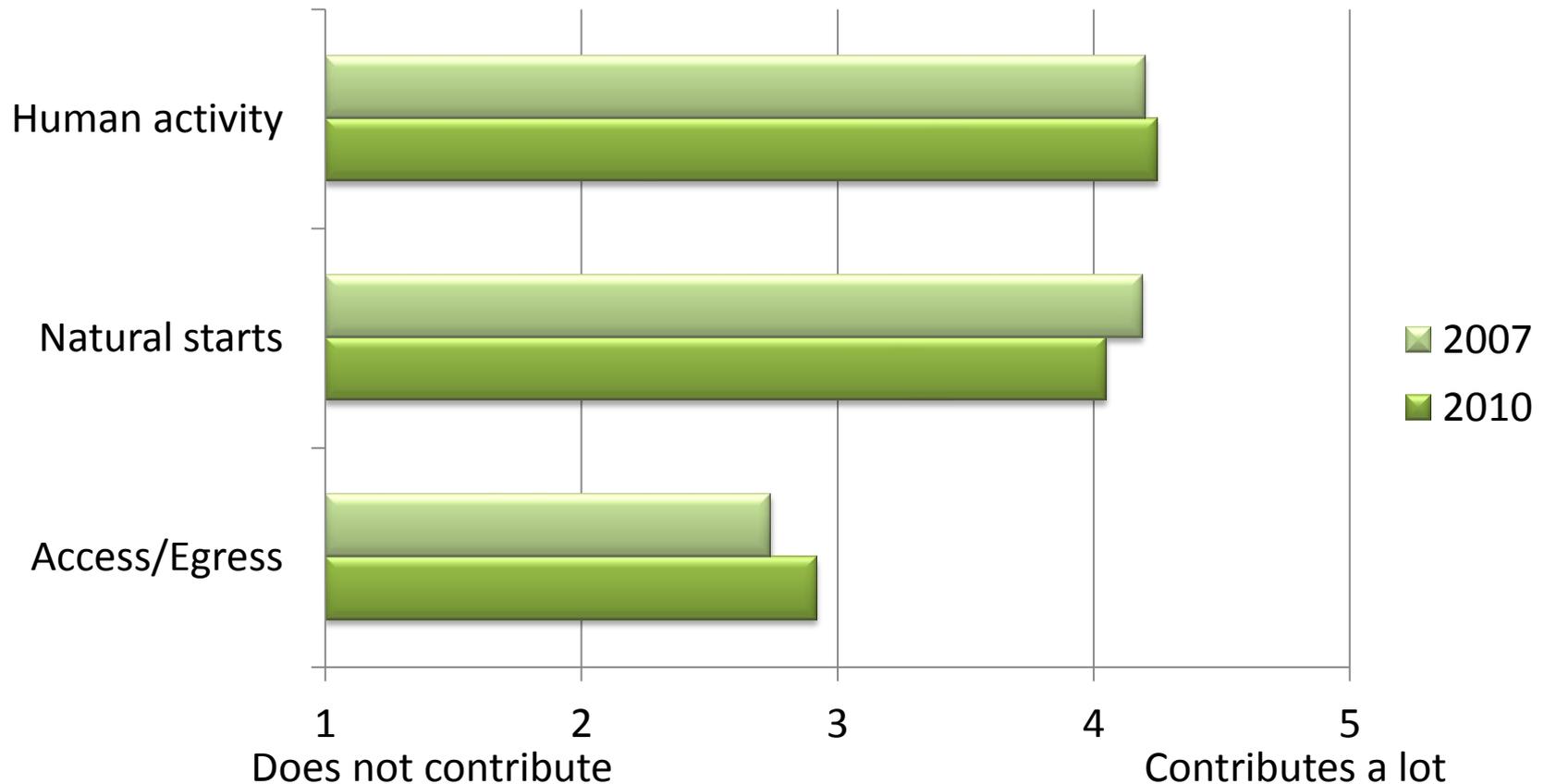
How much do you think each of the following factors contributes to the chances of a wildfire damaging your property **in the next 5 years?**



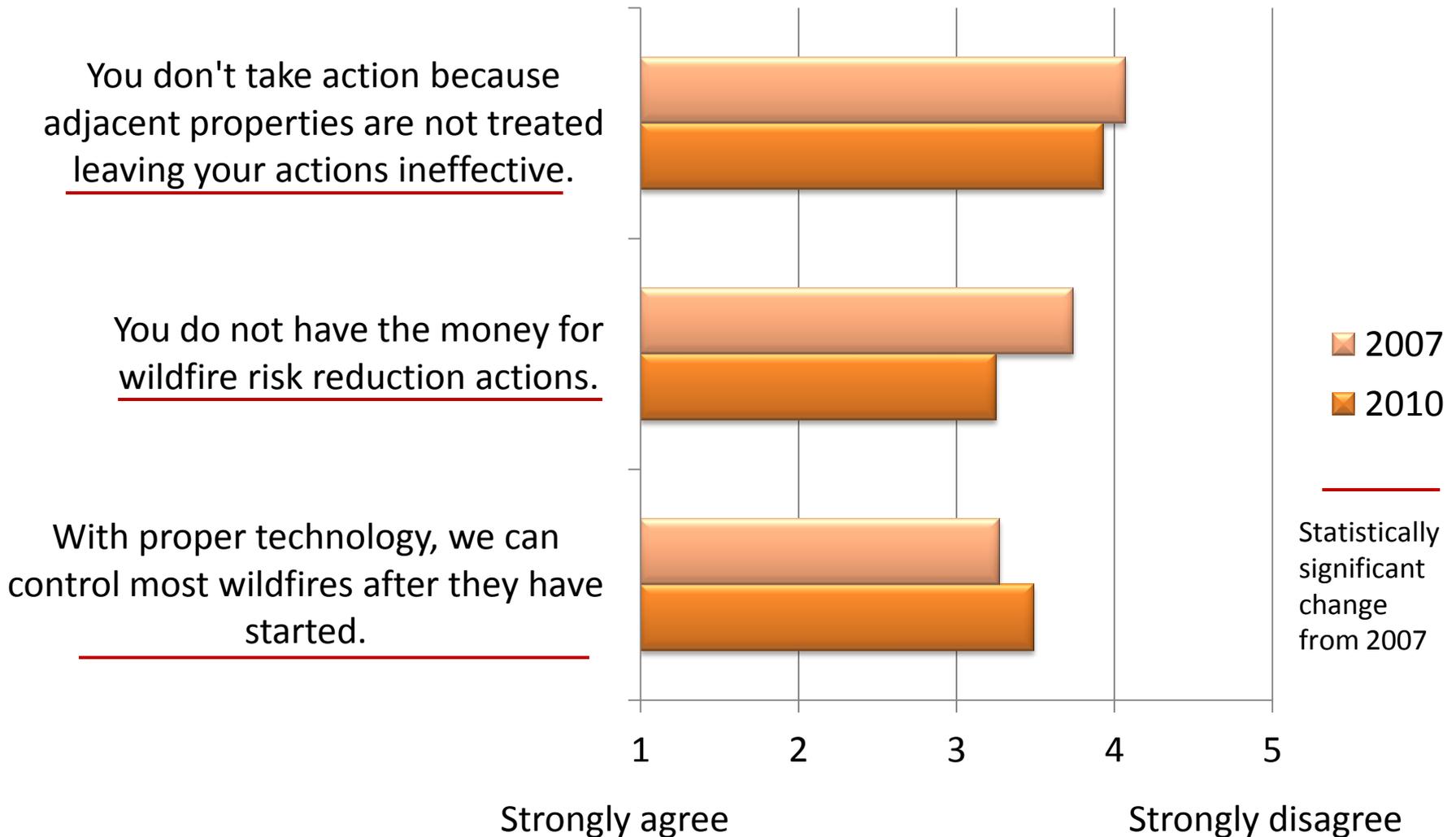
How much do you think each of the following factors contributes to the chances of a wildfire damaging your property **in the next 5 years?**



