

Communities and Forests in Oregon: What Do People Think?

Joel Hartter

University of New Hampshire

Lawrence Hamilton

University of New Hampshire

Forrest Stevens

University of Florida

Russell Congalton, Mark Ducey, Lawrence Hamilton

University of New Hampshire



Research objectives

1. Understand how different landowner groups is associated with landscape change
2. Examine how change is related to forest conditions
3. Relationships between perceptions and forest management (including risks)



Gene Bieraugel

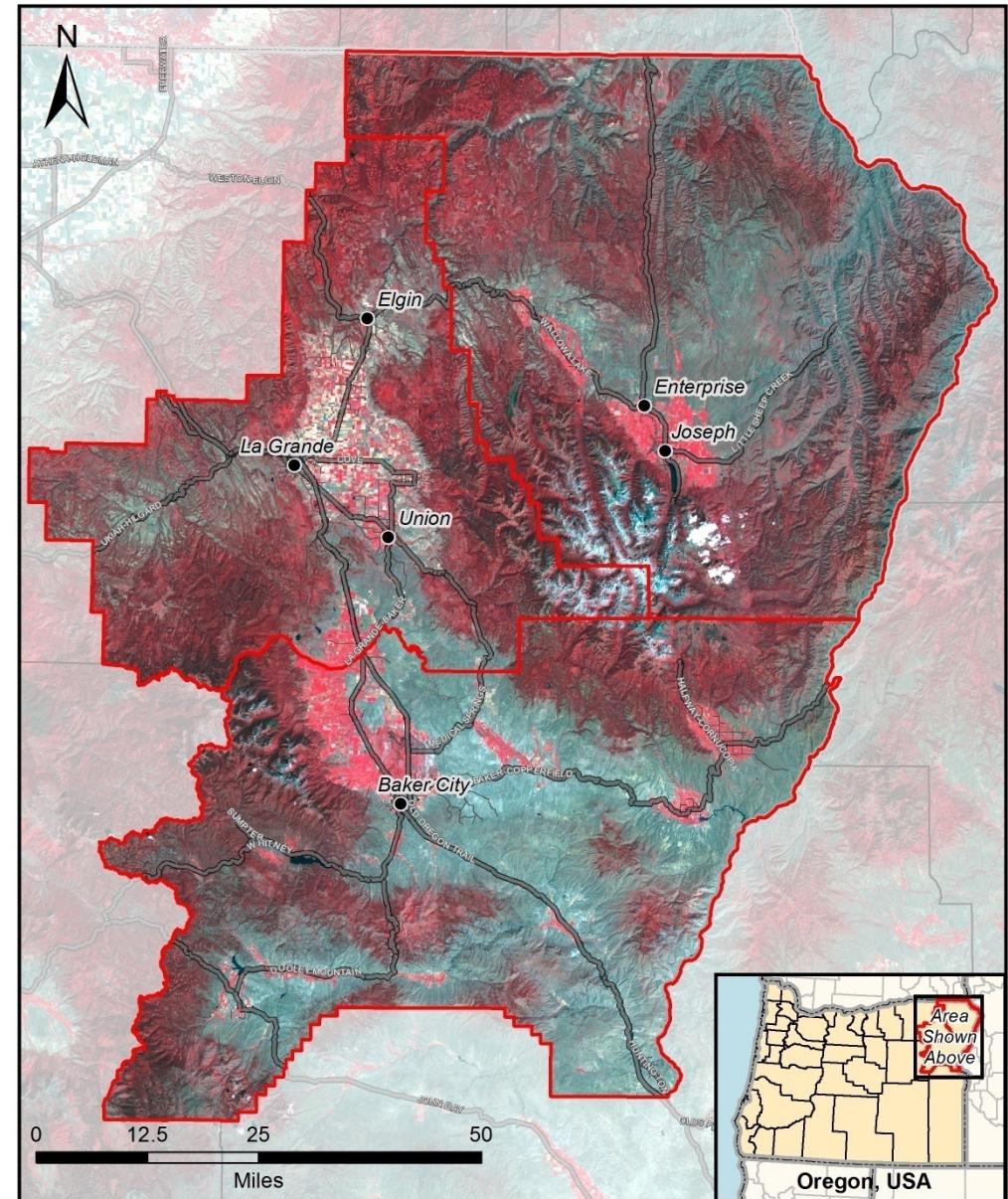
Study Area

Landsat TM
Aug 7, 16, 2010

Study Area - Color Infrared

Wallowa, Union, & Baker Counties
Oregon, USA

Dr. Joel Harter
Department of Geography
University of New Hampshire
Durham, NH 03824



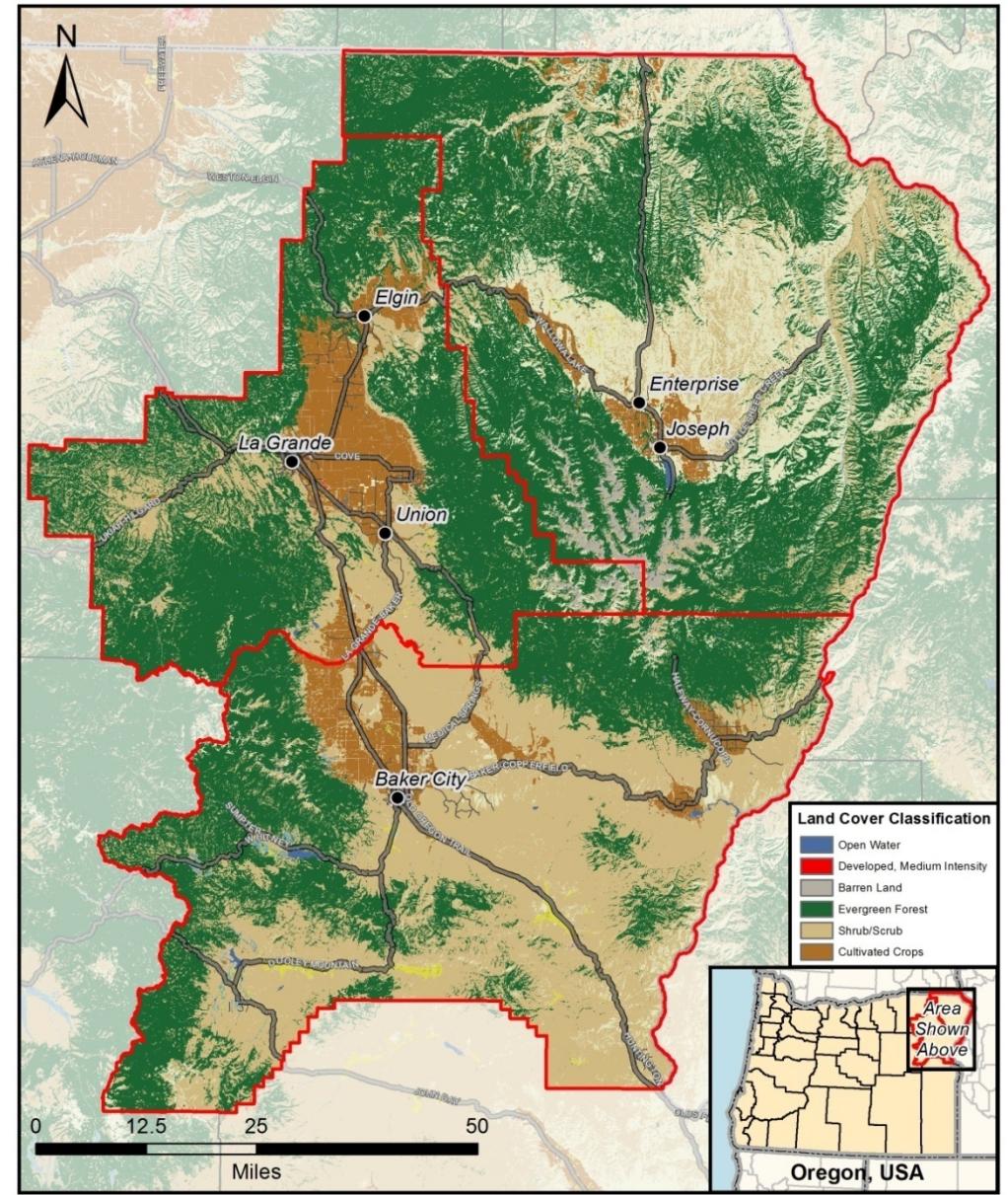
Study Area

NLCD 2006

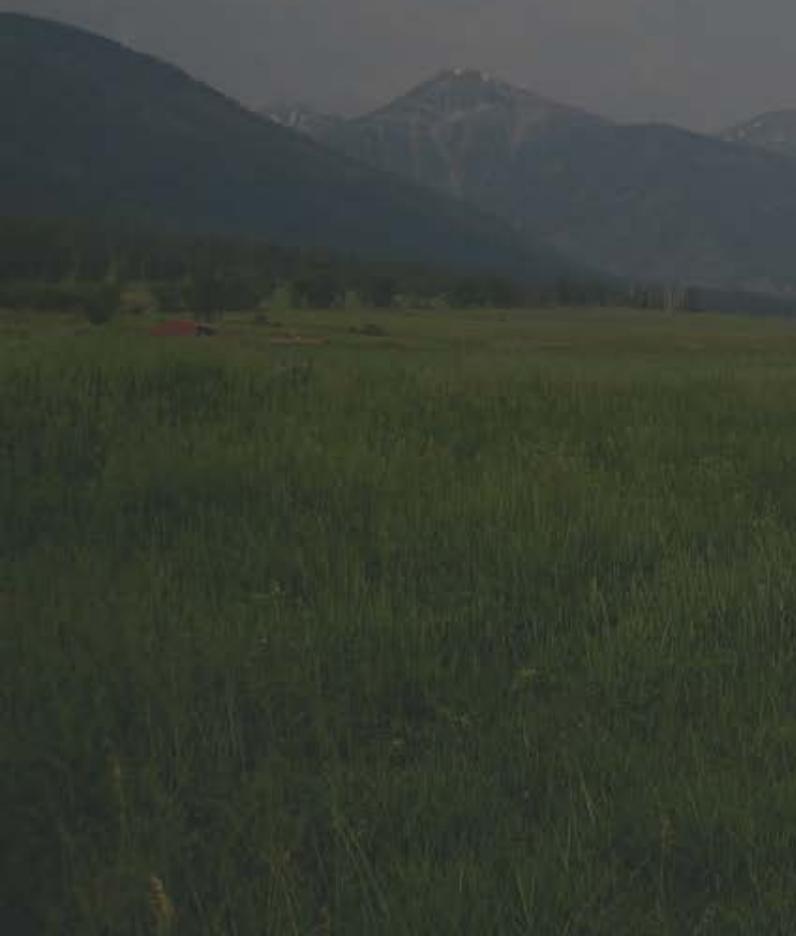
Study Area - Land Cover

Wallowa, Union, & Baker Counties
Oregon, USA

Dr. Joel Harter
Department of Geography
University of New Hampshire
Durham, NH 03824



