

Making and Breaking Trust in Forest Collaborative Groups

Emily Jane Davis, *Oregon State University*
Lee K. Cervený, *U.S. Forest Service*
Donald R. Ulrich, *U.S. Department of Energy*
Meagan L. Nuss, *WiseWood Energy*

There has been a recent increase in use of an organized, forest ‘collaborative’ group approach for multi-stakeholder input on federal forestlands in the U.S. West. This approach relies on the creation of shared trust to achieve social agreement. Yet growing critiques suggest a lack of trust in the U.S. Forest Service [Forest Service], between stakeholders, and the collaborative process itself. We conducted three comparative case studies of established forest collaborative groups in Oregon, Washington, and Idaho to ask how trust is created and damaged or broken in this context. We found multiple, interlinked dimensions to trust, including significant reliance on procedural trust, trust of ‘in-groups’ who shared norms for conduct, and distrust of new participants. We also found that trust or distrust in the Forest Service affected other trust and process dynamics within groups. Our research offers new insights into the functions and limitations of a collaborative approach that is increasingly central to federal forest governance; and new empirical knowledge toward recent theoretical developments about trust in natural resource collaboration.

Keywords: Collaboration, U.S. Forest Service, trust, forest collaborative groups

Collaboration, community forestry, co-management, and other forms of stakeholder involvement in forest management have flourished worldwide. Collaboration has many definitions, but at its core is problem-solving wherein diverse, interdependent stakeholders address common issues and resolve environmental disputes through deliberation, consensus-building, co-learning, and generating solutions (Goldstein and Butler 2010; Margerum 2011). On federal (publicly-held) forestlands in the western United States, these stakeholders may include environmental organizations, the forest industry, local governments, nonprofit groups, and others,

who are in dialogue with each other and with the government agencies that manage the forestland (e.g. the USDA Forest Service). These collaborative efforts seek to influence and guide government to better reflect stakeholder interests (Kemmis and McKinney 2011). As some scholars have noted, “... natural-resource management policies...will fail if they are not socially acceptable” (Charnley 2006a:337).

In the late 1970s, public discontent over national forest management grew as society’s values shifted, conflict among stakeholders escalated, and scientists increasingly questioned the impacts of harvesting on fish and wildlife habitat (Daniels and Walker 1995). Major changes in policy followed,

such as the Northwest Forest Plan and Interior Columbia Basin Ecosystem Management Plan, which assembled teams of scientific experts who used a regional approach and an ecosystem management framework to conduct large-scale assessment (Quigley and Arbelbide 1997). The role of federal agencies as expert managers came into question, and social acceptability of many forestry practices declined (Spies and Duncan 2009; Hansis 1995). The combination of escalating tension over harvest practices, perceptions that environmental analysis was being conducted by hidden experts, and the growing litigious nature of the political landscape lead to a decline in trust between interest groups and public land managers, which in some cases led to conflict and violence.

Collaboration seeks to overcome such conflicts. On federal forestlands, it varies by origins and motivations, geographic scales, management issues addressed, stakeholder types engaged, and programs, tools, or authorities used. It may include ‘community-based’ efforts, landscape or watershed-scale restoration plans or projects, committees operating under explicit statutory incentives, and partnerships or coalitions (Yaffee and Wondolleck 2000). There has been a recent increase in a ‘forest collaborative’ model, a multi-stakeholder group focused on an area of federal forestland, such as a ranger district, watershed, or national forest (Davis et al. 2017). These groups seek agreement about forest management priorities and activities, typically through a structured process guided by a facilitator and ground rules (Davis et al. 2015). They are not chartered or led by federal agencies like the U.S. Forest Service [Forest Service]. Moreover, they lack any legal or decision-making roles on federal lands. However, Forest Service officials generally dedicate time and resources to working with collaborative groups, and see them as an im-

portant venue for input. As of 2016, collaboratives were active on nearly every national forest in many western states.

There is widespread hope that collaboratives will reduce social conflict over public lands management by resulting in agency decisions that better reflect stakeholder input, and avoid legal challenges by addressing potential issues before decisions are made (Summers 2014). The working theory of how forest collaboratives function is that multiple stakeholders participate in dialogue that builds trust, which allows them to reframe their respective values and interests into a collective agreement (Bosak and Belsky 2013; McLain et al. 2015; White et al. 2015). But growing critiques of the forest collaborative approach suggest apparent limits to trust, and ongoing issues in achieving it. Some view collaboratives as Forest Service-controlled venues that do not adequately represent all stakeholder perspectives, and operate through majority/minority decision processes that marginalize environmental input and fuel further conflict (e.g. Blue Mountains Biodiversity Project 2015). Others counter that, “...for individuals or groups with an agenda to limit or eliminate forest management, collaboration can provide an opportunity to wear others down by dragging meetings on and on, then appeal and/or litigate after an extended collaboration process” (Wynsma 2014:online).