How much do you think each of the following factors contributes to the chances of a wildfire damaging your property **in the next 5 years?**

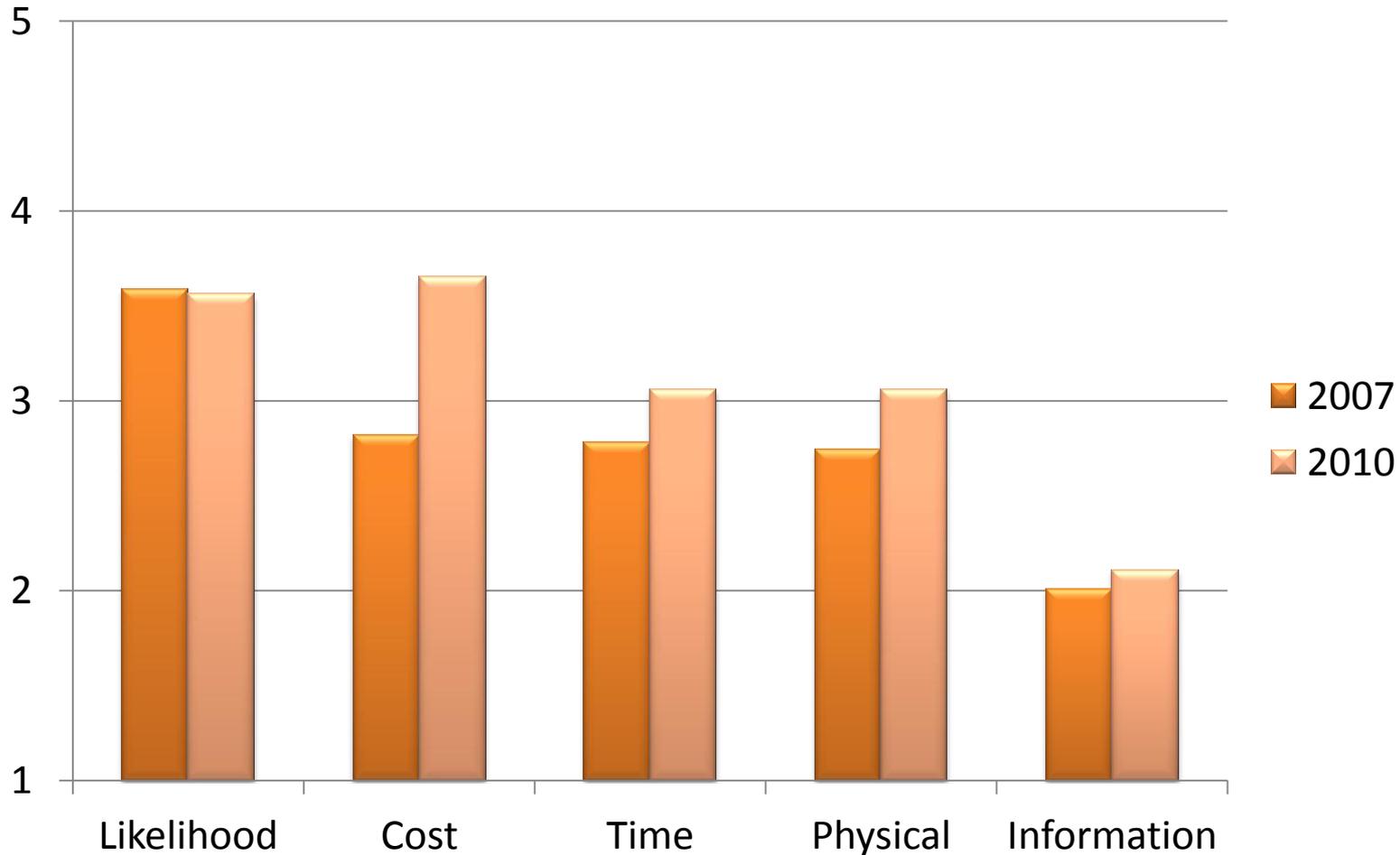


How much do you agree or disagree with the following statements about wildfire?

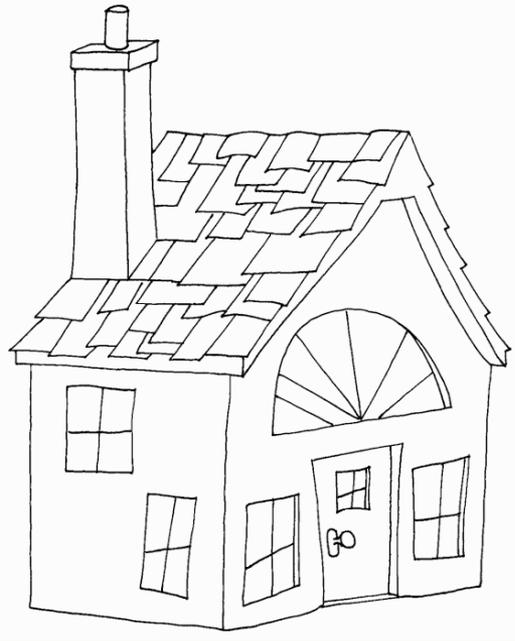


When deciding to take action to reduce the risk of loss due to a wildfire on your property, how much of a consideration is each of the following items?

