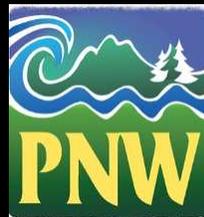


Public and Agency Perceptions about Smoke:

Interview and Survey Results from Four States

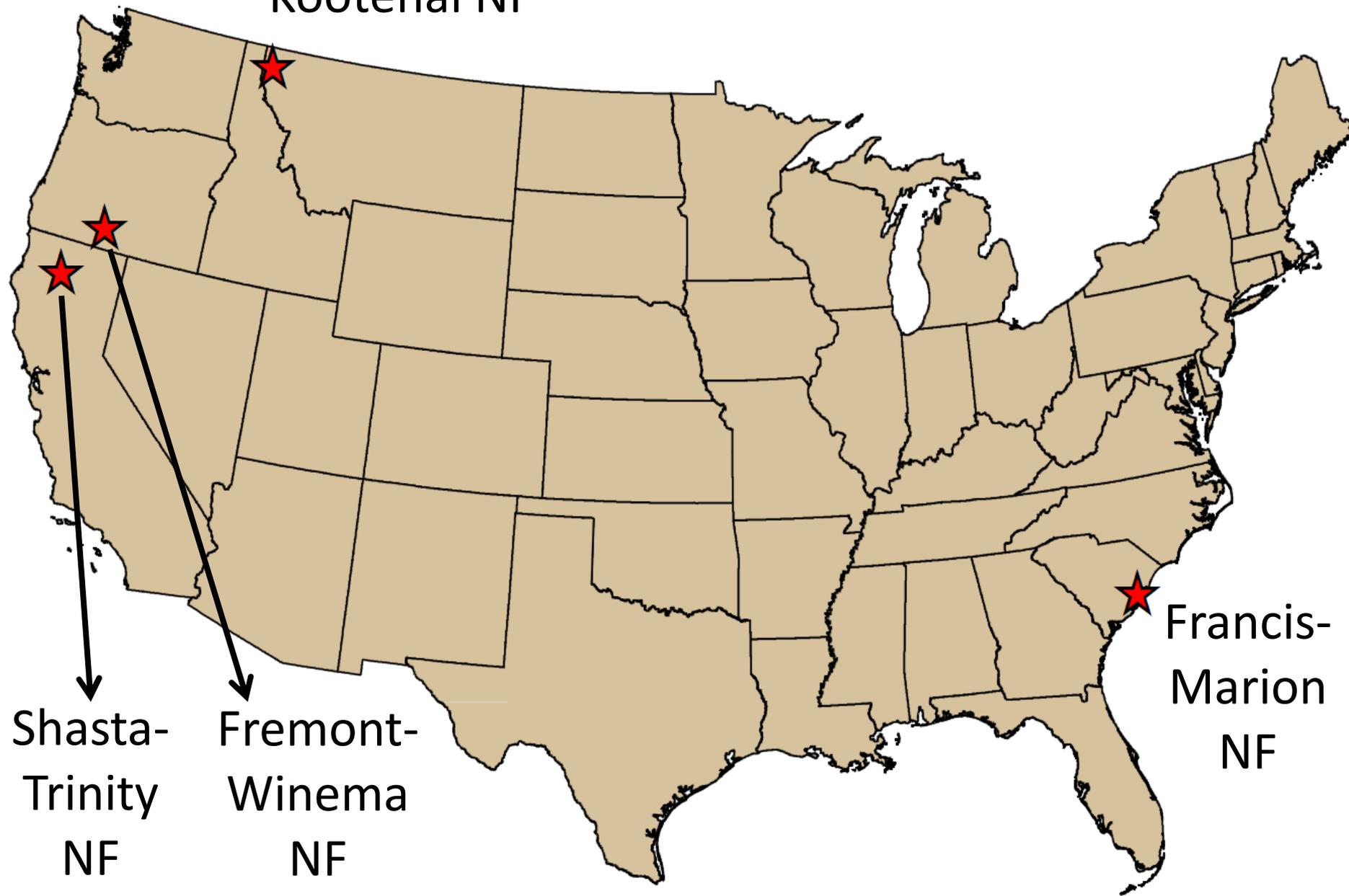
Dr. Christine Olsen
Dr. Eric Toman
Stacey Frederick
Danielle Mazzotta