There is no shortage of research about trust in natural resource management (e.g. Davenport et al. 2007; Lachapelle and McCool 2012; Vaske et al. 2007). Recent studies of forest collaboratives continue to reaffirm trust’s general importance to collaborative success and factors in successful trust-building (Antuma et al. 2014; Butler 2013; DuPraw 2014; Schultz et al. 2014). But, the reliance of the forest collaborative model on trust, ongoing scholarly interest in this theme, and these recent critiques all warrant a closer look at how trust is built and broken in this

context. Evidence of the latter may be particularly insightful, as many studies about collaboratives seek key factors and examples of positive outcomes from groups considered successful. We used three comparative case studies of established forest collaborative groups in Oregon, Washington, and Idaho to ask: 1) how is trust created and used during the collaborative process to achieve agreement, and 2) how is trust damaged or broken? Our research offers new insights into the functions and limitations of a popular conflict management approach that is increasingly central to federal forest governance, and new empirical knowledge on recent theoretical developments about trust in natural resource collaboration (Stern and Baird 2015; Stern and Coleman 2015).

Collaboration and Federal Forestlands

Basis and Evolution of Forest Service Collaboration

The legal and policy foundation of the Forest Service's stakeholder engagement includes the National Forest Management Act (NFMA) of 1976 and its planning rules (1982 and 2012), which direct implementation of several regulations (including the National Environmental Policy Act [NEPA]) that require public engagement and consultation (Flitcroft et al. 2017). But multi-stakeholder collaboration has been more directly stimulated, encouraged, or mandated through several plans and policies. The Northwest Forest Plan's (NWFP) Record of Decision (1994) included a goal to "promote interagency collaboration and agency-citizen collaboration in forest management" (Charnley 2006b:3) responding to the social conflicts that the NWFP in part fueled with its move from timber harvest toward more ecosystem-based management. NWFP-driven collaborative efforts included Adaptive Management Areas

and Provincial Advisory Committees, formally designated by the agency (Stankey et al. 2003). At the same time, other efforts that were grassroots and localized also emerged, often referred to as 'community forestry' or 'community-based ecosystem management' (Baker and Kusel 2003).

More emphasis on collaboration came after 2000 through a series of policies and programs for wildfire risk reduction and forest restoration: The National Fire Plan (2000), Healthy Forests Restoration Act (2003), Federal Land Assistance Management and Enhancement Act (2009), and Collaborative Forest Landscape Restoration Program (2010), and stewardship contracting, an authority provided in the Farm Bill. Collaboration in drier, fire-prone forests has been generally spurred by wildfires and supported by these policies. In wetter, more productive forest types, forest restoration, watershed restoration, and fish and wildlife habitat questions have more frequently driven collaboration, as well as opportunities to use stewardship contracting to reinvest retained receipts from timber harvests into restoration projects (Davis et al. 2015). Recently, driven by the programs and authorities that mandate it and the need to be more structured to access opportunities for funding, such as the CFLRP, more formal, agency-encouraged collaboration through an organized group using the collaborative model has emerged (Monroe and Butler 2015).

Despite recognition that success in federal forest collaboration is difficult to define, measure, operationalize, and generalize (Conley and Moote 2003), there has been enduring interest in identifying factors in success. Most studies posit an essential interplay of various elements including rules and standards for conduct, regular meetings, skilled facilitation, supportive and consistent but non-directive Forest Service participation, multiparty monitoring, use of field trips, and stakeholder diversity (Butler 2013;

Cheng and Sturtevant 2012; DuPraw 2014; Schuett et al. 2001; Schultz et al. 2014; Selin et al. 2000; Yaffee and Wondolleck 2000). Interactive elements include: shared visions and a sense of interdependence, use of joint problem framing and learning, shared ownership, and informal interactions (Schuett et al. 2001; Yaffee and Wondolleck 2000). Recent research indicates that collaboratives with these characteristics have been successful at building agreement on less contentious issues in forest ecosystems clearly departed from their historic conditions (Walpole et al. 2017), but agreement on other issues with less scientific certainty or knowledge may be challenging.

Trust and Natural Resource Collaboration

Most research on trust and forest collaboration uses a broad concept of trust, wherein trust “is not a monolithic phenomenon” (Nelson et al. 2017: 262), and signifies a sense of good faith, or “a psychological state in which one actor (the trustor) accepts some form of vulnerability based upon positive expectations of the intentions or behavior of another (the trustee), despite inherent uncertainties in that expectation” (Stern and Coleman 2015:119). This concept stems from earlier expressions in social psychology that emphasized trust in the sincerity of a person/institution’s word (Mellinger 1956). Previous studies have examined the importance of trust between stakeholders in affecting natural resource management outcomes, and identified dimensions of trust relevant in this context, such as the type of trustee (e.g. an individual versus an organization) and with what action the trustee is being trusted or not. This could include institutional and project-specific trust in the capacity of agencies to address public needs and achieve project goals (Davenport et al. 2007; Olsen and Shindler 2010). Others have focused on rational trust based on the predictability of behavior, accountability,

and reliability of performance (Hardin 2002), or social (or affinitive) trust stemming from sharing experiences and interactions (Braithwaite 1998; Cvetkovich and Winter 2003).

Trust as it pertains to forest collaboratives is a multifaceted, jumbled concept. It is considered an ingredient for ‘success’ (Antuma et al. 2014; Margerum 2011), wherein success may be any number of ecological, social, or economic outcomes. Research in this context has been primarily applied and focused on how collaboratives may build trust. Although “no single blueprint exists to achieve cooperation and trust as social context differs between projects, national forests, and stakeholders involved” (Bartlett 2012:81), some evidence links trust to specific features of a collaborative process. These include multiparty monitoring (Schultz et al. 2014), use of ground rules and ‘norms’ for respectful conduct (Levesque et al. 2017), field trips and informal interactions (Antuma et al. 2014), and impartial mediation or facilitation (Bartlett 2012). These findings mostly affirm longstanding studies about successful collaboration in general, and use of these features has become fairly widespread. However, inclusion of diverse interests, long considered key to successful collaboration in general (Margerum 2002), may in fact harm trust if new participants enter the arena rapidly and without following established norms (DuPraw 2014; Levesque et al. 2017).