[1=not a consideration; 5=strong consideration]



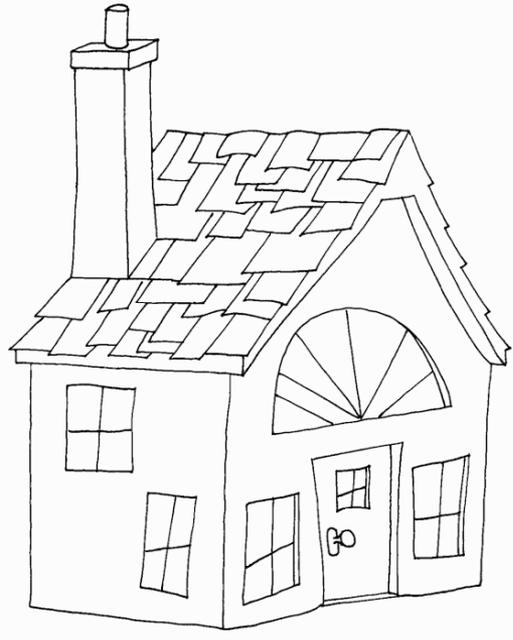
Vegetative Fuels reduction measures



Dspace30: Limb, Thin, Branch, Leaf, Mow

Dspace100: Limb, Thin, Branch, Leaf, Mow

Vegetative Fuels reduction measures



Response Options:

- Completed by previous owner (c)
- Completed/maintained regularly by you (m)
- Plan to complete
- Not applicable