Methods

- 4-phase project
 - 1: Site visits and interviews in 2011
 - 2: Public surveys in 2012
 - 3: Repeat survey in California in 2013
 - 4: Currently testing out new communication ideas

Kootenai NF



Shasta-
Trinity
NF

Fremont-
Winema
NF

Francis-
Marion
NF

Interviews

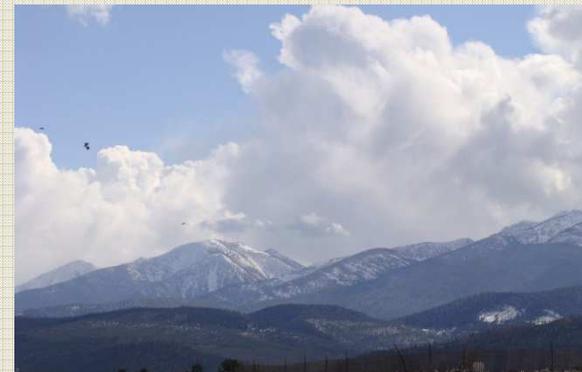
- 60 individuals across 4 sites
- Land and air quality managers, NGOs, industry, private burners, local govt, local fire protection
- Questions about fire and smoke management, experiences, regulations, communication

Cross-Cutting Issues

- Hindered economies
- Liability – escapes
- Need clear scientific guidance (mgmt & comm)
- Conflicts between agencies
- Interest in novel ways to communicate
- Track record of personnel (trust) – open and honest
- Misunderstanding about policies, regulations
- Disconnect with wildfire risk

Site-Specific Issues

- PM 2.5 non-attainment
- Cultural acceptance of fire
- Impacts on recreation
- Airshed coordinating groups
- Prior PF smoke events
- Concern about vehicular accidents, liability



Communication

- Challenges
 - Uncertainty about effectiveness
 - Conflicting and confusing messages
 - Internal priorities elsewhere
- Addressing Challenges
 - Consistent/coordinated mgmt across boundaries
 - Focused communication improvement
 - Institutional priority – do more
 - Coordinating messages across/within agencies
 - Utilizing social networks and resources
 - Fostering relationships with public
 - Engage in-person
 - Get involved in partnerships

Mail Surveys

- Over 1000 responses (24%)
- Respondents:
 - 58% male
 - Mean age: 61
 - 88% Caucasian
 - 33% some college or more
 - Middle class (\$40-60k)

