



Scaling up fire resilience in a complicated world: working within human institutions

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Survey implementation

All Lands Approach

“The threats facing our forests don’t recognize property boundaries. So, in developing a shared vision around forests, we must also be willing to look across property boundaries. In other words, we must operate at a landscape scale by taking an ‘all-lands approach.’”

- *Tom Vilsack, US Secretary of Agriculture, 2009*



Research Questions

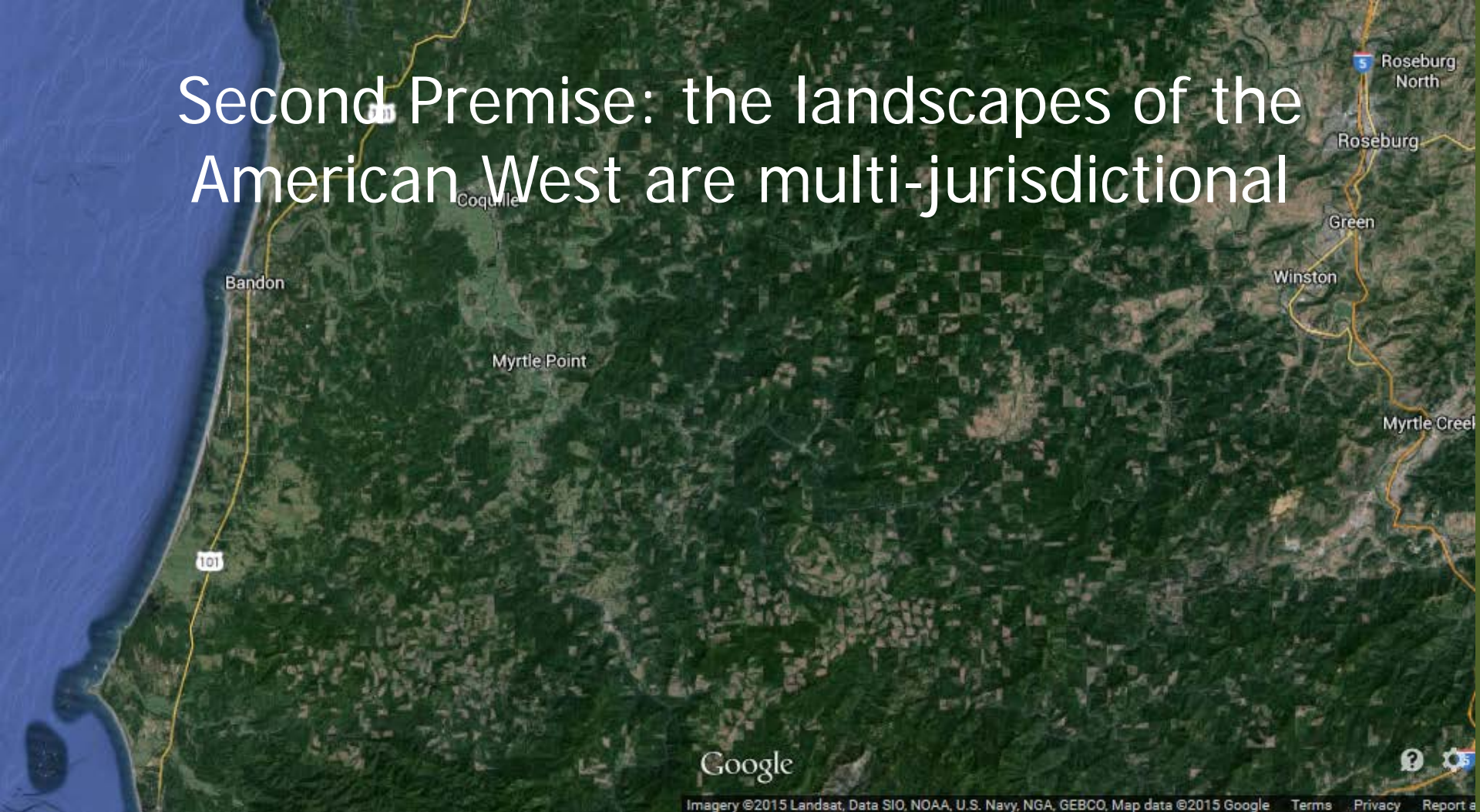
What is the *all lands approach* in its current form?