Dspace30: Limb, Thin, Branch, Leaf, Mow

Dspace100: Limb, Thin, Branch, Leaf, Mow

Structural mitigation measures

Structural: Roof, siding, stairs, deck, rock perimeter, screens, number



Structural mitigation measures

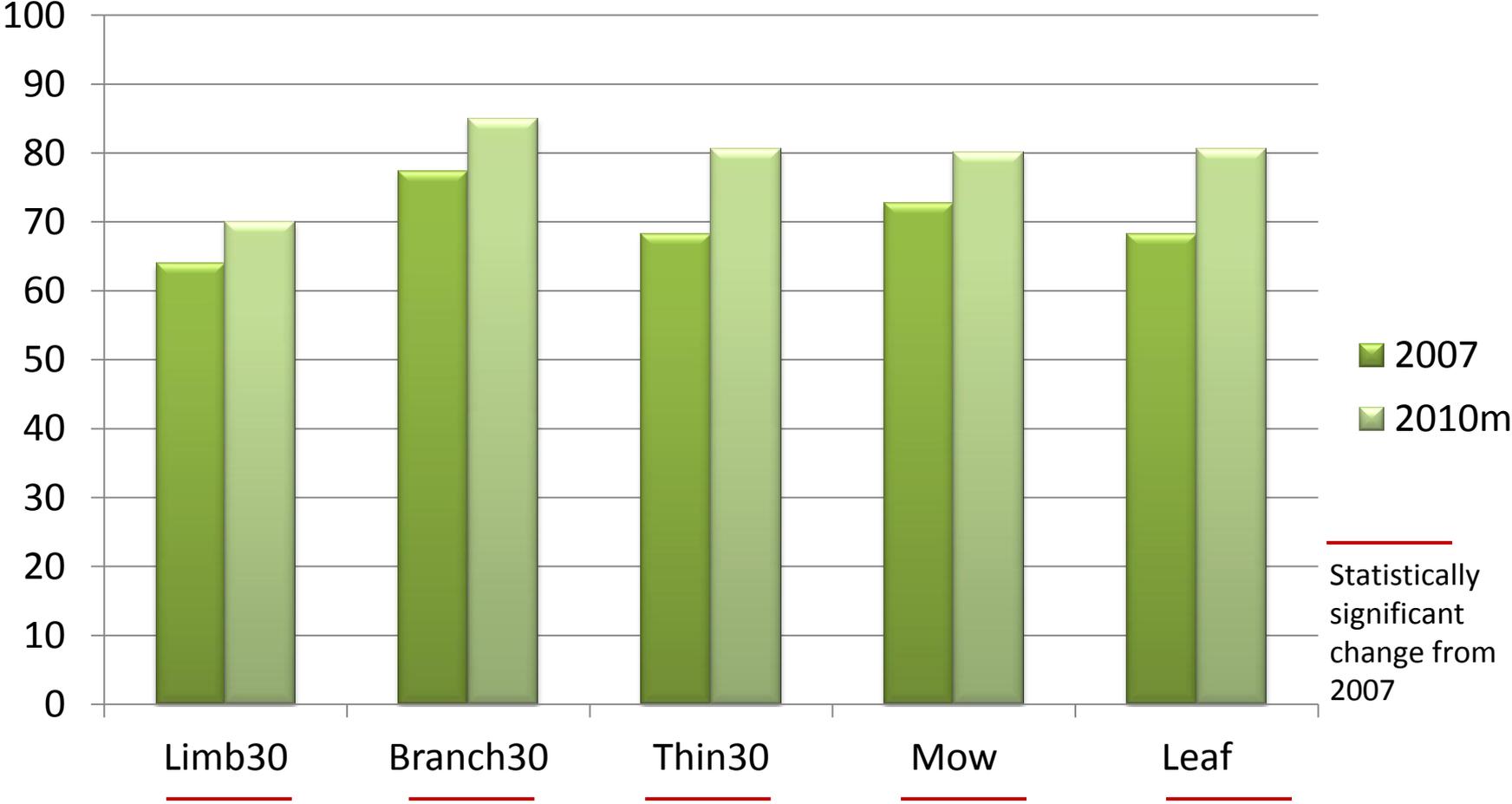


Structural: Roof, siding, stairs, deck, rock perimeter, screens, number

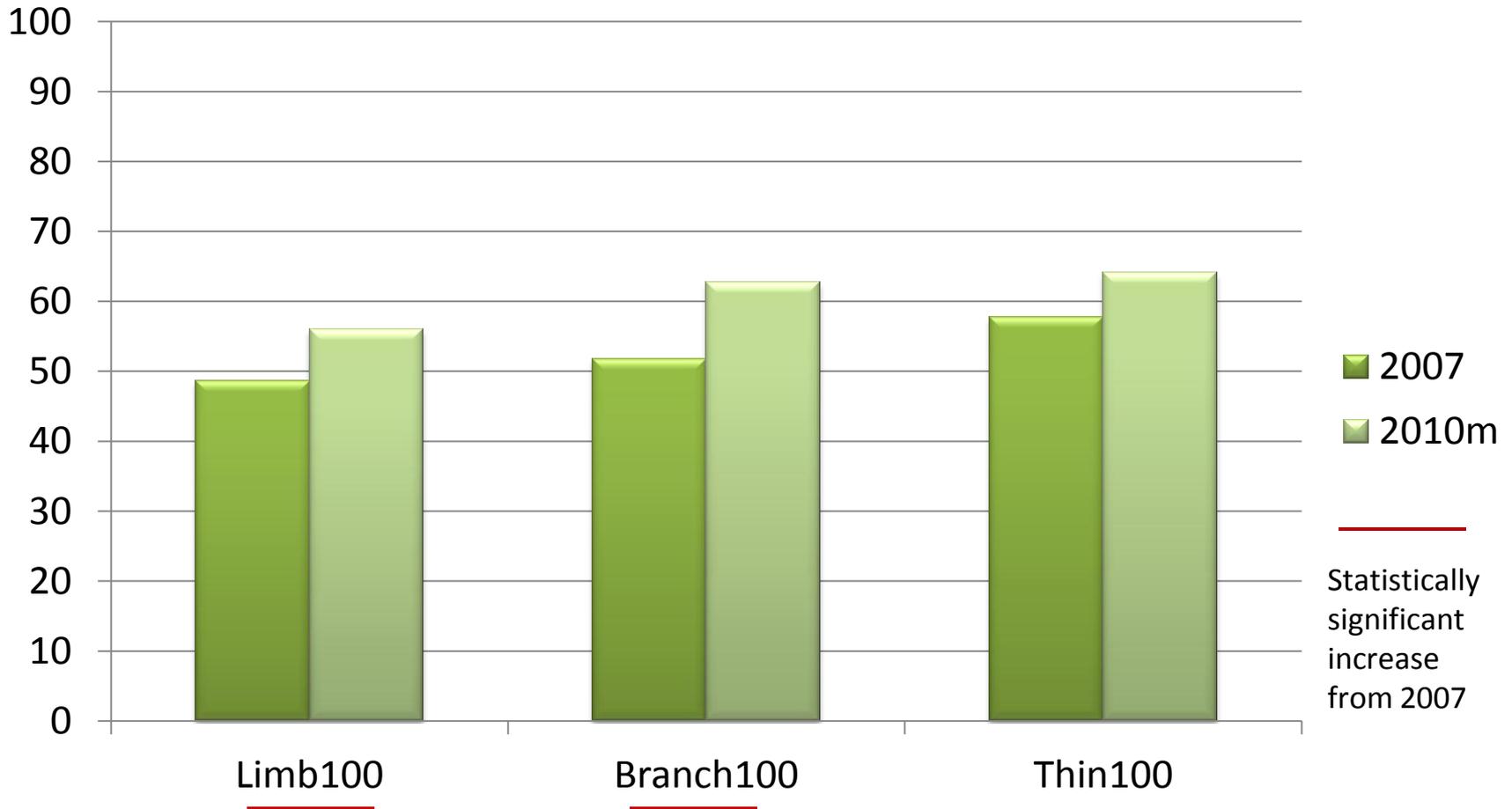
Response Options:

- Completed by previous owner (c)
- Completed/maintained regularly by you (m)
- Plan to complete
- Not applicable

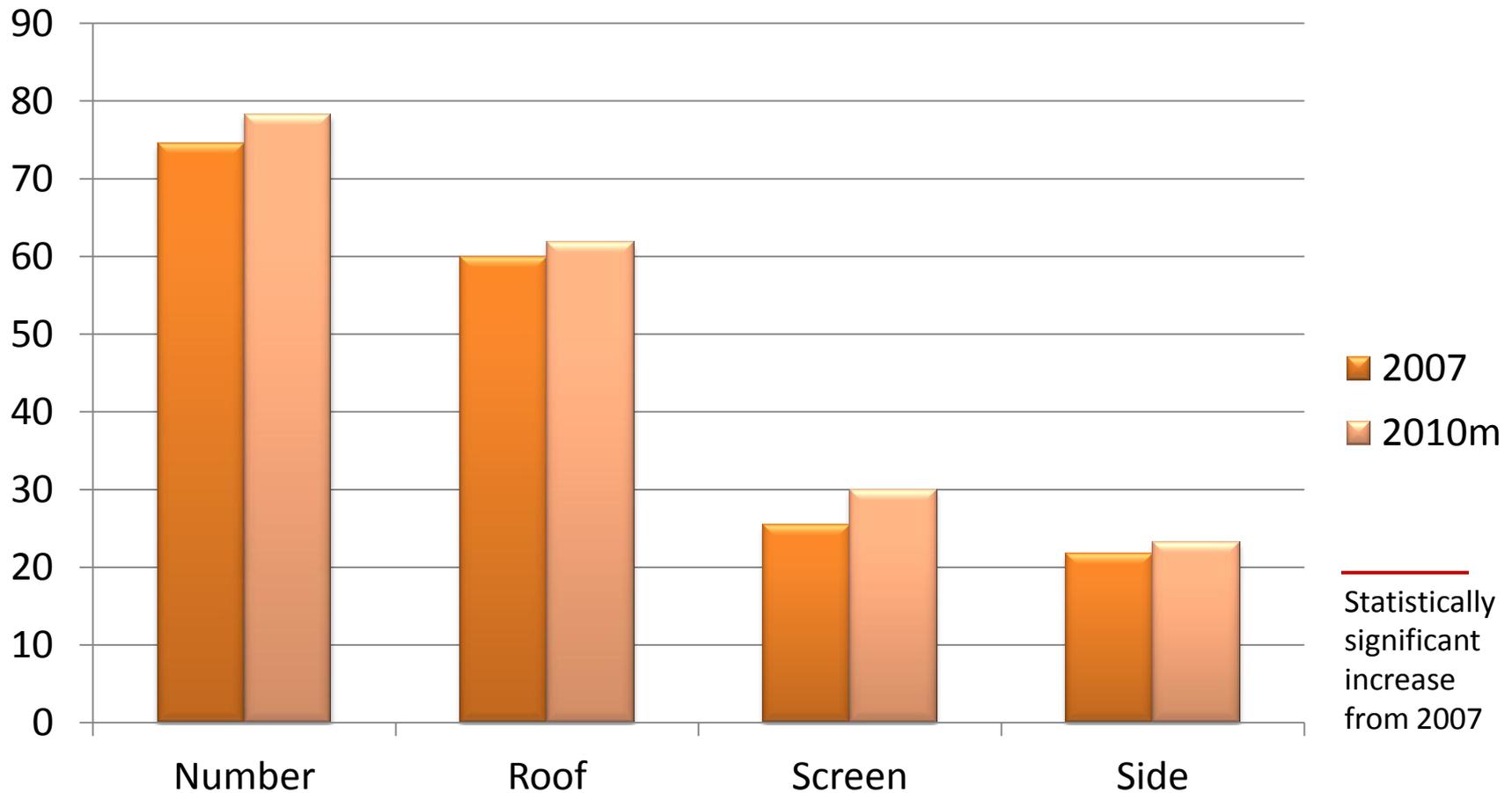
Percent reporting vegetative fuels management 2007 & 2010 within 30 foot perimeter of structure