Public Opinions about Smoke from Wildfire and Land Management Activities



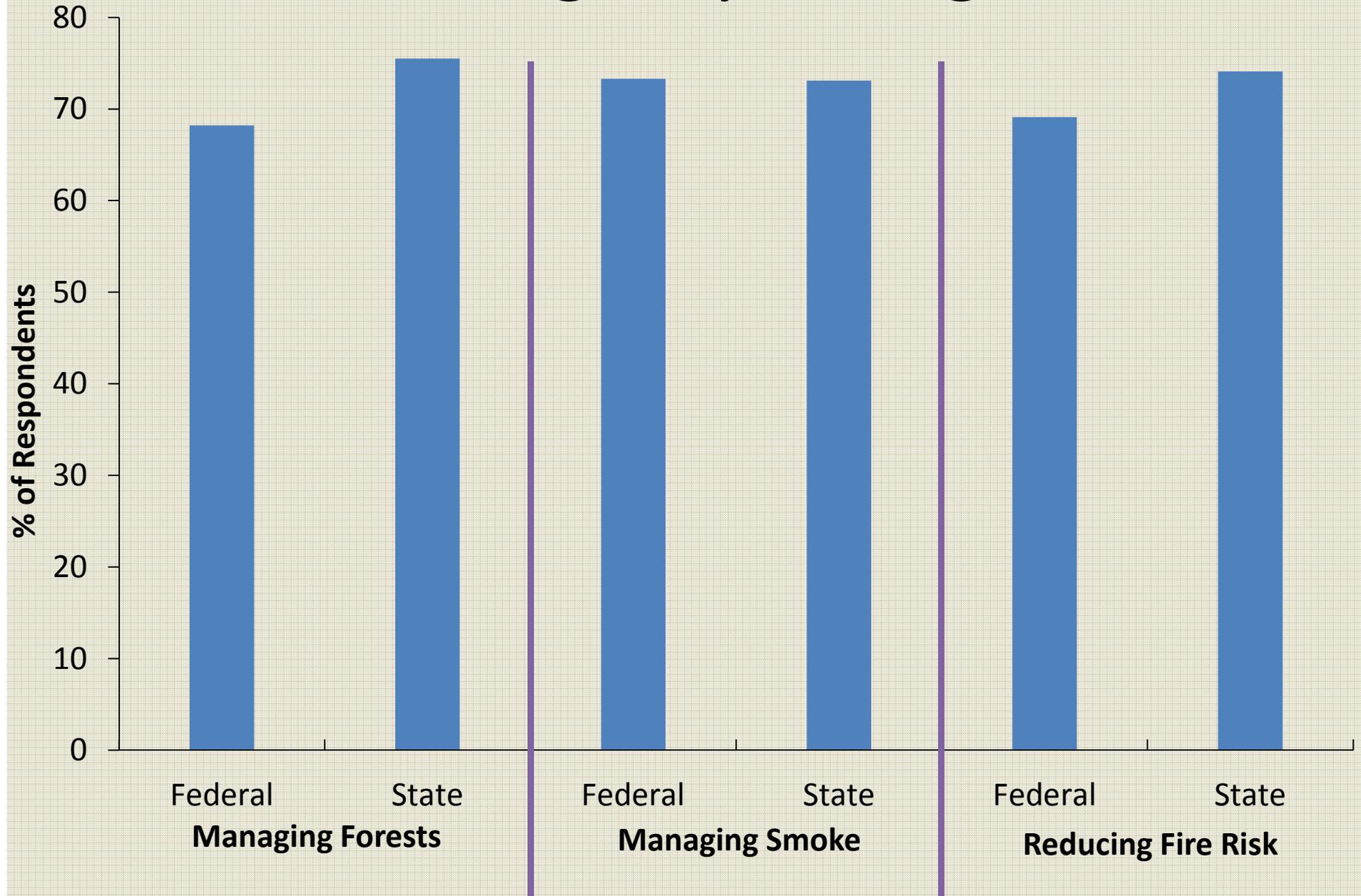
A Survey of Citizens in Southern Oregon

This questionnaire was developed by researchers at The Ohio State University and Oregon State University. The findings will be summarized to help forest managers and scientists better understand citizens' opinions of smoke management from fires. We are asking for your help because you live near public and private lands where management practices may result in smoke.