One primary social outcome often attributed to trust is the ability to reach a collective agreement about forest management. Yet, trust is also at times considered a successful outcome unto itself (Davis et al. 2017), although what it means and how groups demonstrate it is not well documented. For government land managers such as the Forest Service, achieving the public’s trust and social acceptance of their actions is a central concern (Nelson et al. 2017), and a

primary motivation for engaging forest collaboratives in at least one state (Davis et al. 2017). But, if efforts to obtain citizen input are not ‘genuine’ or do not actually inform management decisions, trust can be easily lost or never built (Daniels and Walker 2001).

Recently, Stern and colleagues pursued a new application of trust theory to better differentiate four types of trust in natural resource collaboration: dispositional (the tendency or predisposition to trust a trustee); rational (based on expectations of utility and belief in trustee’s ability to achieve outcomes); affinitive (willingness based on assessment of trustee’s qualities); and procedural (belief in the processes and systems for interaction with trustee) (Stern and Baird 2015; Stern and Coleman 2015). All four appear relevant to forest collaboratives. For instance, ‘baggage’ from past conflict may challenge dispositional trust. Given the hopes that collaboration will achieve many diverse outcomes, rational trust or belief in others’ ability to deliver those benefits may be important, especially in stakeholder trust of the Forest Service. Procedural trust, however, is especially salient. It may facilitate action in the absence of other forms of trust by establishing an environment that reduces vulnerability, and is the ‘most actionable’ for those looking to build or improve a collaborative effort. Yet overreliance on procedural trust may inhibit the full development of other types (Stern and Baird 2015), or increase the risk of process fatigue. Some environmental stakeholders have demonstrated a lack of procedural trust through their arguments that decision processes and composition of collaboratives is unfair, while others’ characterization of environmental groups as ‘dragging out’ collaborative processes suggests both a lack of affinitive trust in those stakeholders and a belief that the process does not work. However, there is yet little empirical work exploring how different trust types function

and interact in the now widely adopted forest collaborative model.

Methods

We utilized a qualitative comparative case study approach for in-depth, contextual observation, appropriate for understanding collaborative process and trust (Mack et al. 2005). Despite not being statistically generalizable, case studies may contribute to conceptual and theoretical understandings by serving as examples and sources of detail about a phenomenon (Yin 2016). We began with available documents about forest collaboratives in the states of Oregon, Washington, and Idaho. There is no official definition of a collaborative. Our criteria were a multi-stakeholder group that met regularly for dialogue and provided collective input about forest management actions on a given area of federal forestland. Practitioner gatherings and consultations helped build our list, which totaled 42 collaboratives in fall 2015.

We gathered information about each collaborative, including year of origin, types of stakeholders engaged, decision processes and organizational structures in place, and primary activities undertaken. We then identified collaboratives with similarities across these variables—groups that met regularly, had a facilitator, had operating procedures and ground rules, and had collaborated on more than two projects or efforts. This systemic approach helped ensure adequate similarity for comparison. We then purposively selected three case studies that represented different state (Washington, Oregon, and Idaho) and biophysical contexts (forest types and ecoregions), but shared a focus on reducing wildfire risk and restoring forest health, and were relatively ‘older’ (predating 2010) than other groups: the Blue Mountains Forest Partners (BMFP), South Gifford Pinchot Collaborative (SGPC), and Lemhi Forest Restoration Group (LRFG).

We contacted the facilitator, coordinator, or executive director of each case study collaborative to recruit interviewees. We targeted those familiar with the collaborative's governing processes, who had been regularly attending meetings over the past five years, and who represented a diversity of stakeholder perspectives, totaling 30 interviewees across cases (Table 1). As our intent was to deeply understand the collaborative processes being used, we sought these experienced participants, which limited our ability to offer broader perspective from new members, others who do not collaborate or those who had left the group. Participant composition varied by the different ecological and social contexts of case study areas.

analysis software, a standard coding program for this type of research. Coding occurred in several stages. A subset of transcripts were pilot-coded to check inter-coder reliability, then transcripts were coded twice using a honed focus on specific stories, events, or factors that appeared to make or break trust; and evidence of how trust was used during the collaborative process. This produced a set of descriptive findings about how trust operated within the context of each collaborative, which we then compared across cases. This analysis led to five salient themes found most frequently across the cases.

Table 1. Interviewees by stakeholder type and case study

Type of collaborative participant	BMFP	SGPC	LFRG	Total
U.S. Forest Service	2	2	2	6
Environmental groups	2	1	1	4
Timber industry	4	1	0	5
Local government	0	1	1	2
Facilitator/coordinator	1	1	1	1
Other (nonprofit organizations, recreation, other agencies)	1	4	5	10
Total	10	10	10	30

We designed semi-structured interviews to elicit descriptions of group dialogue and agreement seeking processes; whether there was an atmosphere of trust in their group and how it was demonstrated; and what had built or broken trust. Questions therefore asked directly about trust, but also asked about other facets of collaborative process and functioning through which participants could optionally bring up trust.