Percent reporting vegetative fuels management 2007 & 2010 within 30-100 foot perimeter of structure



Percent reporting structural risk mitigation 2007 & 2010



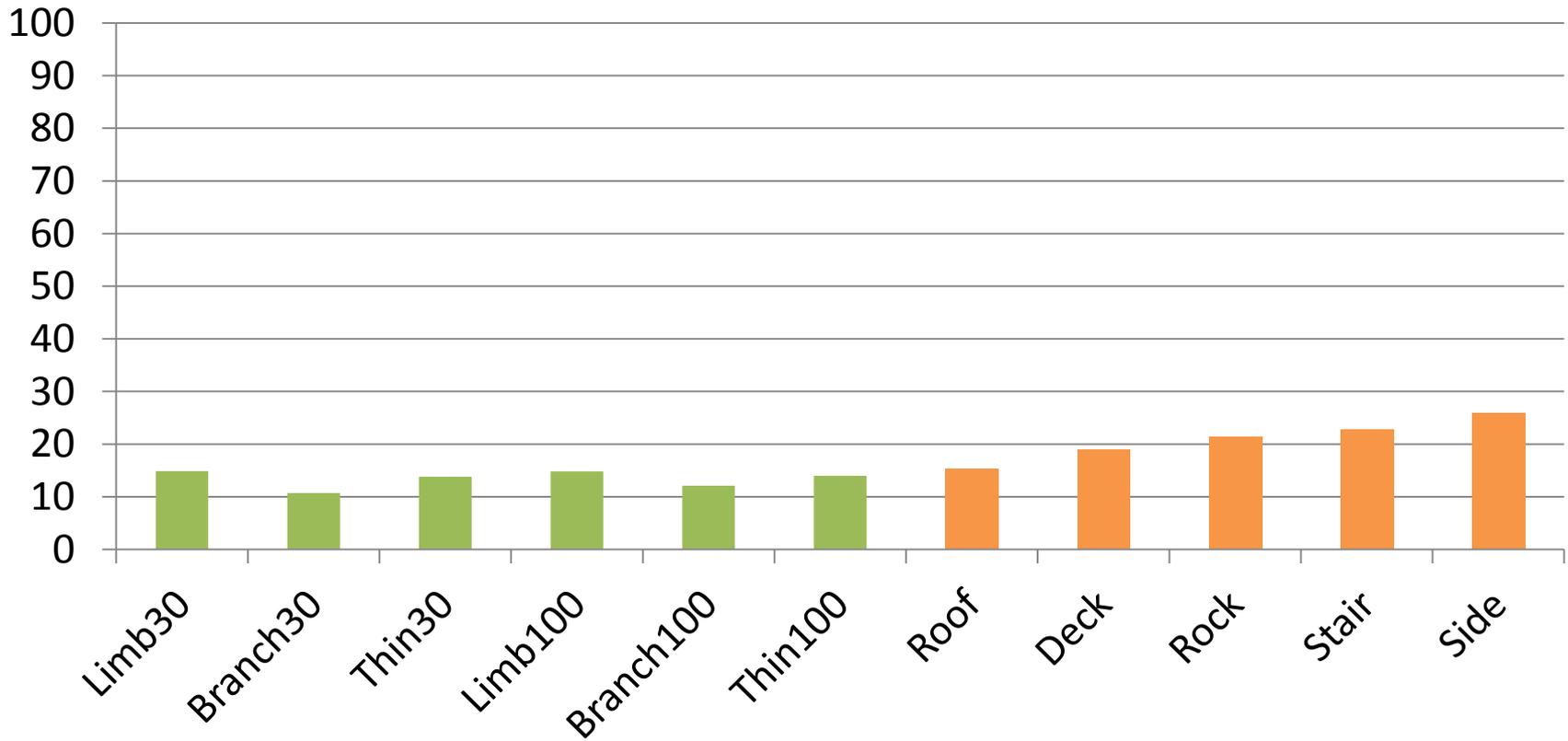
Cost sharing

Assume there are grants available to encourage homeowners to complete wildfire risk reduction actions. What is the smallest amount of money you would accept to complete any actions listed below that **have not already been completed on your property?** [7 point scale]