What are the social factors that enable all lands approaches to forest restoration to reduce fire risk?

First Premise: to restore fire
resilience in the American West,
we need to strategically manage
across landscapes & at greater
scales



Second Premise: the landscapes of the American West are multi-jurisdictional



National Cohesive Wildland Fire Management Strategy goals include: “Landscapes across all jurisdictions are resilient to fire-related disturbances”

Third Premise: multi-jurisdictional work may be more effective if landowners, managers, and stakeholders collaborate to achieve common goals



Collective Action Theory

- Shared resources will be degraded (*tragedy of the commons*)
- Collective Action Theory: situations under which people jointly manage resources

Hardin, G. 1968. The Tragedy of the Commons. *Science* 162 (3859): 1243-1248.

- Ostrom, E. (1992). The rudiments of theory of the origins, survival, and performance of common-property institutions. In Bromley, D.W. (ed.) *Making the Commons Work: Theory, Practice, and Policy*. Pp. 293-318. San Francisco, CA: ICS Press.

What are the social factors that enable all lands approaches to forest restoration to reduce wildfire risk?



Methods

- Case study research following a typology of ALA projects (see Charnley, S., E.C. Kelly, K. Wendel. 2017. All lands approaches to fire management in the Pacific West: A typology. *Journal of Forestry* 115(1): 16-25.)
- Cases chosen from USFS-NRCS Chiefs' Joint Landscape Restoration Partnership program
 - Established in FY 2014 to improve forest health and resiliency where public and private lands interface
 - Currently 36 projects throughout the USA
 - USFS/NRCS invest ~\$32-37 million annually in these projects (typically 3 years in duration)

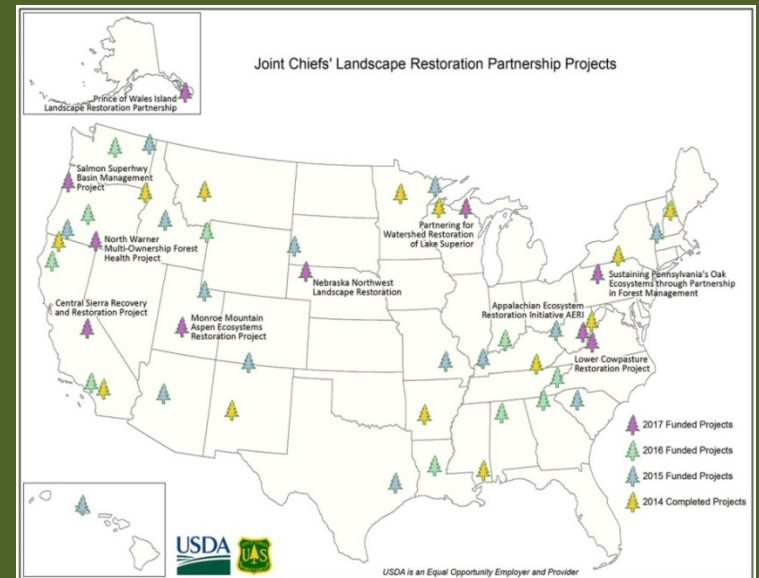


Image: https://www.nrcs.usda.gov/Internet/FSE_MEDIA/nrcseprd1307739.jpg

Study sites

- East Face of the Elkhorn Mountains (FY 2014)
 - USFS, BLM, OR Dept. of Fish and Wildlife, private corporate, family forest owners
 - 128,000 acres
- Ashland Forest All Lands Restoration Project (FY 2015)
 - USFS, BLM, City of Ashland, family forest owners
 - 53,000 acres
- Middle Klamath River Communities Project (FY 2014)
 - USFS, family forest owners, tribal (Karuk)
 - 1.2 million acres



Methods

- Interviews with land owners/managers and stakeholders (n=67)
- Survey of family forest owners with land inside project area boundaries

| Study site (# surveys) | Project participants | Non- participants | Total responses |
|---------------------------|-------------------------|----------------------|--------------------|
| East Face (262) | 19 | 55 | 74 (28.2%) |
| Ashland (458) | 23 | 116 | 139 (30.3%) |
| Mid-Klamath (306) | 10 | 62 | 72 (23.5%) |
| TOTAL (1,026) | 52 (18.2%) | 233 (81.7%) | 285 (26.8%) |