Data collection took place in fall 2015 and spring 2016, reflecting the issues and perspectives in each group at those times. Interviews were audio recorded and transcribed verbatim. We developed a codebook of 10 themes drawn from cited literature and current critiques about collaboratives related to their features (e.g. use of facilitators, ground rules), and trust. We used NVivo qualitative

Case Study Contexts

Each of the three case studies represented a different state and biophysical setting. Two of the cases were in areas affected by the Interior Columbia Basin Ecosystem Management Project (ICBEMP), and one was within the Northwest Forest Plan area.

Blue Mountains Forest Partners (BMFP)

The Blue Mountains Forest Partners was founded in 2006 in Grant County, Oregon, on the northern half of the Malheur National Forest (MNF). Grant County is 60 percent publicly owned and has 2 million acres of forestland, 80 percent of which is under federal ownership (Oregon Forest Resources Institute 2013). It is within the Blue Mountain

ecoregion of eastern Oregon and Washington, where forests range from dry ponderosa pine (*Pinus ponderosa*) and juniper (*Juniperus spp.*) to moist mixed conifer at higher elevations. The MNF is not subject to the NWFP, but is within the ICBEMP area. At approximately the same time as NWFP development, President Clinton also ordered the creation of ecosystem management strategy for 140 million acres of federal forestland east of the Cascades. This followed a decade of conflict over species such as Chinook salmon (*Oncorhynchus tshawytscha*), which was addressed through interim protection rules limiting management in riparian areas and restricting harvest of trees over 21 inches in diameter at breast height to protect old growth. Although ICBEMP resulted in a final decision and strategy, it has not been implemented, and these interim rules remain in place.

Prior to 2006, timber harvest and active management on the MNF had slowed as environmental groups objected to and litigated its attempted projects. Around the mid-2000s, a county commissioner from Grant County reached out to an environmental attorney from western Oregon who had been an active litigant. With support from Sustainable Northwest, a regional nonprofit based in Portland, they initiated a conversation with a small group of interested stakeholders. BMFP began meeting regularly in 2006, and over time, grew to include stakeholders such as Malheur Lumber, Grant County, Oregon Wild, Western Environmental Law Center, and several local contractors. In 2012, BMFP worked with the MNF to garner a \$2.5 million dollar per year award from the US Department of Agriculture's Collaborative Forest Landscape Restoration Program. In 2016, this was increased to \$4 million per year in response to a proposal to triple annual timber and restoration targets on the MNF.

BMFP focuses on federal land management activities guided by the vision of

"...[improving] the resilience and well-being of forests and communities in the Blue Mountains" (Blue Mountains Forest Partners 2015:online). It has collaborated on specific projects before and during the NEPA process, as well as on larger strategies. The collaborative has produced 'zones of agreement' capturing their input on issues that span multiple projects to better guide Forest Service management priorities and activities. Management issues of focus include restoring the health of dry ponderosa pine forests and dry and moist mixed conifer forests, and managing for wildlife habitat – species such as elk (*Cervus canadensis roosevelti*), deer (*Odocoileus spp.*), and northern goshawks (*Accipiter gentilis*). BMFP is a structured collaborative: it meets frequently (often, several times in a month), engages contracted research scientists for joint fact-finding, uses multiple subcommittees, approves 'zones of agreement' documents through a formal voting process, and is its own 501c3 nonprofit corporation.

South Gifford Pinchot Collaborative (SGPC)

The South Gifford Pinchot Collaborative focuses on the southeastern area of the Gifford Pinchot National Forest (GPNF) in southern Washington State. This landscape ranges from high-elevation mountains and glaciers to wet lowlands, with mixed conifer forests and single-species plantations. Tree species include Douglas-fir (*Pseudotsuga menziesii*), grand fir (*Abies grandis*), lodgepole pine (*Pinus contorta*), ponderosa pine, and western larch (*Larix occidentalis*). Several portions of this area are designated as Late Successional Reserves (LSRs) in the NWFP, intended to provide old-growth characteristics and habitat for species such as the northern spotted owl (*Strix occidentalis caurina*) (USDA Forest Service 2016). Much of the southern portion of the GPNF is within rural Skamania County, a historically timber-dependent

county that experienced major unemployment in the early 1990s with declines in timber harvest and closure of the primary employer, Stevensen Co-Ply. In 2015, thirty percent of nonfarm employment was public sector (government jobs), with 25 percent in leisure and hospitality, 12 percent in manufacturing, and a growing number commuting to the Portland Metropolitan area (Washington Employment Security Department 2015).

SGPC was formed in 2011 from two existing collaboratives that joined to better represent regional needs. In the late 2000s, several different entities in the Mt. Adams area (county government, environmental organizations, and the Forest Service) mutually expressed a desire to overcome a history of conflict and explore new opportunities such as stewardship contracting. The Mt. Adams District Collaborative formed in 2008, and by 2011, absorbed the Lewis River Collaborative to the west. SGPC describes itself as “a community-based partnership that participates in the development, facilitation, and implementation of projects that enhance economic vitality, forest ecosystem health, recreation and public safety on the south end of the Gifford Pinchot National Forest and in surrounding communities” (SGPC 2018:online). Issues of focus include forest thinning primarily in plantations, road management, and watershed restoration. From inception until 2016, SGPC had one facilitator and consistent participation from stakeholders including Skamania County, WKO Industries, Cascade Forest Conservancy (formerly the Gifford Pinchot Task Force), and Mt. Adams Resource Stewards. More recently, a recreation stakeholder also joined (Washington Trails Association). Areas where SGPC collaborates are projects moving through the NEPA process, the GPNF’s ten-year action plan, and the use of retained receipts from stewardship contracting.