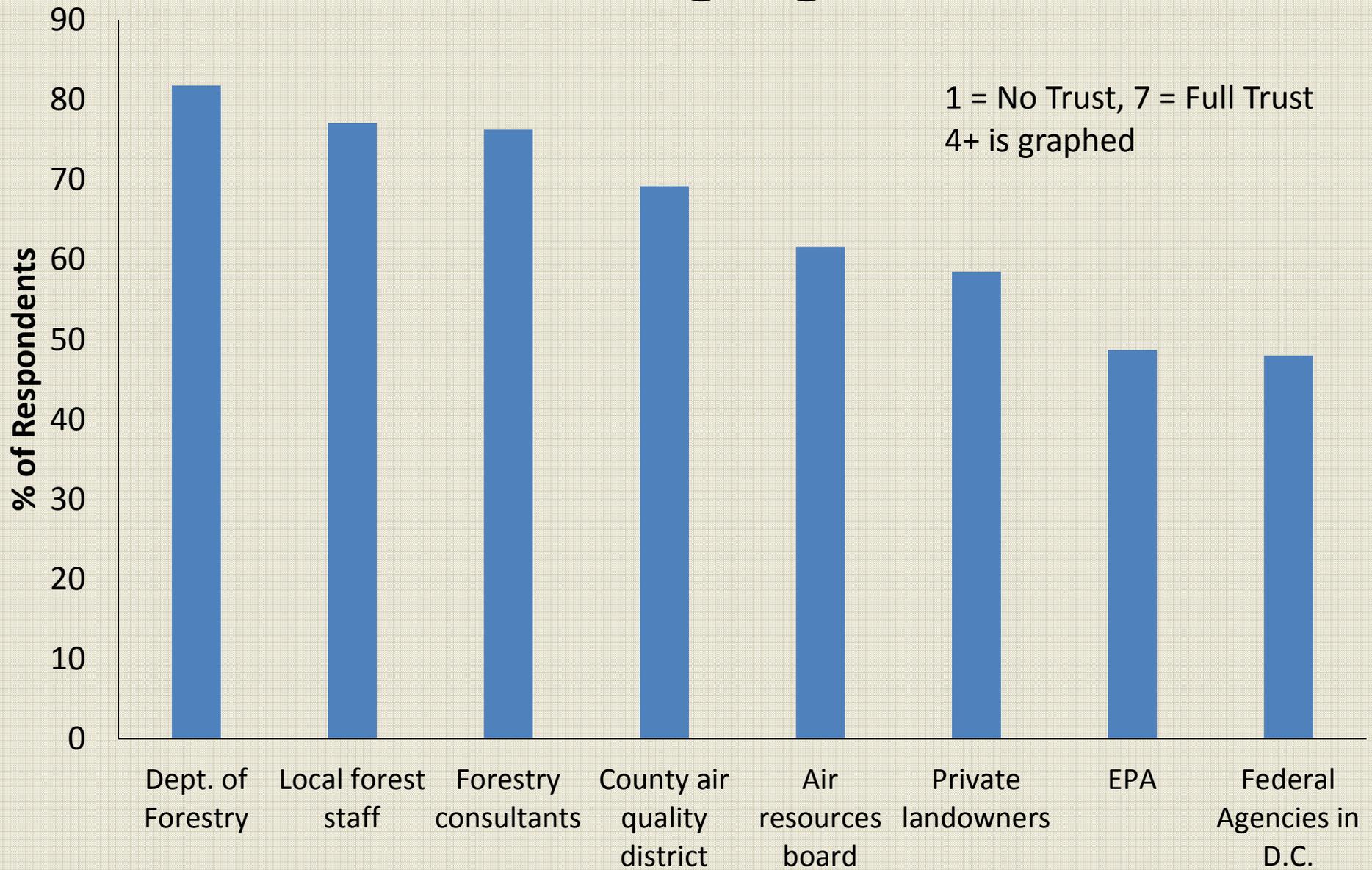
The first set of questions is about general land and smoke management. These are followed by questions about your trust in and communication with land and air management agencies. Finally, we ask a few questions about you so that we can better understand who our respondents are. All responses are confidential.