People may engage in collective action if:

1) they understand that independent strategies will harm a resource important to them;

knowledge and communication

2) coordinated strategies exist that can reduce the risk of harm to the resource;

capacity

3) they trust that if they change their behavior, other group members will too; and

trust

4) the benefits of coordination exceed the costs

benefits

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1. Knowledge and communication

Family forest owners across all 3 projects

| Variable | Participants (n=52) | Non-participants (n=233) |
|--|---------------------|--------------------------|
| Concern about wildfire burning on property | 4.3 (scale of 1-5) | 3.9 (scale of 1-5) |

Difference significant at the $p < .01$ level

1. Knowledge and communication

Commonly-shared important resource:

"The major thing is that every citizen who lives there knows that that watershed is their water supply. It's been beat into them by fire that the potential to burn that watershed is very, very high. They've dodged the bullet now for too many years."

- non-governmental organization member (Ashland)

1. Knowledge and communication

Increasing understanding and communication:

"I think the key thing that the Nature Conservancy did here in Ashland working with the city and working with some leaders in the community is just giving people a little more knowledge and a little help with articulating what the problem was and what the solution could be. Having those local leaders stand up and present that created a little bit of awareness of a language and a possibility for this restorative ecosystem-based community-based work that had been completely quashed by either end of the spectrum that preceded that."

- non-governmental organization member (Ashland)

2. Capacity

“nested institutions”

Federal partners enabled through federal policy and funding

Regional partners/intermediaries (esp. NGOs, state, restoration groups) providing capacity

Grassroots community-based collaborative groups creating priorities for projects & providing outreach to local residents



2. Capacity

Support at multiple levels (“nested institutions”)

“The Cohesive Strategy is definitely this aligning moment where we have a chain of likeminded people all the way from the grassroots level to Washington that recognize some key shifts; from funding mechanisms to how we’re managing fire that can allow us to really move towards managing fire at the landscape in a different way.”

- non-governmental organization member (Mid-Klamath)