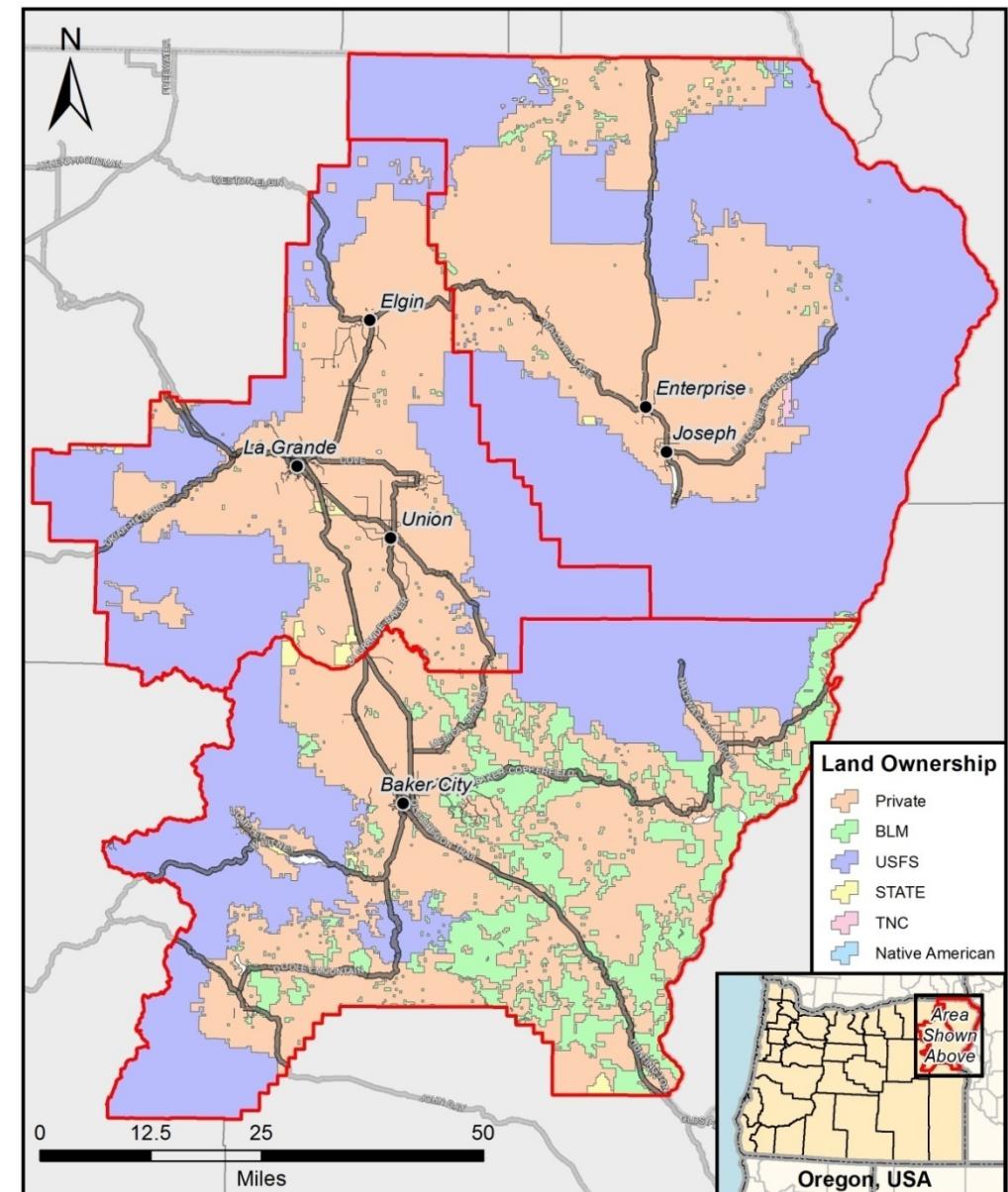
Study Area



Study Area - Ownership

Wallowa, Union, & Baker Counties
Oregon, USA

Dr. Joel Harter
Department of Geography
University of New Hampshire
Durham, NH 03824



Methods:

- Land Cover Change
- Forest Sampling
- Social Science



Social Science

Goals:

1. Examine concerns about the environment, community, and forests according to the landowners
2. How management relates to forest conditions

Social Science

General public survey (telephone)

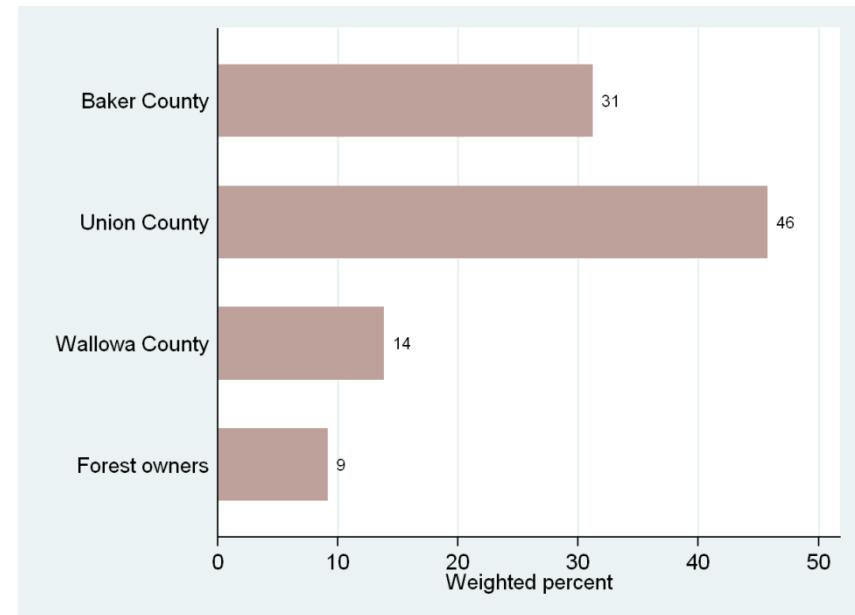
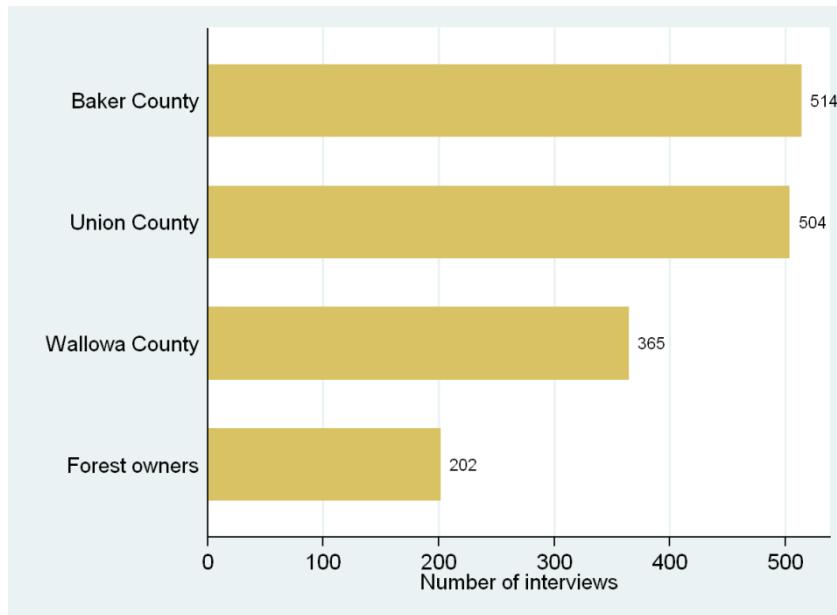
- Explore background factors (age, education), knowledge of environmental conditions, how general beliefs shape responses
- 35 fixed-choice questions, ~10 minutes
- Compared to national survey and other surveys (38 counties, 12,000 interviews)

Forest landowner survey (mail)

- Perceptions of threats, forest management, public lands
- 28 mostly fixed-choice questions