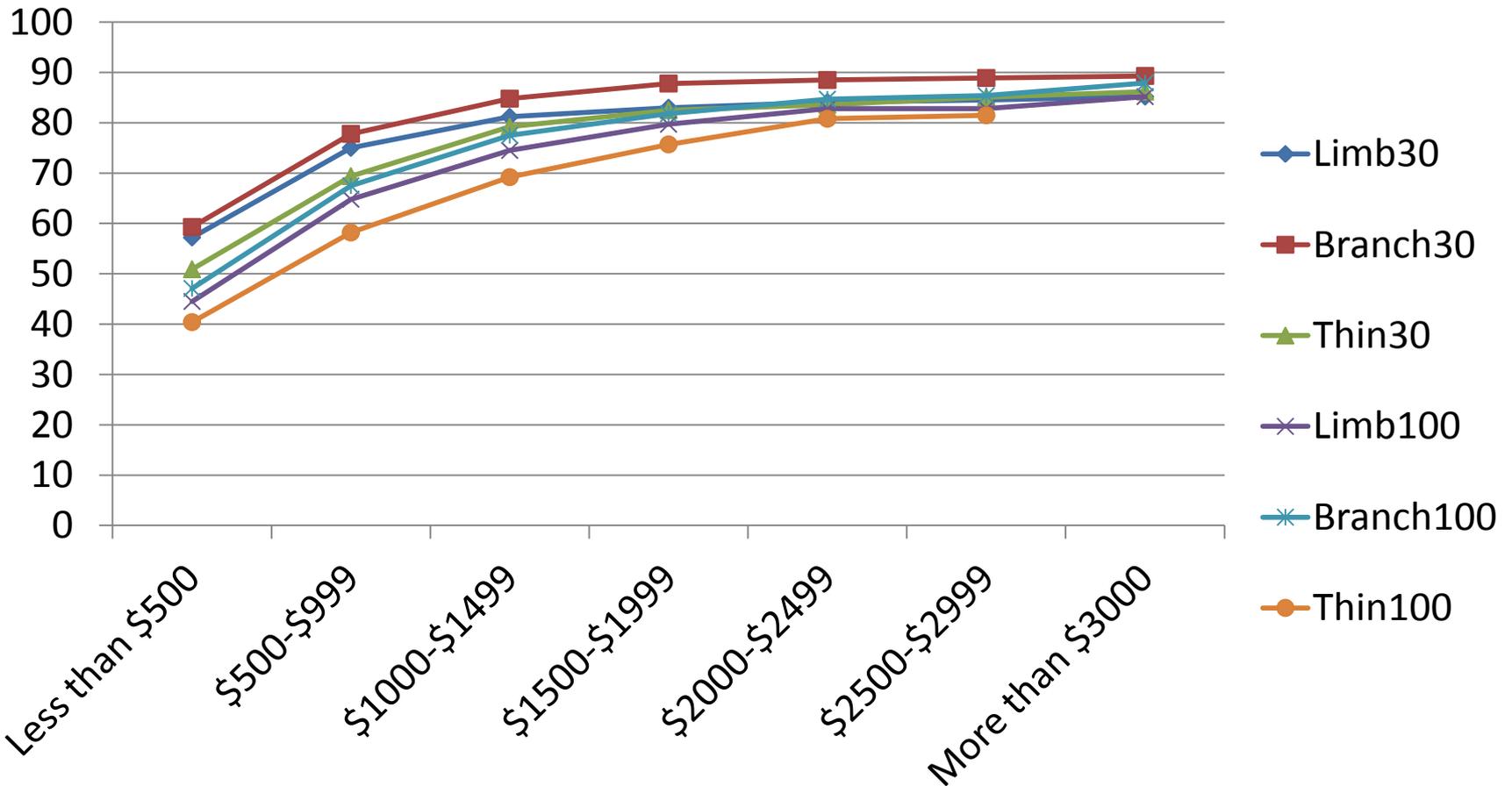
- Less than \$500
- \$500-\$999
- \$1000-\$1499
- \$1500-\$1999
- \$2000-\$2499
- \$2500-\$2999
- More than \$3000
- Would Not complete

Percentage unwilling to accept cost sharing for risk reduction measures not already completed

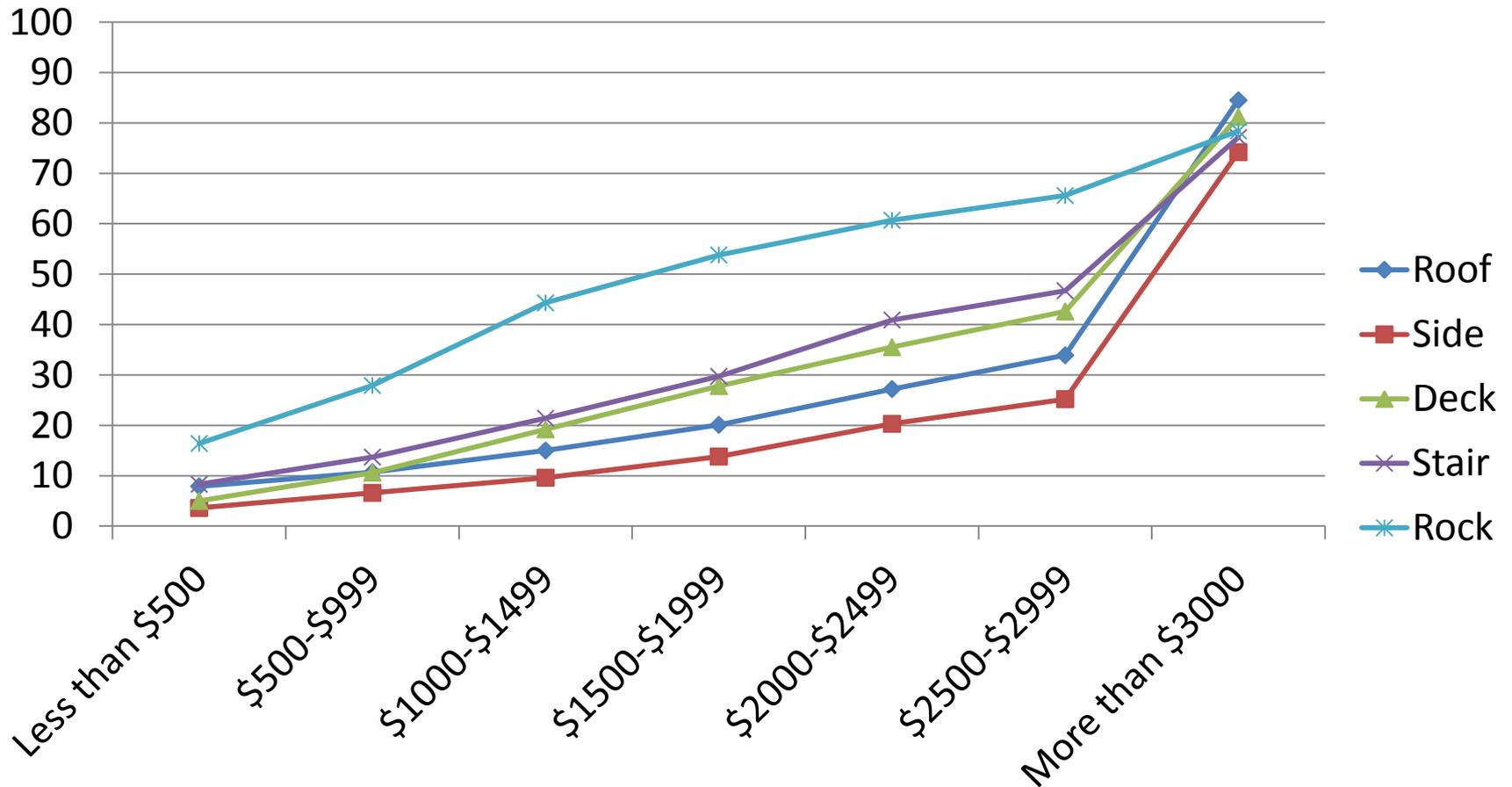
Would Not Accept



Cumulative percentage willing to accept cost sharing for vegetative fuels reduction at 30 & 100 foot perimeters