Lemhi Forest Restoration Group (LFRG)

LFRG focuses on a portion of the Salmon-Challis National Forest (SCNF) within Lemhi County, near the community of Salmon in the High Divide region of central Idaho. Ninety percent of the county is federally owned. This region ranges from drier sage-steppe land to subalpine forests, including tree species such as western juniper (*Juniperus occidentalis*), lodgepole pine, Douglas-fir, subalpine fir (*Abies lasiocarpa*), Englemann spruce (*Picea engelmannii*), and whitebark pine (*Pinus albicaulis*) (Salmon-Challis National Forest 2016). The SCNF contains 1.3 million acres of the Frank Church Wilderness and several wild and scenic designated rivers. Lemhi County is spatially large, with few incorporated communities. Employment is primarily in the government (33 percent), trade and transportation (17 percent), and leisure and hospitality (14 percent) sectors. Mining was historically more prevalent than the forest industry, and there is no forest products infrastructure in the area today (Idaho Department of Labor 2017).

LFRG formed in 2006 through the leadership of Salmon Valley Stewardship, a local nonprofit community-based organization, and with guidance from Sustainable Northwest. A major motivation was reducing wildfire risk to communities and resources, given the large wildfires the area experienced. LFRG’s mission is “to enhance forest health and local economies in Lemhi County through stewardship contracting and restoration activities” (Lemhi Forest Restoration Group 2012). LFRG has focused on developing proposed fuels reduction and forest restoration projects, and on monitoring local economic impacts. LFRG meets several times a year and takes field trips, uses an operations manual, and has had the same facilitator and administrative support from Salmon Valley Stewardship since inception. At the time of

study, the group included the Idaho Conservation League, state agencies such as the Idaho Department of Fish and Game, retired local officials, and residents active in homeowners' groups in the wildland-urban interface.

Findings

We found five salient themes about trust that were most frequently present across all three cases.

Creation, Maintenance, and Violations of Safety

There was a consistent cross-case emphasis on the creation of safe environments for dialogue in order to build trust. Interviewees in the BMFP and LFRG cases in particular described a need for this safety so that they could share their views and ask questions of others without fear of negative consequences. As one described, using ground rules and norms for collaborative conduct helped foster this:

...made sure that...everybody feels like they can bring all of their issues up, and that they're not going to be pigeonholed in a particular spot. Where they're not going to be attacked...not only can they voice those opinions and that knowledge but it's going to get heard, and whether people agree with it or not they will at least listen to it and consider it.

Interviewees brought up the need to revisit and enforce ground rules and operating procedures to maintain this safety, especially when new participants joined their groups. They also described how rules were necessary to govern not only the in-meeting conduct itself, but also how the collaborative dialogue was more widely shared (or not) in the

community, which could affect a stakeholder who had taken the risk to make themselves vulnerable during a meeting. "You need to know what to expect from the other guy after a difficult conversation. Is he going to go out and blast you on Facebook? Or is he, just going to say, 'Yep, we have a disagreement.' And be kind about it?" However, several LFRG interviewees, when asked about their rules, remarked that the group was informal and did not need to review or reinforce its rules. For example, they knew the rules existed, but had "not really taken the time to look at it carefully" because "I think it's just established", that there was an environment of trust in the group, and that participants typically followed the rules.

Several BMFP and LFRG participants also suggested that safety was maintained by not "pushing it" and "leaving well enough alone" when there was a clear lack of agreement.

You stop. If it's something where, I freaked out and [another stakeholder] freaked out and we were like, 'No! Not no!'...kind of table that discussion for another time. At this point I think that most of us have been working together for long enough and we recognize the value of what we are doing and the breadth of the existing area of agreement, that there's, on one hand there's an interest in pushing, a little bit. But there's also a recognition that if we push too hard, we'll break it. Nobody really wants to break it.

The role of the facilitator was also identified as key to safety and effective dialogue. For example, LFRG participants remarked that "[the facilitator] acknowledges everybody's different concerns...and gives merit to those in the discussion." Many directly linked the facilitator's ability to surface everyone's in-

terests with trust, saying that their group developed an atmosphere of trust as a result of being able to safely share and weigh all the options. Others noted that at times when their group struggled, it was due to the facilitator not being able to “get everybody to go in the same direction, and not spend a lot of time arguing about things that we’ve argued over again and again and again,” and that the facilitator was “the crux... [their] ability, personality, to get people to the table, and be productive, kind of make or break the group.” These repeated moments of struggle appeared to generate frustration with the collaborative process and reaffirm the importance of the facilitator as a central figure.

The BMFP case revealed that their safe environment was recently threatened by new participants, many attending due to suspicion about the collaborative’s activities and role relative to the Forest Service. These individuals were not following ground rules and norms of conduct; they were “making comments under their breath”, “grumbling” and leaving meetings to “stir the pot” by “blabbing out” what had been said in the community. Interviewees described how this had the effect of “cutting our dialogue in half...,” as many felt unable to share their perspectives in this setting. This was not limited to new participants, however. Some longer-term BMFP members were identified as “reporting” out negative stories of the collaborative to new participants and as a result, BMFP interviewees no longer trusted these individuals. In the SGPC case, new players were also directly linked to changes in trust. As several interviewees suggested, SGPC did not have a “trusting environment” at the time of our study, and said,

I think that for a while, there was a known cast of characters, and even though they didn’t always agree, they knew each other well enough to trust

each other and knew where the sticking points would be. There have been a number of new players on the environmental group side, and then there’s also new interests that have wanted to participate and come to the table.