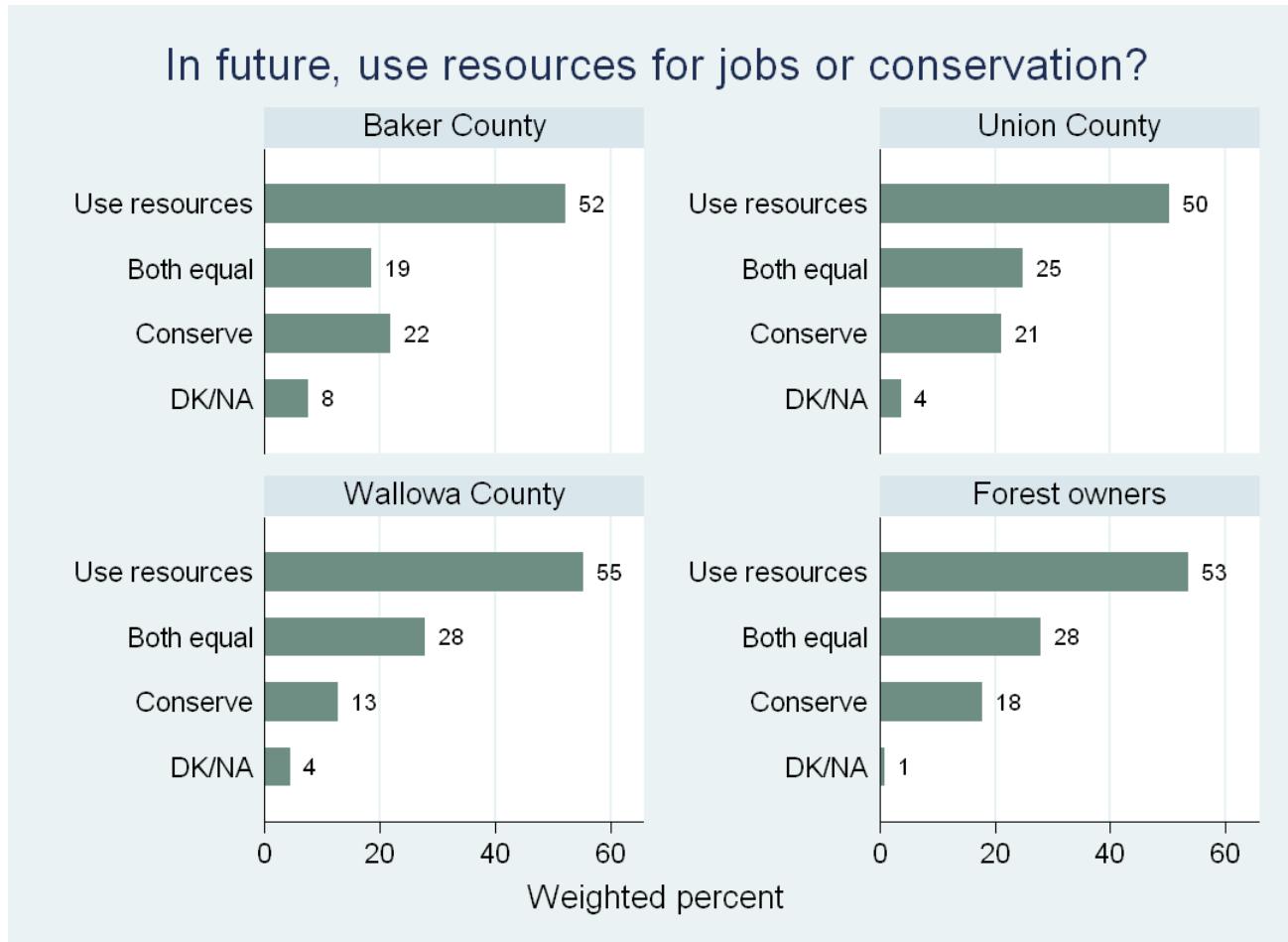
October 2011 CAFOR survey

Telephone interviews with 1,585 NE Oregon residents in Baker, Union and Wallowa counties — including 202 who own 10+ acres forest land (L).



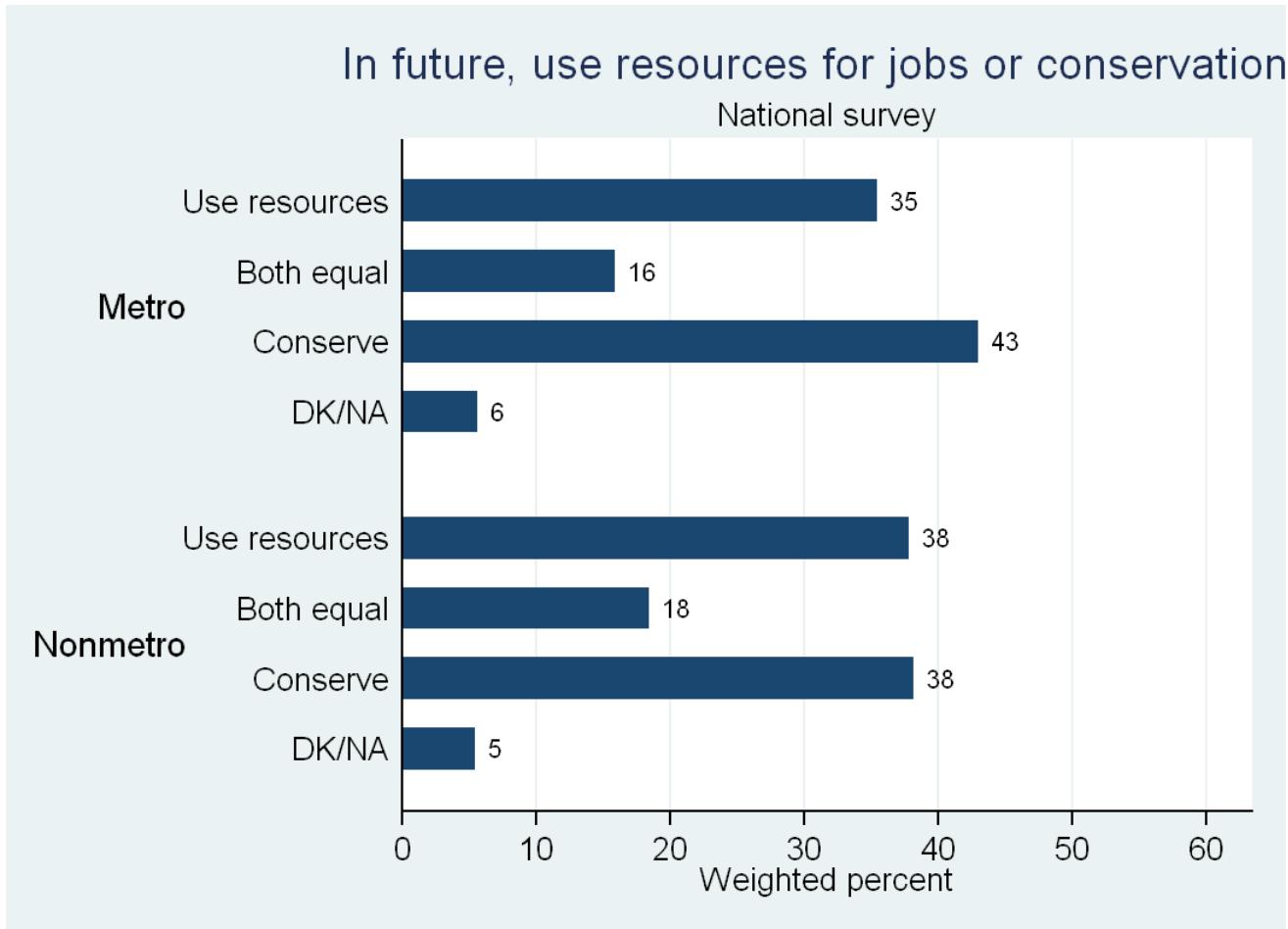
Weighting adjusts percentages to more fairly represent the populations of these counties (R).

For the future of your community, do you think it is more important to use natural resources to create jobs, or to conserve natural resources for the future?



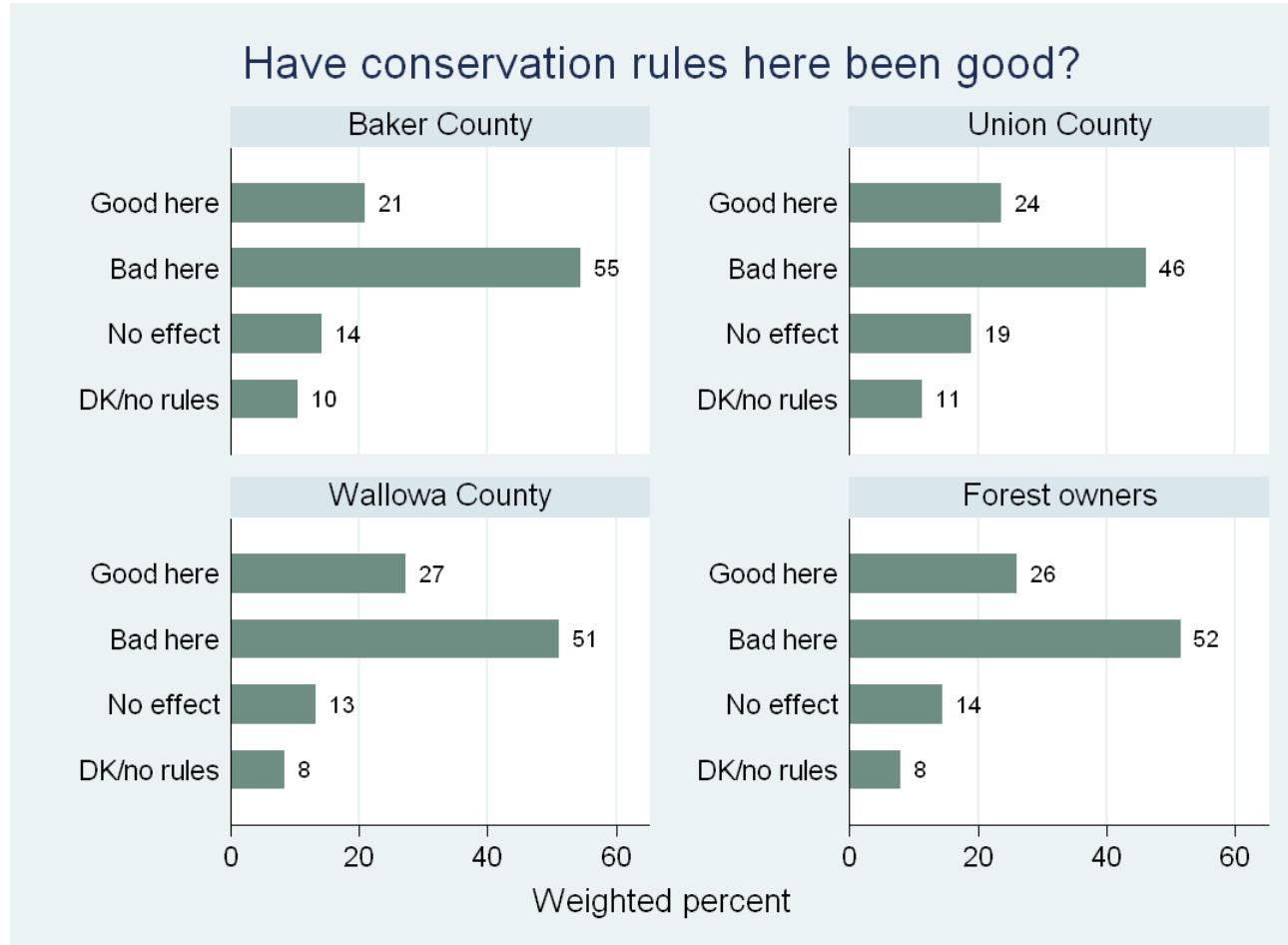
NE
Oregon
survey

For the future of your community, do you think it is more important to use natural resources to create jobs, or to conserve natural resources for the future?