Agency Ratings

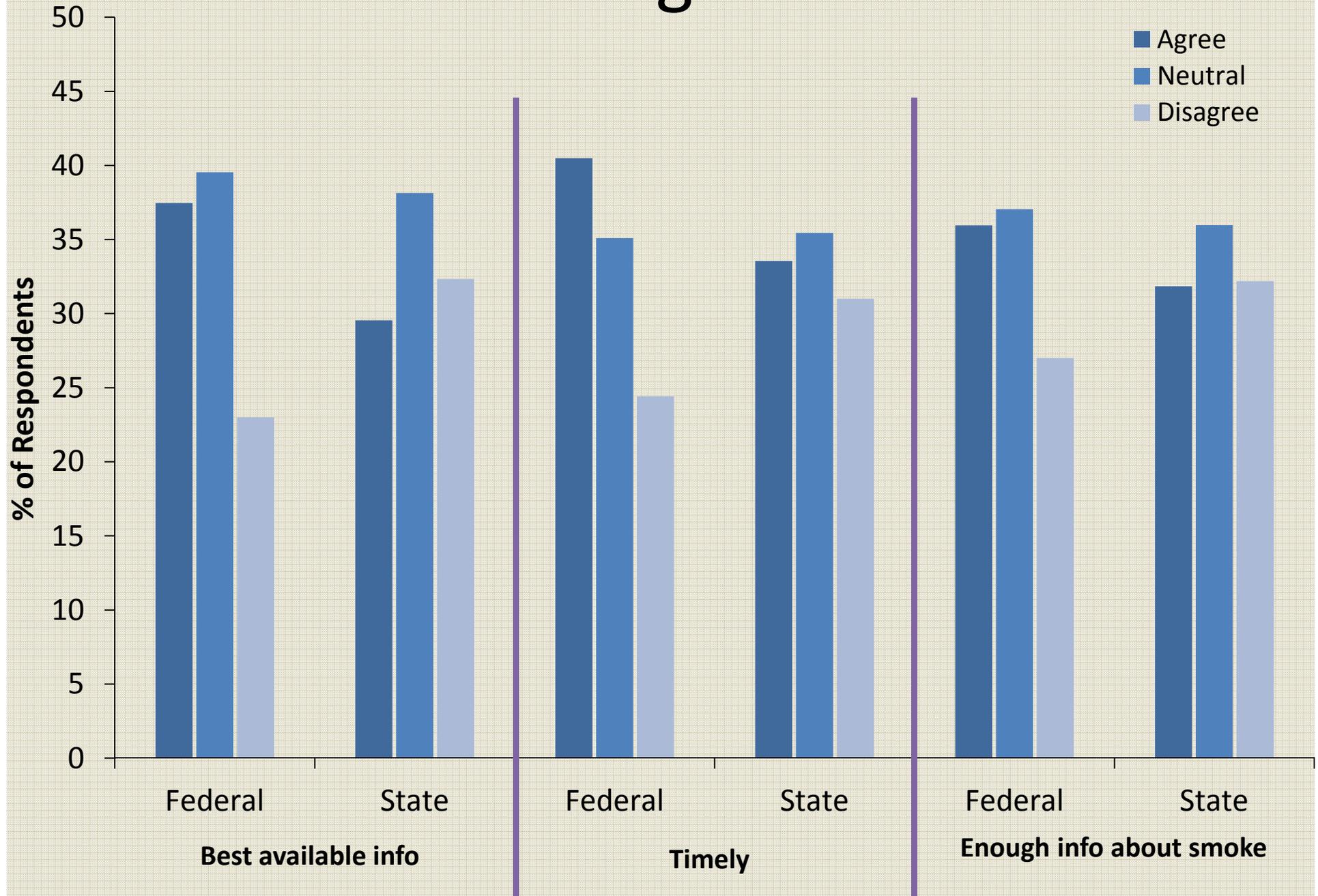
1 = Poor, 7 = Excellent
4+ is graphed



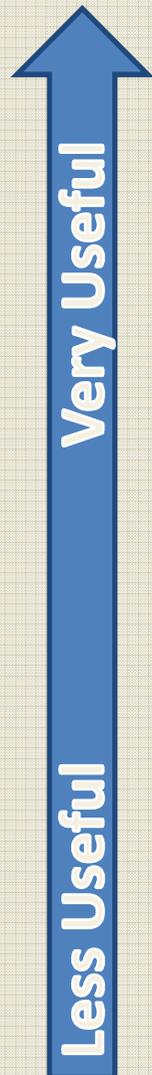
Trust Managing Smoke



Communicating about Smoke



Communication Source Usefulness

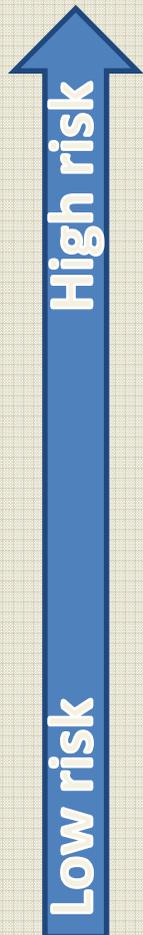


1. TV and radio public service messages ($m = 3.4$)
2. Newspapers/ Magazines
3. Family/Friends/Relatives
4. Billboards and road signs
5. Visitor center/ interpretive signs
6. Informational brochures
7. Air quality call line
8. Conversations with agency staff
9. General web pages
10. Forest Agency web pages
11. California air quality website