When we get these new players who have way different ideas, we’re not quite sure where they’re coming from. Some groups in particular, there’s this concern from most people that they’re not very up front, and even questioning whether they have the same idea of what is collaboration.

Informal Interaction

The importance of informal interaction in field trips and otherwise outside of meeting rooms was frequently mentioned across all cases. Many interviewees, particularly in BMFP, directly linked it to agreement and trust:

You and I are standing in the woods, we come from two totally different perspectives, and through the course of a day or several days, we realize our views are really not that far apart. And conversations migrate from that tree and that tree to, fishing, or kids or human interest things. And you see people as people. And then agreements come easy.

Another interviewee reiterated that “...if we go on field trips they’ll ride out together in vehicles, they’ll talk about their personal lives – it’s not just business – people open up and share – it shows that people are trusting and it builds the trust, too.” However, field trips did not consistently lead to trust in all cases. As one SPGC interviewee recounted:

There's some things that I'm hard and fast set on and that I'll never agree to and there's things that other people are hard and fast set on. We've had plenty of field trips out to look at buffer widths and old, abandoned roads and all this stuff...I just think that people have their minds made up and I don't think it's anything that we can really change...We've looked at it so much.

SGPC interviewees generally depicted their time in the field as focused on specific management issues, did not tend to frame it as a chance for more personal interactions, and expressed frustration that field trips had not led to more trust or agreement.

All BMFP interviewees also discussed how this interpersonal dynamic found in the field could also be generated through informal interactions such as eating dinner, drinking, and otherwise socializing outside of the meetings. They strongly linked this to development of interpersonal trust. In the cases of BMFP and LFRG, most members were local, and those from other locations often stayed overnight in town, creating these social opportunities. But informal interactions did not consistently lead to trust:

At one point, we put out the idea, 'Hey, after the next meeting, let's go grab a beer. Let's just spend some more time together.' [One stakeholder] walks through the door, and right away, [another stakeholder] just hit her with, 'So, why are you guys taking this position on that?' I think [first stakeholder] was just like, 'Whoa, I thought we were just getting together to have an informal conversation and get to know one another a little bit more.' After about 10 or 15 minutes, [first stakeholder] was like, '...I'm hitting the road.'

Without adherence to norms of collaboration and ground rules, this informal interaction did not create a safe space or encourage interpersonal sharing. Informal interaction also had its limits depending on the individuals in the space. Some interviewees from BMFP suggested that they valued informal time with other long-term participants that they had come to trust and whose company they enjoyed. But if 'certain people' who were new or who had broken the rules were to enter the bar when they were socializing, it would cause the conversation and tenor to change notably and the informal interactions would no longer be viable.

Participant Composition

Across cases, participants expressed general desire for balanced stakeholder representation, yet then offered specific stories demonstrating preference for an 'in group' with whom they could find trust and agreement. One BMFP member called this a "group of friends, you can talk a little more freely amongst yourselves. Trust amongst our inner group has developed over years." Another described how they wanted new participants who were going to 'fit':

We're on the edge on really having a bad imbalance. But it's not like you just reach out there and start plucking bodies off the street. You look at different people and say, 'well there's someone with environmental interests,' but it doesn't mean that they necessarily would be well suited for our group. Not that they wouldn't be welcome. Some personality types impede process more than help it along.

Multiple LFRG interviewees expressed contentment with the current composition of their group, excepting the lack of industry presence, which they attributed to a lack of

industry infrastructure in their area and the relative isolation of the Salmon Valley. Several LFRG and BMFP interviewees remarked that their groups worked well because “outliers” who were “too radical,” “never going to agree,” or “unproductive” had left. For example:

Weeding out the herd more than anything else. Once we weeded out the people that were just going to sit there and bitch, we could actually have some pretty good conversations!

Interviewer: You couldn’t actively tell them to go away, could you? Or did they just self-select out?

You can make it pretty visible for them. I have a tendency to irritate people enough myself that if we get somebody that’s that big of a – I can be just as big an asshole as them if they want to do that way.”

Delving into Details

Interviews in all three cases revealed that the level of detail in a dialogue and in a final agreement could make trust for some and create frustration for others. Some described the need for detailed, carefully-crafted recommendations so that environmental stakeholders in particular felt comfortable that their vision and what was acceptable and not was clear. They noted that “just really going into the details is tedious but valuable” when reaching and documenting agreement. Although most LFRG interviewees were fairly vague about how agreement was reached in their group, one described how they had “a lot of back and forth documents, two hour phone calls where people are literally word-smithing on a conference call. Yeah, it’s painful, but important.” This level of detail helped this participant feel comfortable as

their interests were documented, and was key in enabling them to support the final recommendations that the group created. It was also necessary because as this interviewee pointed out, there could be “inconsistencies” within the Forest Service and the group on interpretations of a term, such as a decommissioned road, so more exposition of what that meant was essential.