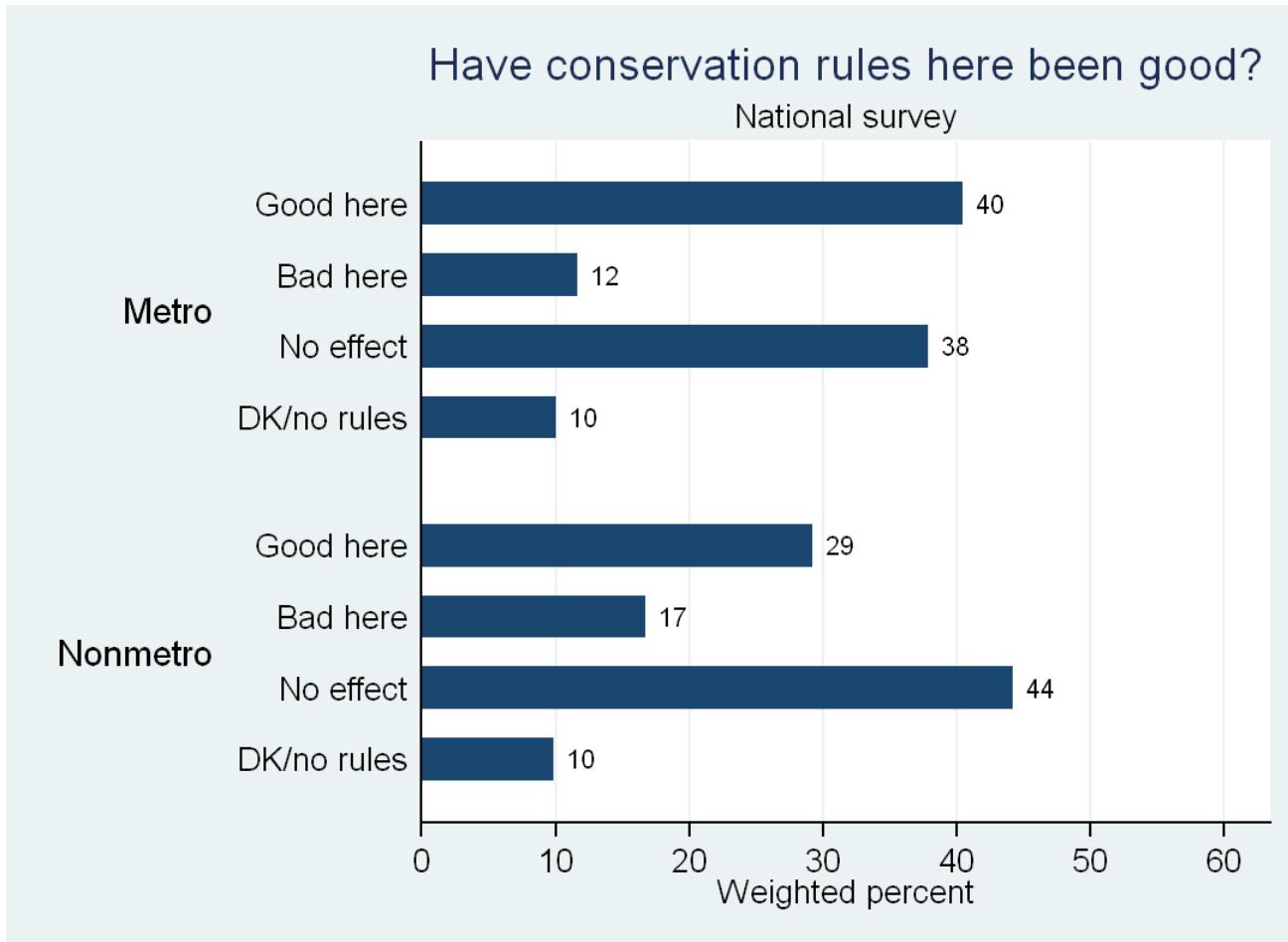
US
national
survey

Have conservation or environmental rules that restrict development generally been a good thing for your community, a bad thing, or have they had no effect here?



NE
Oregon
survey

Have conservation or environmental rules that restrict development generally been a good thing for your community, a bad thing, or have they had no effect here?