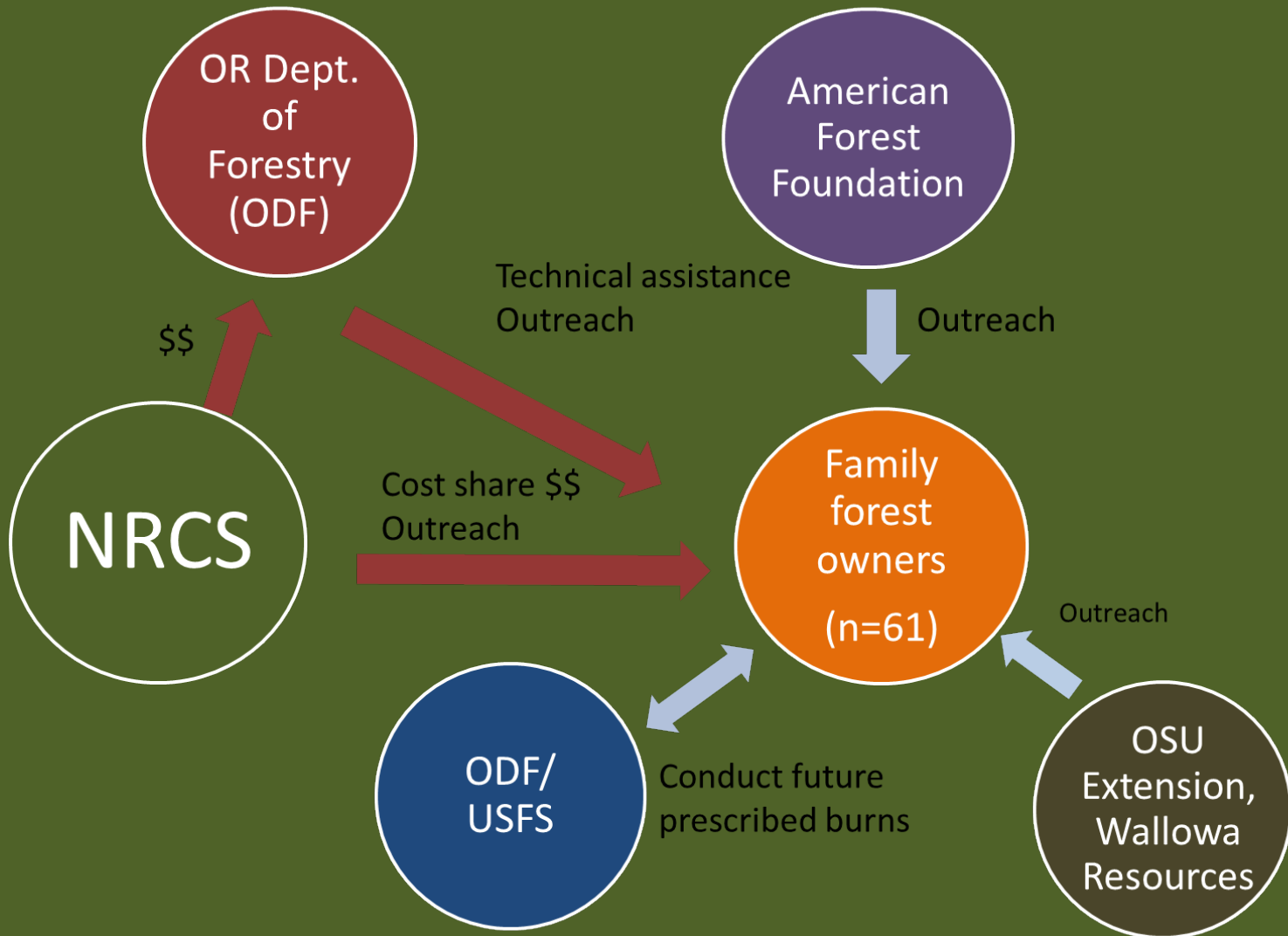
2. Capacity

Strong intermediary organizations (strategic partnerships):

“There is a good analogy [about streams of funding] with the electrical grid. You get these huge surges where you've got more power—in this case, money—than you can deal with... You need a transformer to regulate the flow of money from the federal government, which is incredibly boom and bust. For us, the transformer is Lomakatsi [restoration contractor] because of their ability to scale up and down to meet the need. They're able to harness what would otherwise be energy just burned off as heat.”

- *Non-governmental organization member (Ashland)*

Strong intermediary organizations – utilizing ODF to facilitate outreach and technical assistance to family forest owners (East Face)



2. Capacity

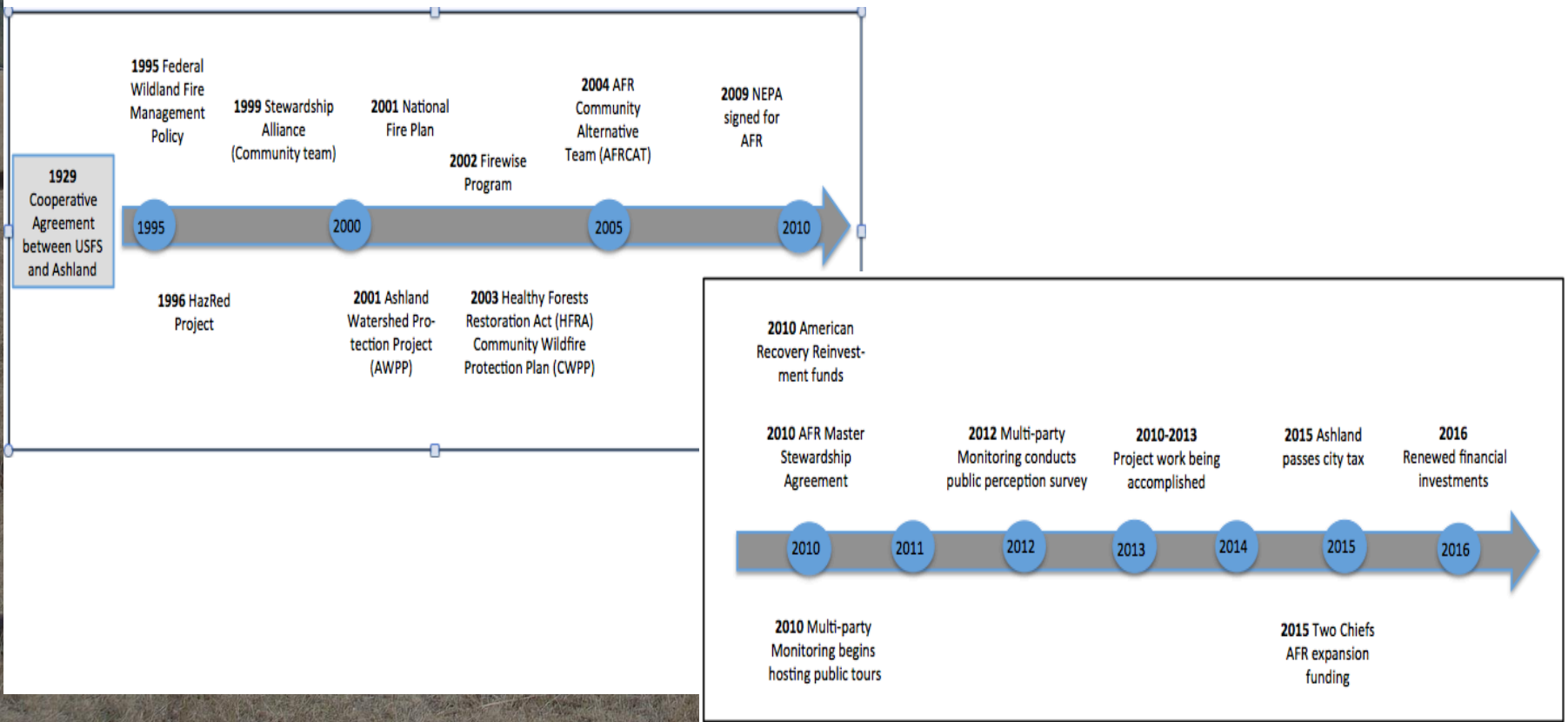
Developing and sharing expertise:

“We took the prescriptions and the innovative restoration that we developed on private lands across thousands of acres and were able to extrapolate it onto the federal land side with the support of a community that was against logging and against the agencies. They [community] backed us because we were implementing the ecological fuels reduction approach.”

- Non-governmental organization member (Ashland)

3. Trust

Building upon pre-existing working relationships: (Ashland)



3. Trust

*Building upon pre-existing working relationships:
(family forest owners)*

| Past cross-boundary forest management experience | Participants | Non-participants |
|--|--------------|------------------|
| With other public landowners | 17.3% | 5.2% |
| With other private landowners | 48.1% | 23.2% |

3. Trust

Overcoming distrust through intermediaries: (Mid-Klamath)

"Once I heard that The Nature Conservancy was involved, that really was the key point for me to get involved because I was involved in other collaborative efforts or attempted collaborative efforts, but they were pretty much being facilitated and run by Forest Service personnel. They weren't successful. They went on for two years in some cases and some projects. **The trust was never there, could never be established. To have an outside, independent party like this come in is great."**

- Mid-Klamath resident

4. Benefits

Family forest landowners: benefits

| Benefit: if you participated, what have been the benefits? | % Response |
|---|-------------------|
| Reduced wildfire risk on property | 71.1% |
| Helped implement management activities | 62.2% |
| Helped plan treatments | 60% |
| Obtained funding for forest management activities | 57.8% |
| Obtained technical assistance | 40% |
| Built relationships with stakeholders/landowners | 31.1% |
| Helped coordinate with neighbors to plan/conduct treatments | 22.2% |
| Helped with permitting processes | 13.3% |

4. Benefits

*Benefits of coordination sometimes do not exceed costs:
(East Face)*

"If I felt that I could really impactfully make a difference as to what the Forest Service is doing along my boundary, I probably would. ...I don't know how that would work other than going to the collaborative meetings, and pounding my chest... I mean, short of dedicating somebody to go to those collaborative meetings every week or every month or quarterly or whenever they meet. I've gone to some of those collaborative meetings and made a decision very early on that this isn't something I can dedicate time to, we don't have the staffing to really do that."

- Private industry, East Face

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- 4) the benefits of coordination exceed the costs

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Conclusions

- There is evidence that collective action principles can help explain All Lands Approaches to fire management
- ALA needs support, funding, and capacity at multiple levels and successful cases seem to rely on strong partnerships
- Social science can help identify what is needed to promote co-management of wildfire risk across land ownerships

Thank you!
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