Every BMFP participant saw a need to delve into details to overcome disagreement by obtaining more information from the Forest Service and scientists, and forming subcommittees to “hash out” specific issues, which enhanced trust in each other and information used to make decisions. One participant said that for newer groups or people, details could not be “skipped over”:

But you haven’t had the hard conversations about why you are doing it, and, you haven’t talked about old but small trees and you don’t really know why it’s two times the drip line that you’re not thinning, and you don’t understand that it’s okay to take a larger tree if that makes the entire sale pencil out. So, you [try] get the benefit without putting in the leg work and that will bite you in the ass, in the end.

However, many other interviewees in the SGPC case in particular stated that if participants were willing to develop more general recommendations, it would be a sign of trust. They expressed frustration that a level of detail was necessary in agreement seeking and documentation. Their trust of the collaborative process itself appeared reduced by these experiences of going into detail and taking a long time to reach agreement.

Trust in the Forest Service

Delving into details was also important because it helped some stakeholders feel more

reassured that the Forest Service would understand and implement their recommendations. There were many other references to issues of trusting and not trusting the agency, primarily in the SGPC and LFRG cases. One LFRG interviewee described how they agreed to some temporary roads in one project that were a risk for them. When asked why, they said, “It’s trust. At the end of the day. It’s believing that the standards and guidelines that are built into the project, as a whole, are going to meet the needs on the backend.” The same interviewee said that their trust also came in part from one Forest Service leader’s transparency, and demonstrated rational trust or belief that this individual would do what they said.

[The ranger] takes time. He takes time to make phone calls. When they were running into some issues up in the Upper North Fork Project, with some implementation last summer, that it was going to differ from what we talked about in the room. What the collaborative had agreed on. He took the time, and he called every collaborative member to talk about that. He said, ‘Here’s what we’re running into. Here’s the reality of the situation on the ground. Here’s how we’re hoping to handle it. I want to be transparent that this is different than what we talked about. What do you think about this?’

In the SGPC case, most interviewees instead felt that environmental stakeholders did not trust the Forest Service; this in turn greatly frustrated them and reduced their trust in the environmental participants and the process.

God, we’ve been having all these questions about letting the Forest Service do their job, and that they’ve really gone out of their way to demonstrate

to us their process and their considerations. [An environmental stakeholder] literally said, ‘Yeah, but all these people could leave tomorrow, and the Forest Service could be taken over by some nefarious leadership, and we could end up with something totally different, so we want the safeguards in there’... a number of us were just like, ‘What? Really?’ The whole district is not going to change. The whole region is not going to change.

What somebody said at the last meeting, was ‘I’m trustful of these people, but what if so-and-so leaves then someone else comes in?’ In other words, it’s the individual more than the Forest Service that we trust. That’s a concern.

One interviewee also expressed irritation with an environmental stakeholder’s lack of trust in the agency, yet simultaneously demonstrated it himself:

There’s real trust issues when you work through a process and you think, ‘Oh, things are going good’, and then all of a sudden...Another thing that happened to me was that I provided some recommendations on some buffer widths that were in a specific area in a watershed. Then the Forest Service used those as gospel across the whole forest. It wasn’t something I would have agreed to, so I have some issues with that...That’s not a good way to build trust amongst the group.

Discussion

The working theory of federal forest collaborative groups is that multiple stakeholders participate in dialogue and reframe their individual interests into a collective vision. Trust

is integral as it is built and used during that process to achieve agreement. Trust is a longstanding theme in scholarship on natural resource collaboration, but has not been applied in a robust or conceptually differentiated fashion to the forest collaborative example. We undertook three comparative case studies to examine the role of trust in more depth, applying recent concepts in trust theory (Stern and Coleman 2015) and previous findings about what builds trust in natural resource collaboration.

First, these cases suggest that despite different biophysical and political contexts, forest collaborative groups using similar approaches (regular meetings, facilitation, field trips) generate some consistent dynamics and issues around procedural trust. Our evidence affirms existing findings that process features such as ground rules, facilitation, and field trips, as well as informal interactions, can successfully build a generalized sense of trust, and produce trust as an outcome (Bartlett 2012; Walpole et al. 2017). It appears that what Stern and Coleman (2015) refer to as procedural trust (process features, such as ground rules) lead to enhanced ‘affinitive trust,’ or what others call relational trust. Rules and facilitation did so by creating ‘safety’ for dialogue that reduced vulnerability, and field trips and informal gatherings allowed less structured interpersonal contact.

Second, these procedural features were not a solution unto themselves. They were reliant on the willingness of group members to uphold collaborative norms. When participants chose to behave out of step with these rules, trust was adversely affected and the climate was deemed unsafe. Procedural and affinitive dimensions were interlinked in this dynamic in that procedural trust did drive some aspects of affinitive trust (Stern and Coleman 2015). New stakeholders in particular threatened an existing climate of trust in two cases. Interviewees felt that process with a facilitator and ground rules would

create the safe space wherein they could trust each other to act in good faith. Most interviewees seemed to express that if the process worked, affinitive trust would be built and agreement would be accomplished, positing procedural trust and taking the time to delve into details as necessary preconditions. Participants in the BMFP in particular who did not respect the process lacked procedural trust in the collaborative, and behaved in ways that inhibited the development of affinitive trust between themselves and others. They could also have come into the group with a lack of 1) affinitive trust for some its members, if they had any history in their local community; 2) rational trust in the federal government to follow-through with agreements; or 3) dispositional trust in their individual personalities. Many SGPC participants expressed a lack of procedural trust in the collaborative and affinitive trust in others after frustrating experiences such as too much delving into detail. However, they had continued to participate.