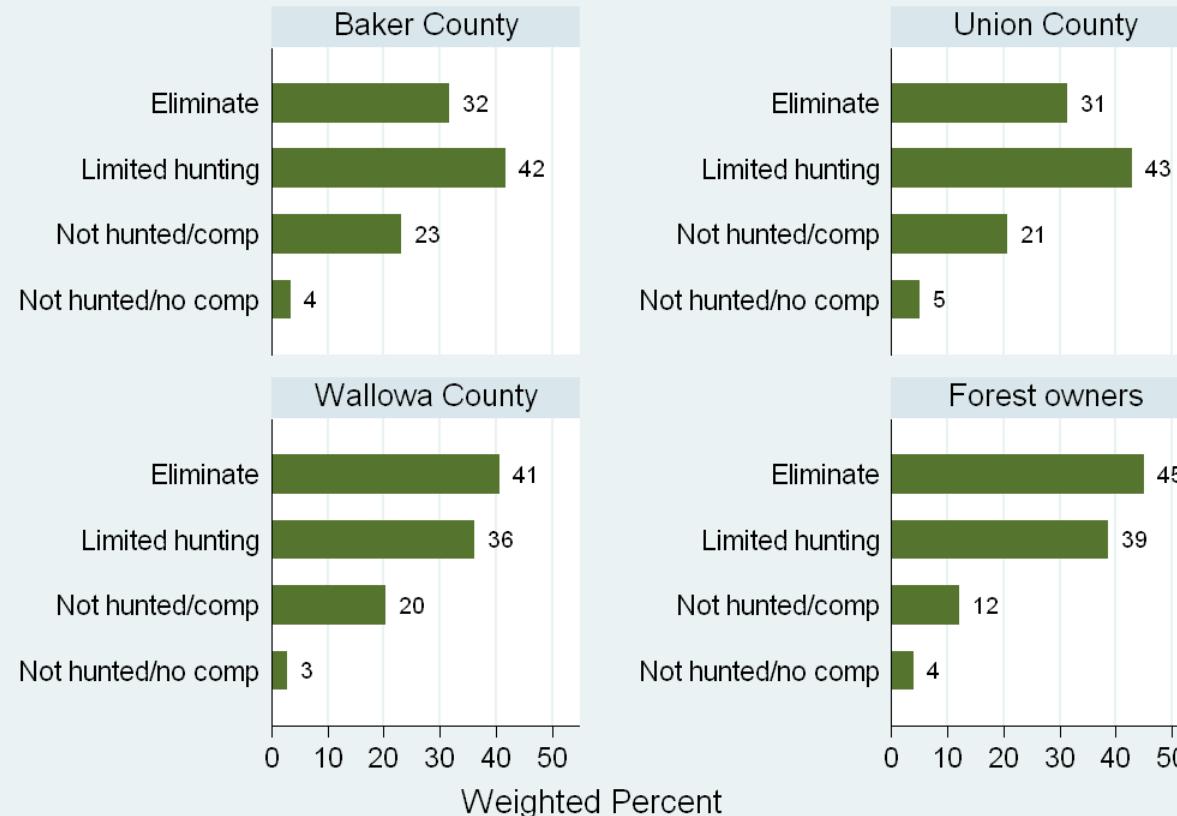


US
national
survey

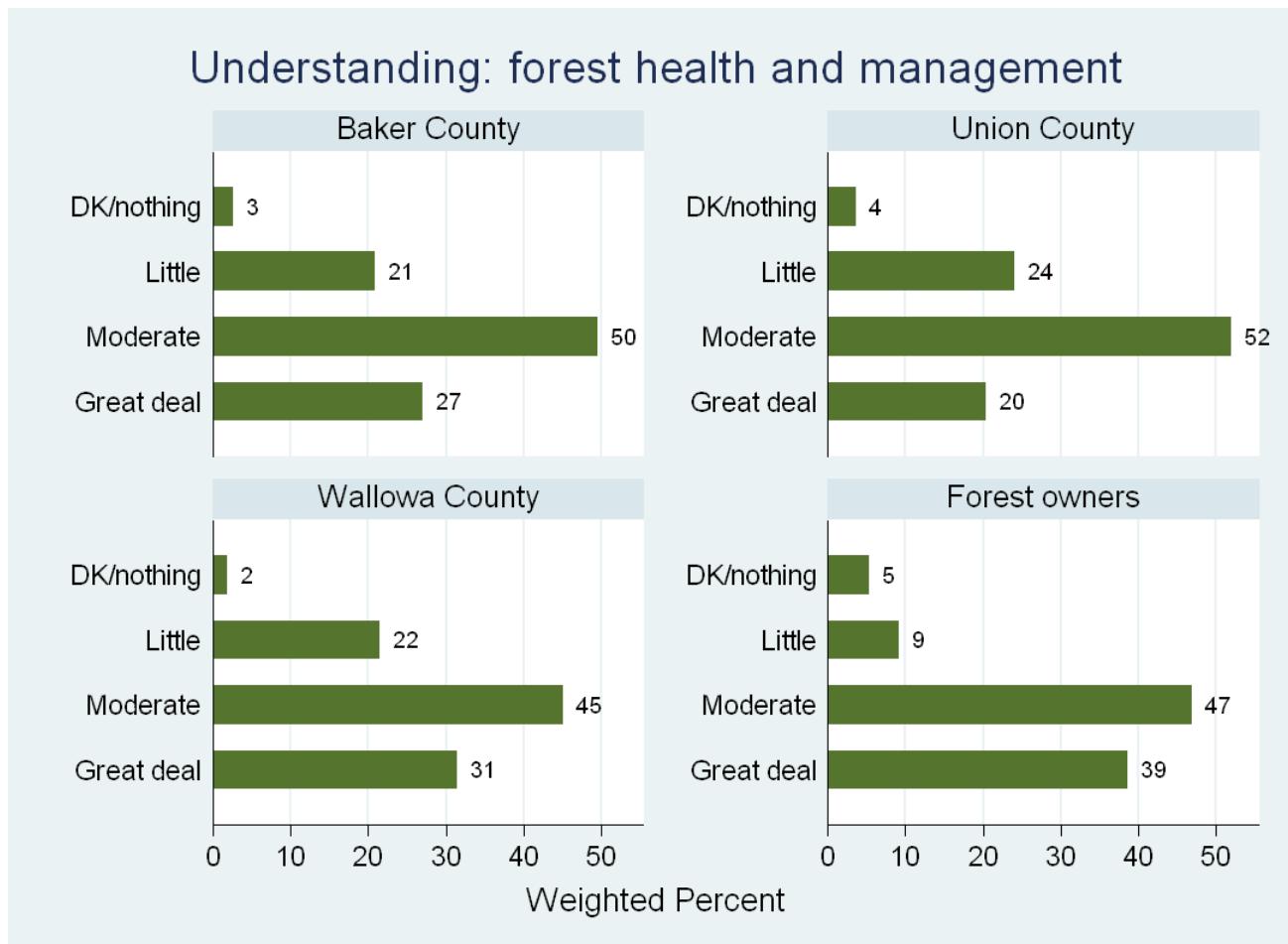
- Wolves should be eliminated from eastern Oregon
- Limited hunting of wolves should be allowed
- Wolves should not be hunted, but landowners compensated for losses
- Wolves should not be hunted, no compensation needed.

**NE
Oregon
survey**

Personal belief about wolves in E Oregon



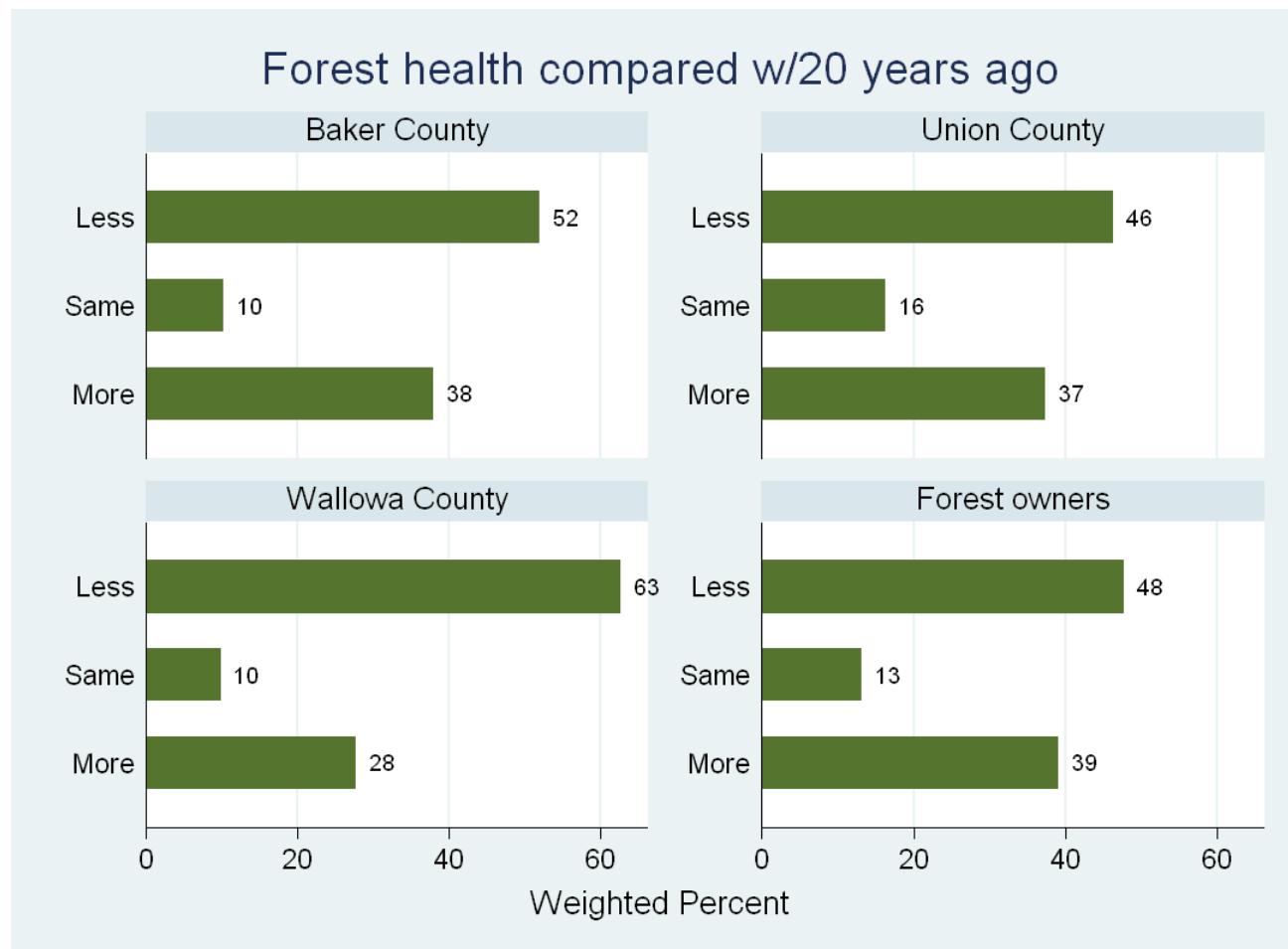
How much do you feel you understand about forest health and management?



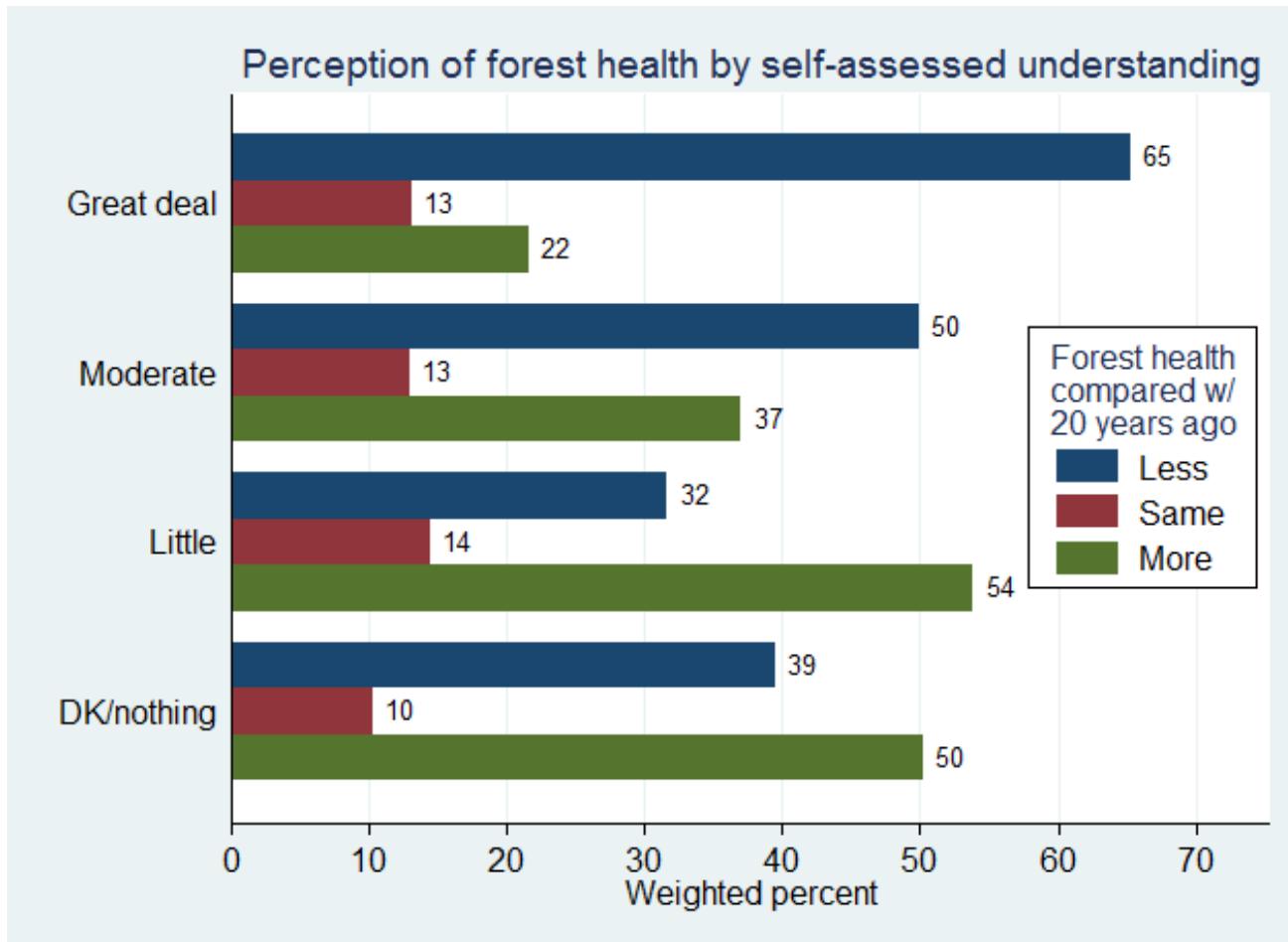
NE
Oregon
survey

Do you think that the forests in your area are less healthy or more healthy than 20 years ago, or is forest health about the same?