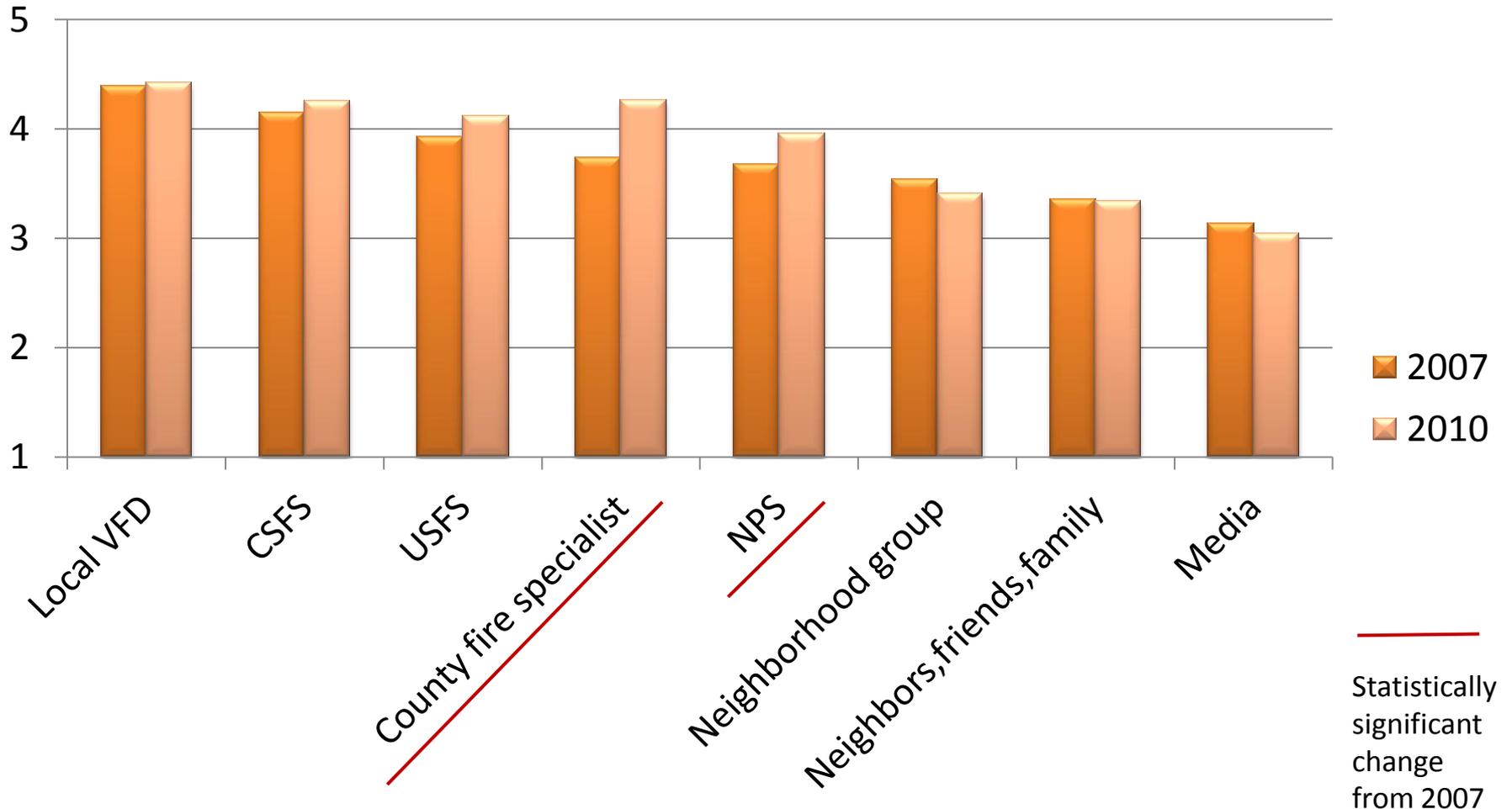
Cumulative percentage willing to accept cost sharing for structural mitigation



Confidence in wildfire information sources 2007-2010

How much confidence to you have in the accuracy of wildfire risk information provided by the following sources?

[5 point scale: No confidence (1) – A lot of confidence (5)]

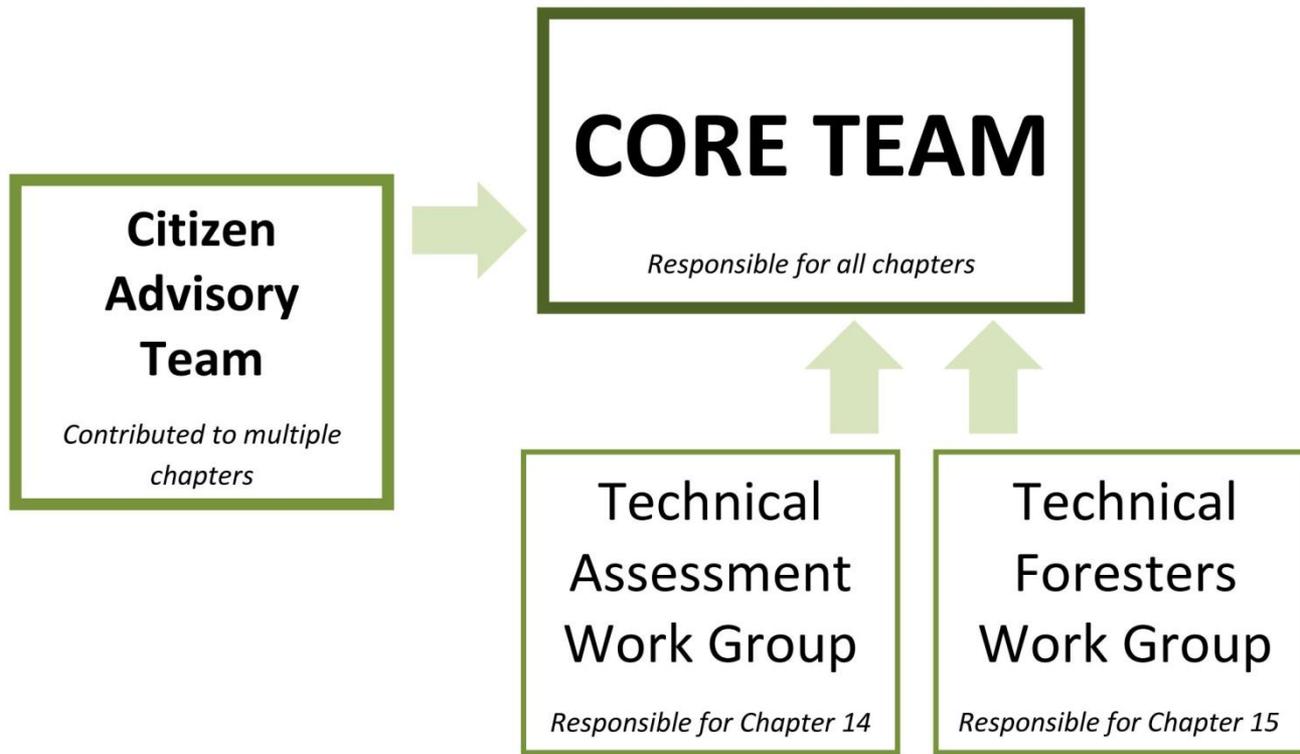


Research summary

- Focus has been on changes b/t 2007 and 2010 but many survey measures did NOT change b/t 2007 and 2010
- Residents were aware of wildfire risk in 2007 and even more aware in 2010
- Change in focus from 2007 to 2010 on the effects of wildfire on own property and risk associated with own property
- Cost sharing. Written comments suggest some of the folks who would not accept any cost share do not want government involved with their property or they think it's their own responsibility