12. Newsletters
13. Educational workshops
14. Government public meetings
15. Environmental Protection Agency website
16. Flyers or door-hangers ($m = 2.1$)

1 = Not Useful,
5 = Very Useful

Perceptions of Risk from Smoke

- Risk - likelihood (1-7) X severity (1-7)



1. Family's health ($m = 21$)

2. My health

3. Negative impacts to scenery

4. Reduced tourism

5. Reduced opportunities for rec participation

6. Reduced ability to accomplish activities on my property

7. My travel (road closures)

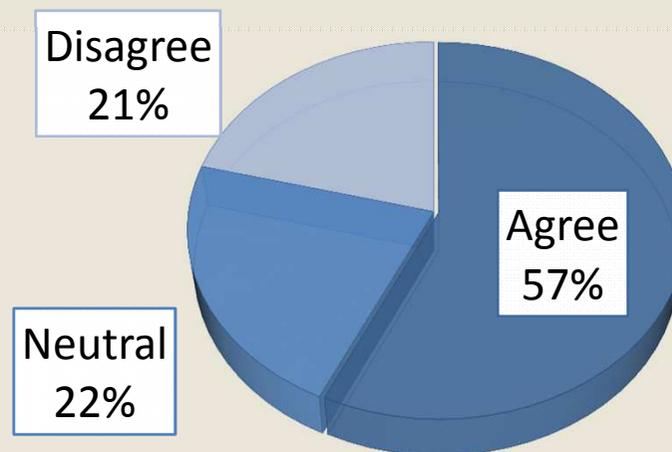
8. My ability to work ($m = 11$)