NE
Oregon
survey

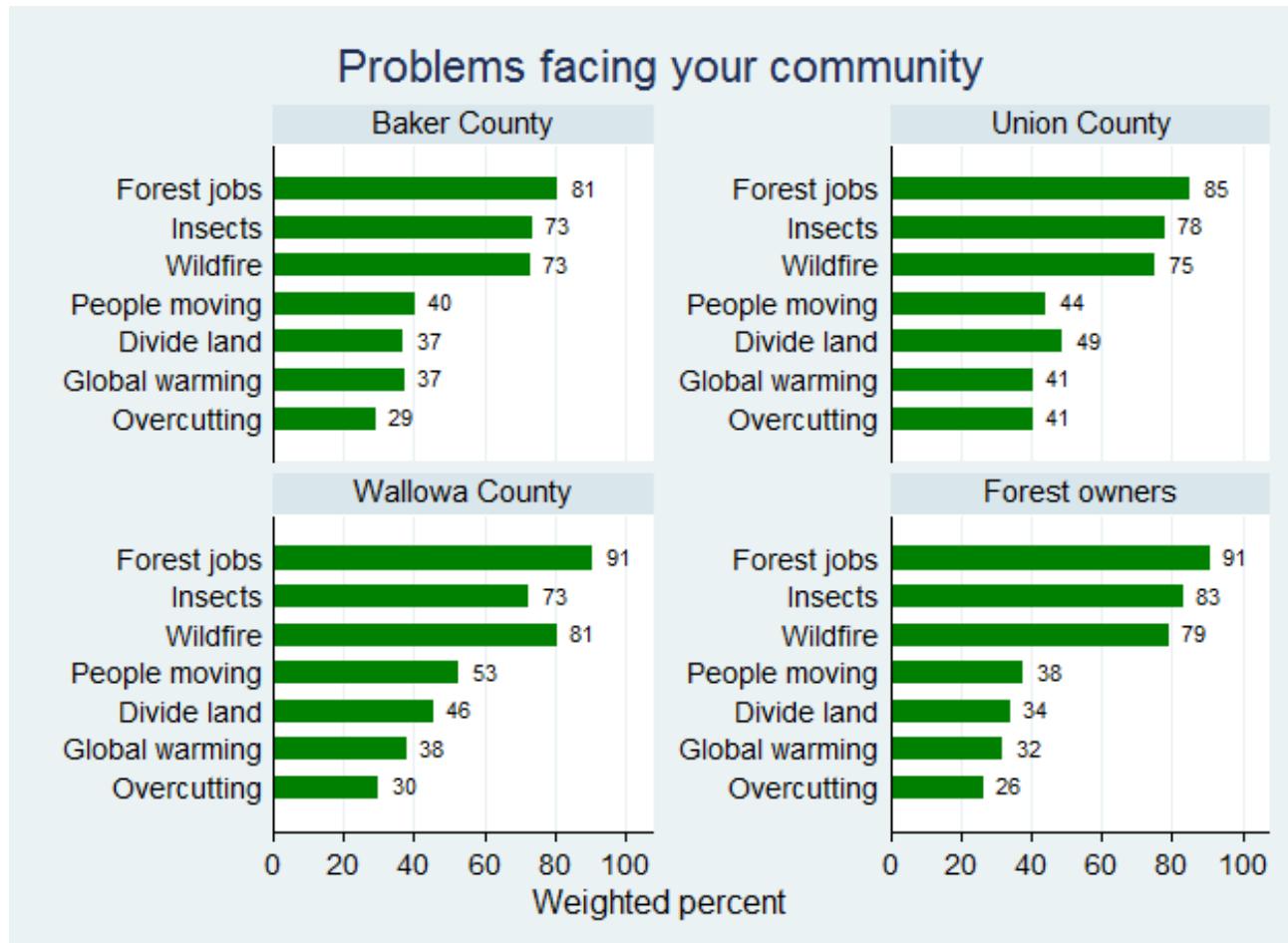


Is forest more or less healthy, by self-assessed understanding



NE
Oregon
survey

For each of the following, do you think that these problems pose a serious threat to you or your community?

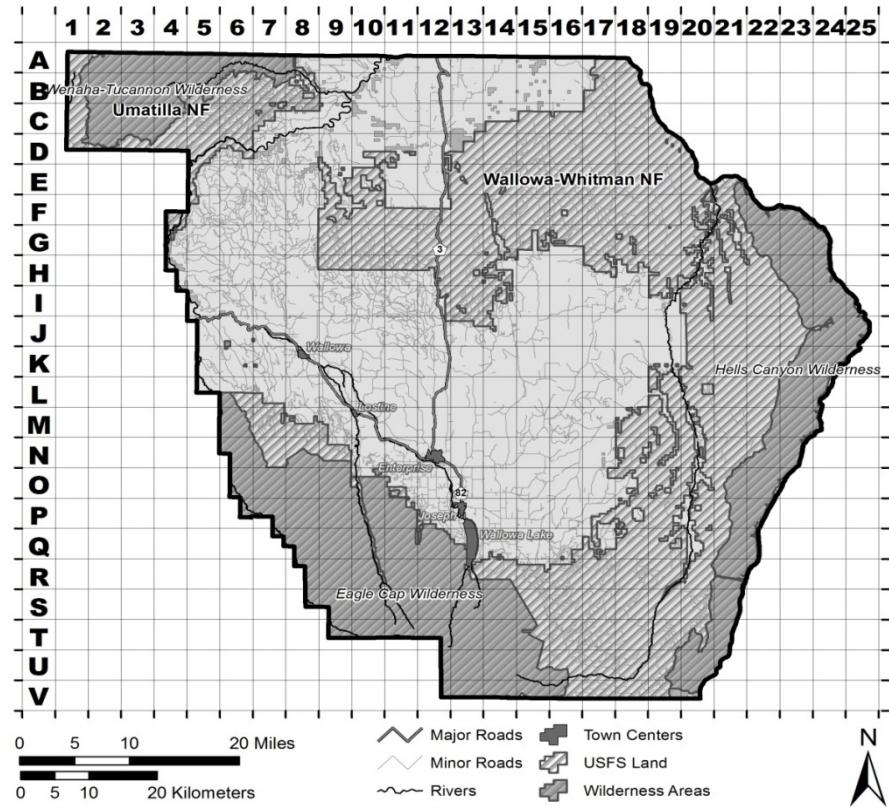
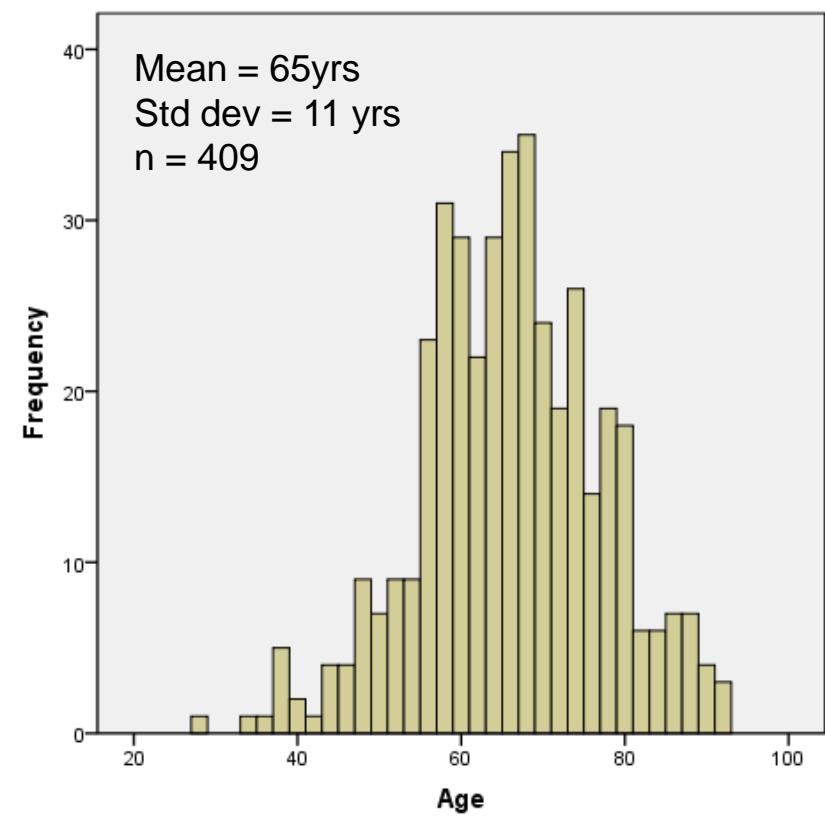


Telephone Survey Conclusions

- “Conservation” and “environmental” have connotations in NE OR
- Little difference between counties, but Wallowa does stand out
- Owning forest was not a significant predictor in response
- Key predictors tend to be background factors:
 - Age, political affiliation, education
 - Newcomer status

Mail Survey

- Sept-Nov 2012
- 2133 sent (2072 eligible)
- 454 completed (22% response rate)
- Questions about risk, public lands, management



Mail Survey

- Sept-Nov 2012
- 2133 sent (2072 eligible)
- 454 completed (22% response rate)
- Questions about risk, public lands, management