Boulder County Community Wildfire Protection Plan

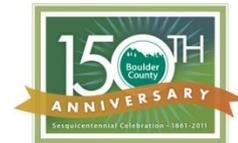


Citizen Advisory Team



Wildfire Education in Boulder County

- We have a well educated and engaged community
- It is not enough to simply offer information
- We have a long list of programs to encourage individual action



Nederland Community Forestry Sort Yard





OCTOBER WILDFIRE AWARENESS MONTH

PROGRAMS AND EVENTS

During Wildfire Awareness Month, learn how to prepare for a wildfire, take action to protect your home, and work with neighbors to reduce your risk. Visit BoulderCountyCWPP.org to learn more.

- Remembering the Fourmile Canyon Fire: One Year Later Video Program
- Walker Ranch Fire Ecology Hike (two mile hike)
- Wildfire Preparedness Workshop: 15 months, 15 days, 15 hours, and 15 minutes
- REI Fire Series Presentation: The Effects of Fire on Soils: Implications for Runoff and Erosion
- Volunteer Forestry Project: Restoration and Reseeding
- Fire Aviation Operations Presentation
- Volunteer Forestry Project: Restoration and Reseeding
- Fire on the Mountain: One Year after the Fourmile Canyon Fire Ecology Hike (a moderate one mile hike)
- Keynote Lecture by Jack Cohen: "Residential Fire Destruction During Wildfires"
- Backyard and Beyond Wildland Fire Education Conference

- Boulder Public Library - 7 p.m.
- Meyers Homestead Trailhead - 10 a.m. - Noon
- Nederland Community Center - 9:30 a.m. - 12:30 p.m.
- REI - 6:30 p.m.
1789 28th Street, Boulder
- Reynolds Ranch Open Space - 9 a.m. - 1 p.m.
Register at 303.678.6329
- Public Safety Building - 7 p.m.
1805 33rd Street, Boulder
- Reynolds Ranch Open Space - 9 a.m. - 1 p.m.
- Location TBA - 10 a.m. - noon
Register at 303.678.6214
- University of Colorado - Hale, Room 270
7 - 8:30 p.m.
- Double Tree Hotel, Denver

- Tuesday, Sept. 20
- Saturday, Oct. 1
- Saturday, Oct. 1
- Monday, Oct. 3
- Saturday, Oct. 8
- Wednesday, Oct. 12
- Saturday, Oct. 15
- Sunday, Oct. 16
- Thursday, Oct. 27
- October 27-29

MONTH LONG ACTIVITIES

- Community Chipping Days (see website for details)
- Community Forestry Sort Yard: Allenspark Area
- Community Forestry Sort Yard: Nederland Area
- Wildfire Awareness Month Poster Contest and Traveling Art Show

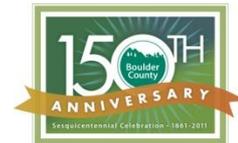
- Throughout the Month
- Tuesday - Saturday, 9:00 a.m. - 5:00 p.m. Through Oct. 15
- Fridays and Saturdays in October, 9:00 a.m. - 5:00 p.m. (Closed October 1st)
- Entire Month



Visit www.BoulderCountyCWPP.org for Details or contact Jim Webster at jbwebster@bouldercounty.org or 720.564.2600

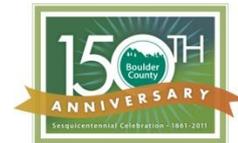
Major Obstacle to Effective Mitigation

- Financial Expense



Financial Incentives for Landowners

- Citizen Advisory Team asked County Commissioners to submit the question to voters to create Colorado's first Forest Improvement District
- The Commissioners placed the question of creating the district on the November 1, 2011 ballot



Colorado's 2007 Forest Improvement District Act

Purpose: Protect communities from wildfires and improve the condition of the forests in the district

Process: Two steps—Voters must first create the district and funding questions would come in future elections



Forest Improvement District

May provide financial incentives for private landowners to mitigate wildfire risks on their property (up to 50% of direct costs)



Public Opinion Survey

Question 1: A ballot proposal to create the Boulder County Forest Improvement District. This District would increase the property tax of mountain property by point 75 mills, or \$7 for every \$100,000 of assessed value. The money raised would pay for wildfire mitigation efforts If the election were held today, would you vote in favor of it or against it?



Survey Results #1

- Vote in favor..... 66%
- Vote against..... 28%
- Undecided at this time/Not sure 6%

[Asked only of mountain residents]



Question 2

A ballot proposal to increase the Boulder County Sales tax by point zero five percent, or 5 cents on a \$100 dollar purchase. The money raised by this tax would pay for wildfire mitigation efforts.... If the election were held today, would you vote in favor of it or against it?



Survey Results #2

- Vote in favor 63%
- Vote against..... 33%
- Undecided at this time/Not sure4%

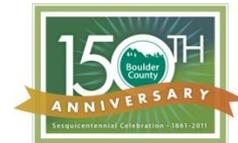


We have significant capacity for suppression

Artist: Herb Mignery



Recovery efforts receive strong support



What about wildfire mitigation?

Fire districts have different capacities and different approaches to mitigation and forest improvement

Fire District	Mill Levy	Estimated Revenue
Boulder Mountain	6.189	339,051
Boulder Rural	11.747	2,342,914
Four Mile	12.000	119,862
Gold Hill	7.499	32,865
Indian Peaks	3.764	31,659
Lyons	8.325	370,356
Nederland	15.130	718,681
Rocky Mountain	13.445	4,162,843
Sugarloaf	7.276	149,663
Sunshine	12.040	60,629



Conclusions

- County residents are knowledgeable and active
- Significant mitigation and forest improvement efforts are taking place in Boulder County
- However, we need to do even more (conclusion of the countywide Community Wildfire Protection Plan)
- Will voters support Ballot Question 5C: The Boulder County Mountains Forest Improvement District?