1 = No Risk, 49 = High Risk

Acceptance of Smoke

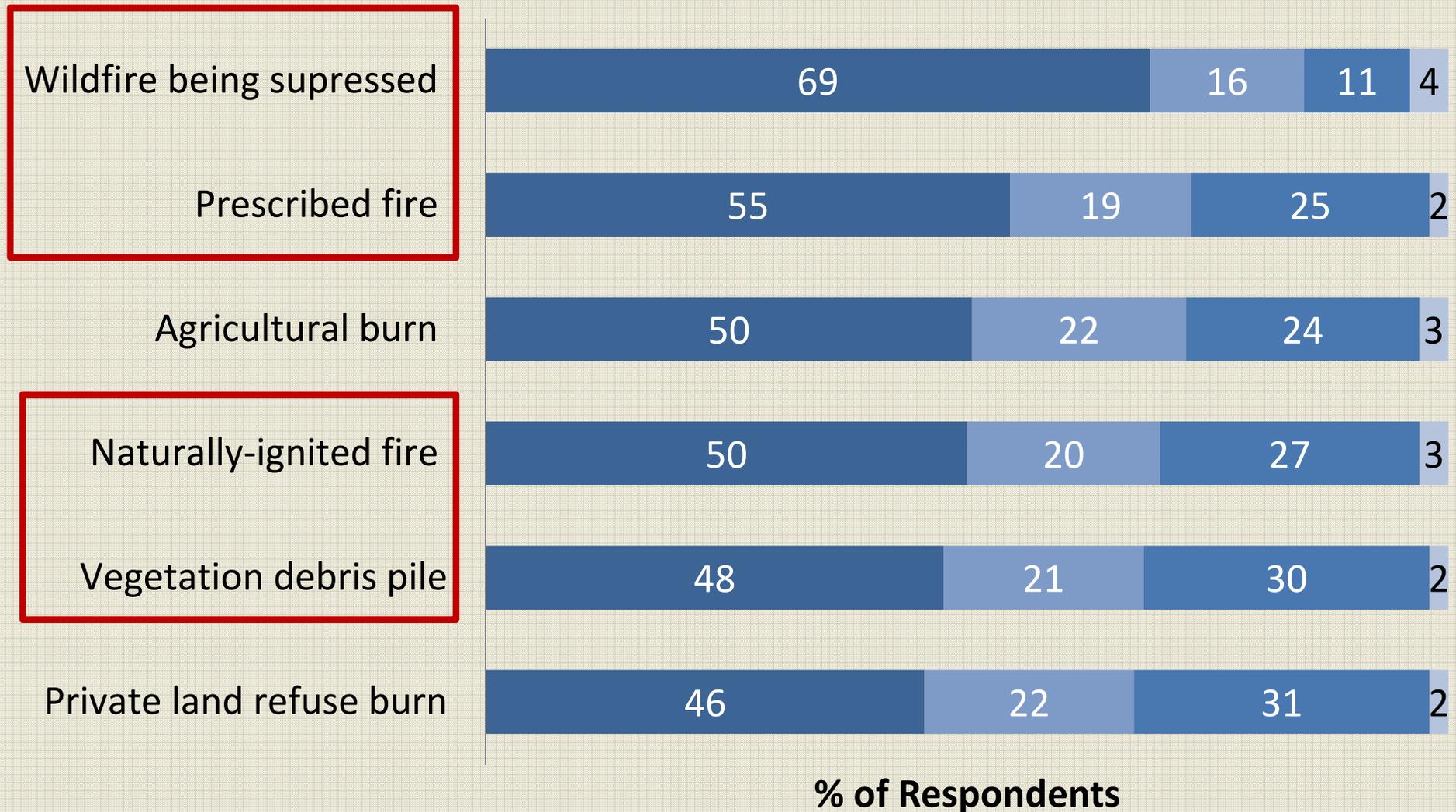
- What is acceptability?
 - Affective (values, emotions) and cognitive (knowledge, lack of understanding) comparison of alternatives – not as strong as support
- Most (71%) can figure out source of smoke

Acceptance of smoke influenced by fire type



Acceptance of Smoke: Fire Type

■ Agree ■ Neutral ■ Disagree ■ Don't know



What Influences Acceptance?

	Wildfire	Prescribed	Nat-Ig Mgmt	Pile
Smoke confidence	++	+++	+	
Smoke risk	---	---	---	---
Smoke impacts				
Fire type	+++			
Education			+++	
Age		-	-	
Comm experience				+
PF benefits		+++		
Adjusted R ²	.12	.41	.17	.19

p < 0.05, 0.01, 0.001

Implications for Large Fires

- Information needs are high
 - During and after large events
 - General awareness, PF benefits and planning, risk
- Communication can be more, better
- Impacts on health are of great concern
- Risk perception influences acceptance
- Competence managing smoke important

Ongoing Research...

- Repeat surveys in California
- Communication experiments in CA, OR, SC

Questions?

Christine.olsen@oregonstate.edu



Shasta-Trinity NF Fire