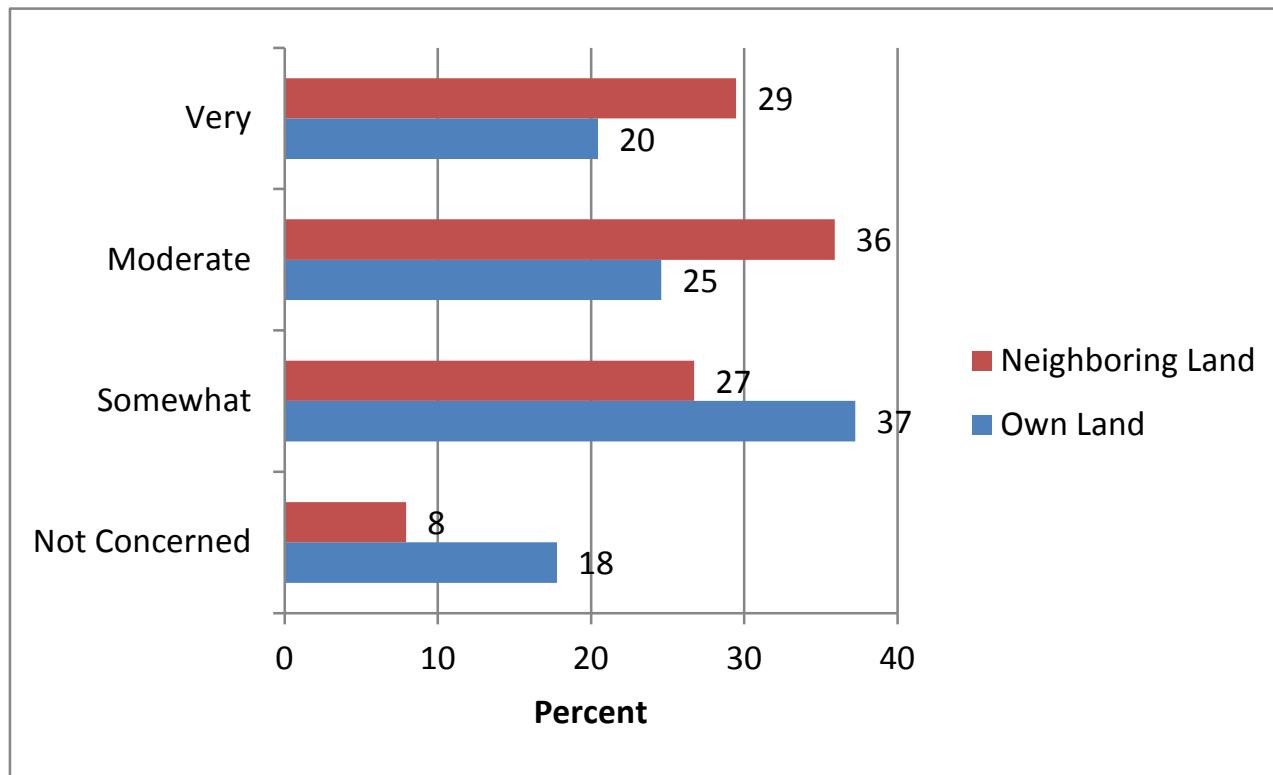
Forest Objectives	Mean	Median	Mode
Investment for future	3.12	3	2
Recreation/ hunting/ wildlife	3.09	3	3
Grazing/ ranching	3.65	4	5
Farming (e.g. row crops, hay, grass seed, alfalfa)	5.18	6	6
Place to live	2.82	2	1
Timber	2.95	3	2
Other	4.21	4	7

Forest Services	Mean	Median	Mode
Clean water	3.42	3	1
Soil quality	6.22	6	6
Traditional forest products (e.g. timber)	4.56	4	1
Wildlife habitat	3.36	3	2
Carbon storage	7.87	8	12
Cultural/historical significance	8.57	9	10
Air quality	4.94	5	3
Scenic beauty	5.16	5	5
Non-timber forest products (e.g. mushrooms)	8.69	9	11
Hunting	6.35	6	6
Other recreation	7.53	8	9
OHV	9.77	11	12

General Risk Perception

- Threats (most threatening to least): wildfire, insects, diseases, drought, neighbor's land, extreme weather, climate change

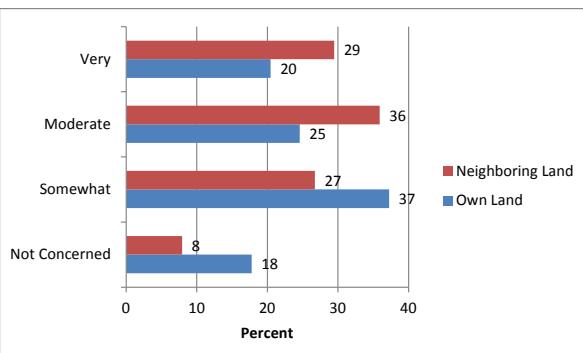
Concern of Forest Conditions



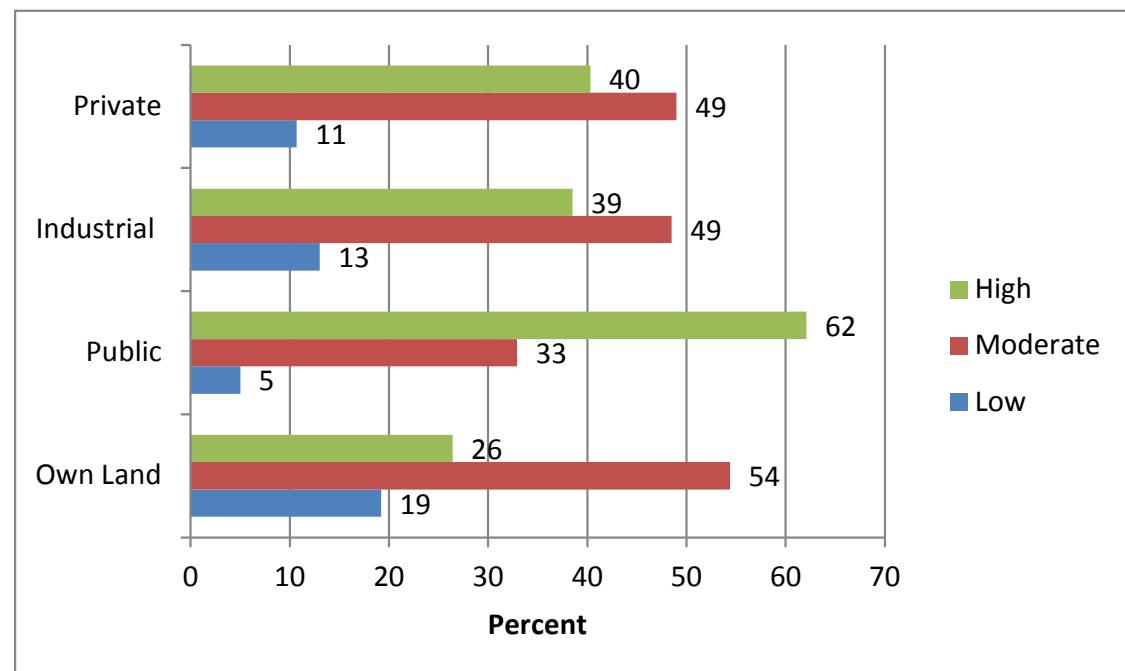
General Risk Perception

- Threats (most threatening to least): wildfire, insects, diseases, drought, neighbor's land, extreme weather, climate change

Concern of Forest Conditions



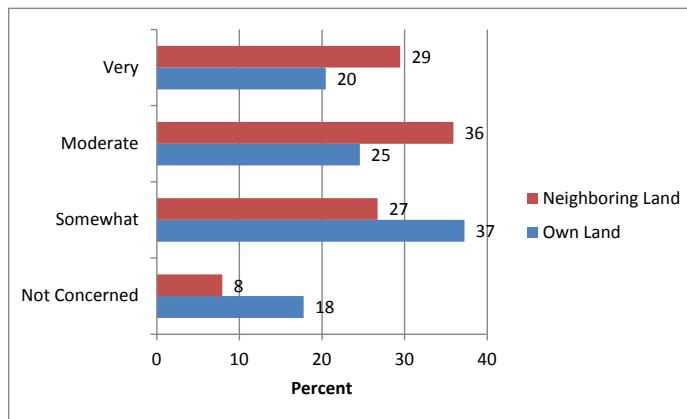
Risk of Wildfire



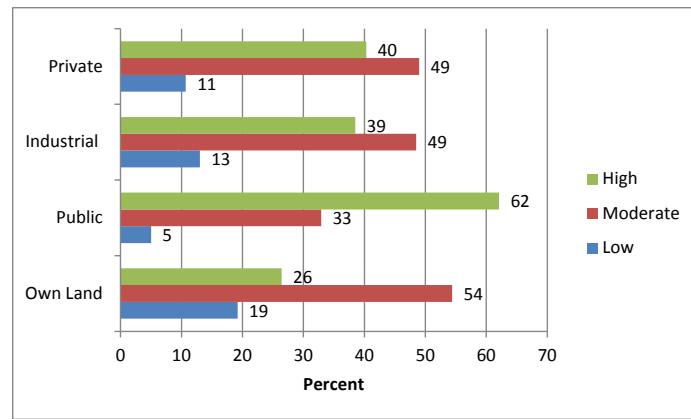
General Risk Perception

- Threats (most threatening to least): wildfire, insects, diseases, drought, neighbor's land, extreme weather, climate change

Concern of Forest Conditions



Risk of Wildfire



- Key predictors:
 - If you work on your land full time, have experience with wildfire, have participated in extension within the last 5 years, and work in the forest industry, the odds of you moving up a category (e.g., going low to medium or medium to high) are greater.
 - No impact of employment, education, income, political party

Perceptions about public lands

- Perceived risk of wildfire on public lands:
 - High: 62%, Moderate: 33%
- Management of Public lands near my land are managed well
 - 64% disagree
- Management of public lands as a whole are managed well
 - 74% disagree

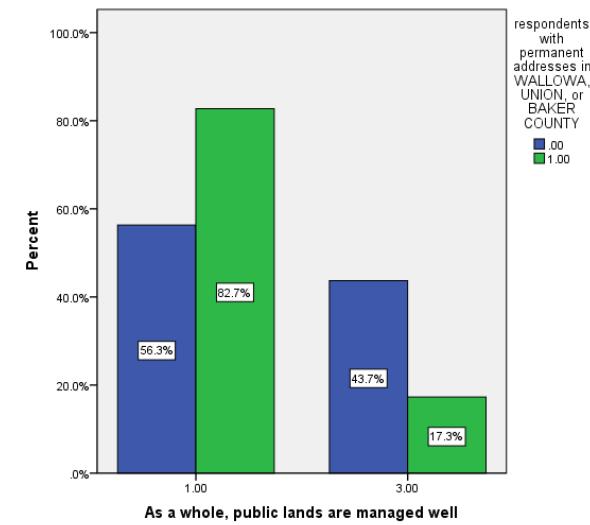
Predictor	Public Lands as a Threat	Public Lands Managed Well (Near)		Public Lands Managed Well (Whole)	
Age	-0.032	**			
WUB Resident	-0.2	n.s.	-0.594	*	-1.129 ***
Work on land full time	0.637	*	-0.53	+	
Experience with fire	0.986	***	-0.727	**	-0.618 *
Participant in Extension w/i 5 yrs	0.65	*	-0.73	*	-0.554 +
Work in Forest Industry	0.842	**			-0.579 +
n observations	302		284		303
Pseudo R square (Nagelkerke)	0.189		0.133		0.148

+ statistically significant at alpha = 0.1

* statistically significant at alpha = 0.05

** statistically significant at alpha = 0.01

*** statistically significant at alpha = 0.001



Notes:

Shown are reduced models

Gender, age, education, political party, income not significant

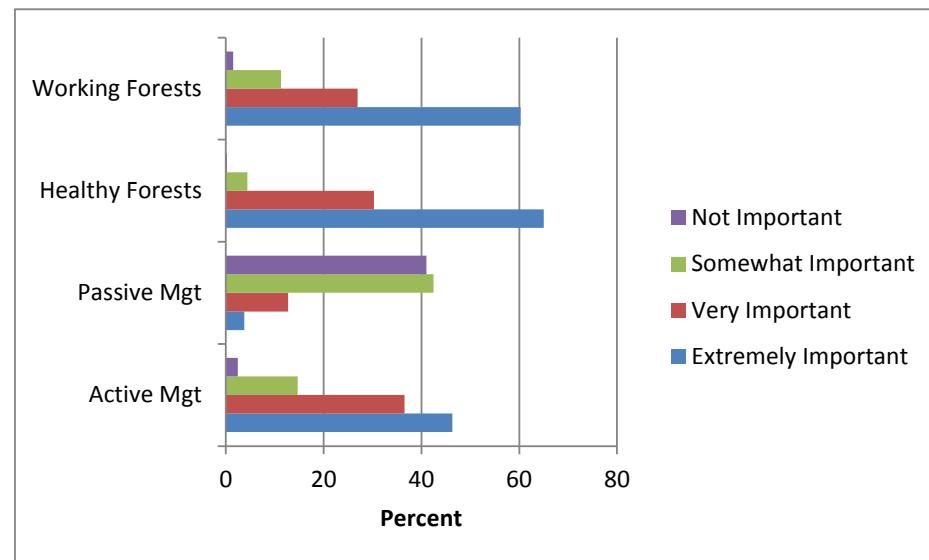
Does concern mean action?

- Concern for neighbor's lands is important
 - Participation in extension

Predictor	Stand Tending			Disease/Insect Mgt			Pre-Commercial Thin		
	Coef.	Inc/Likely	Sig.	Coef.	Inc/Likely	Sig.	Coef.	Inc/Likely	Sig.
Concern for neighbor's conditions (moderate-very)	.774	Inc	**	.721	Inc	*	.779	Inc	*
High concern for neighboring public land	.340		n.s.	.585	Inc	*	.343		n.s.
Work on land full time	-.290		n.s.	-.121		n.s.	.364		n.s.
Experience with fire	.332		n.s.	.503	Inc	+	.297		n.s.
Participant in Extension w/i 5 yrs	1.100	Inc	***	.771	Inc	**	1.179	Inc	***
n observations	329			327			327		
Pseudo R square (Nagelkerke)	0.149			0.136			0.178		

Working Landscapes

- Background factors become important



Predictor	Active Mgt			Passive Mgt			Healthy Forests			Working Forests			Conservation		
	Inc/Dec Coef.	Likely	Sig.	Inc/Dec Coef.	Likely	Sig.	Inc/Dec Coef.	Likely	Sig.	Inc/Dec Coef.	Likely	Sig.	Inc/Dec Coef.	Likely	Sig.
Political Party															
Party = Dem	-0.582	Dec	*	0.874	Inc	***	-0.499	Dec	*	-0.701	n.s.	2.644	Inc	***	
Party = Ind	-0.233		n.s.	0.825	Inc	***	-0.07		n.s.	0.184		1.821	Inc	***	
< 6mos in county	-0.102		n.s.	0.513	Inc	*	-0.425	Dec	*	-0.602		0.75	Inc	*	
Work on land full time	0.041		n.s.	0.169		n.s.	0.042		n.s.	-0.251		0.632	Inc	+	
Experience with fire	0.698	Inc	**	0.107		n.s.	0.247	Inc	*	0.53	Inc	*	-0.3		n.s.
Participant in Extension w/i 5 yrs	0.855	Inc	***	-0.578	Dec	*	0.539	Inc	*	0.553		n.s.	-0.625	Dec	+
n observations	357			350			356			356			308		
Pseudo R square (Nagelkerke)	0.103			0.092			0.051			0.09			0.238		

+ statistically significant at alpha = 0.1

* statistically significant at alpha = 0.05

** statistically significant at alpha = 0.01

*** statistically significant at alpha = 0.001

Mail Survey Conclusions

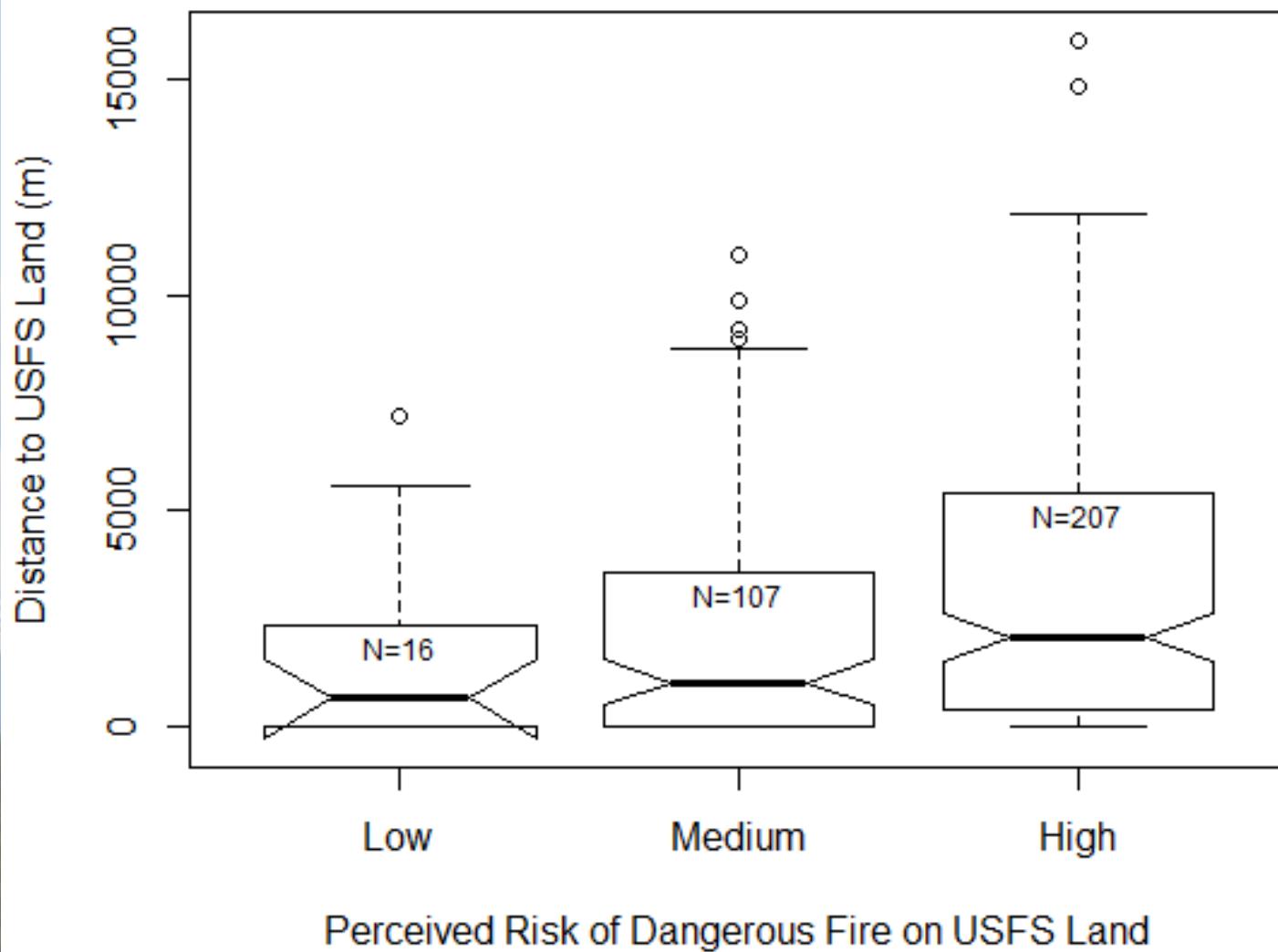
- There is strong concern about wildfire and an even stronger concern about public lands.
- Among landowners, personal experiences and situation trump ideology (unlike general public may have less invested).
- Who your neighbors are matters
- People who participate in Extension have different sensibilities
- Not strongly controlled by background factors (e.g., gender, age, political party, wealth) in most cases

Conclusions

- Disconnect with scales – general public (more abstract and removed) and landowner (where change occurs)
 - Background factors vs. experience
- Combine data sources to understand more place-related nuances
- Creative, adaptive, and cooperative solutions to address working landscapes needed

--	--

10b. How high do you consider the risk of a dangerous fire occurring on neighboring public land?



Acknowledgements



- USDA NIFA #2010-67023-21705



- Wallowa Resources, Oregon State University Forestry Extension, USFS, ODF, Forest Capital



- Jesse Abrams, John Warness, Bruce Dunn, many private landowners, many logging contractors, OSU Ag Exp Station, Wallowa and Baker County NRAC (& Union and Wallowa County First Responders)



- Carsey Institute
- Mazamas
- NSF IGERT

Thank you!

Questions?

joel.hartter@unh.edu