Third, procedural and affinitive trust were also linked in that many participants seemed to prefer collaborating with an ‘in-group’ of others who shared these two types of trust. Some openly discussed wanting to exclude those who did not follow rules, show willingness to compromise, or appear too ‘radical’ in their views. This suggests that trust can be built and reinforced in certain sub-groups, not dependent on similar stakeholder types, but rather on similar dispositions to trust process and uphold norms (Beierle and Konisky 2000). As others suggest, “organized collaboratives have not been the right solution for everyone” (Flitcroft et al. 2017:126); yet much existing research and even the mission statements of collaboratives themselves laud their ability to bring together as many diverse stakeholders as possible and to be open, balanced venues.

Fourth, despite these similarities, each case had different expressions of the relationships between procedural and affinitive trust. The BMFP case showed a high degree of historic trust among many members, but struggles with newcomers and questions from outside their group, who did not believe in collaborative process, were beginning to fray this for some, suggesting a breakdown of affinitive trust. SGPC interviewees mostly did not trust the process or environmental stakeholders at the time, and perceived that they had not yet achieved trust as an outcome. In other words, there was a lack of procedural trust (Stern and Coleman 2015). The LFRG case depicted a smaller group in a relatively isolated valley with a fairly stable, trusting group dynamic (strong affinitive trust), yet 'outliers' who may have made this more difficult had either left or did not participate. These differences may be contextual. BMFP might have been experiencing new interest due to its prominence as a well-publicized example of forest collaboration, while LFRG may have received less attention and new participation due to its historically smaller size and more remote location.

Finally, perhaps the most significant dimension of trust in two of the three studied collaboratives was rational trust in the Forest Service, and how this affected procedural and affinitive trust for each group. In one case, some trust in the Forest Service was evident because a key leader had been transparent and communicative, although some participants still felt it necessary to compose detailed recommendations to ensure input was used as expected. In another case, trust in the Forest Service was low for one stakeholder, who trusted individuals within the agency but did not trust the institution. In other words, there was strong affinitive trust among colleagues and low rational trust (for the agency to be held accountable.) The other stakeholders did not possess this distrust, and became increasingly frustrated with the stakeholder

who was distrustful, as well as with the collaborative process itself.

These findings show that a lack of dispositional and rational trust (Stern and Coleman 2015) in the Forest Service may foster challenges to affinitive trust within the group, and to procedural trust in the collaborative as an effective venue. Implications may be that collaboratives could invest more time in building agency-stakeholder trust, learning about how the agency operates, and creating institutional memories and infrastructure to stem potential negative effects of staff changes and unmet expectations. These actions, plus further research, may help further illuminate the dynamics of trust in individuals versus institutions, and how each can be built or related to the other. Some recent critiques accuse the Forest Service of not meaningfully collaborating on multiple occasions (Blue Mountains Biodiversity Project 2015). Therefore, ongoing study of how the agency may build and sustain trust with collaboratives and what constitutes genuine collaboration is warranted. Previous research examines public trust in agencies, but does not necessarily illuminate how collective action processes like collaboratives may function to foster it (Irvin and Stansbury 2004; Lachapelle and McCool 2012).

Conclusions

On national forestlands in the western U.S., collaboration is seen as a tool to build social agreement, overcome conflict, garner trust and support for agency decisions, reduce costs and delays from objections and litigation, and even increase the agency's capacity to manage its forests at an increased pace and scale (Davis et al. 2017; Goldstein and Butler 2010). At the same time, research cautions that collaboration may take longer than traditional approaches and may not achieve all desired outcomes (Koontz and Thomas 2006).

Central to the success of the collaborative process is building trust to enable collective agreement. Our research found multiple, interlinked dimensions to trust in federal forest collaborative groups that require more examination, given the posited centrality of trust to how these groups function, yet the growing critiques of this approach. For further study and practice, we suggest two primary considerations. First, given that the interplay of procedural and affinitive trust is a complex and crucial dynamic in forest collaboratives, this needs further examination. Within this, the existence of safety and collaborative norms, and what types of trust and collaborative process features might sustain them, particularly affinitive trust, would be important. Utilization of different study approaches to do so may also be illuminating. Case studies yield rich detail about a group and its context, but typically capture only shorter moments of a longer, dynamic story that can change dramatically depending on, for example, political trends, the loss or uptake of key people, or wildfires or other major disruptions. 'Longitudinal' studies of collaborative groups that collect data at regular points throughout a longer duration, such as more than a year, may better capture broader perspective on fluidity of trust, and more precise insights. It is also crucial that we learn from stories of struggle and distrust (e.g. Walker and Hurley 2004). Continued pursuit of factors in success from more recognized collaboratives incites research fatigue, biases our understanding based on selected examples, and does not encourage novel scholarship or practice.

Second, our observations about rational trust in the Forest Service-stakeholder relationship and procedural trust in the collaborative approach indicate the need for deeper clarity about what collaboratives are and whom they serve. They have become widespread yet lack consistent standards and requirements for process and participation.

Are they entirely inclusive bodies pursuing full consensus, or coalitions of the willing who embrace a specific shared vision representing some but not all public lands stakeholders? There is a growing need for collaboratives and the Forest Service to better grapple with issues of representation and equity. If stakeholders and the Forest Service seek 100 percent agreement and representation of stakeholders, then much more effort must be made to ensure that each group can provide equitable access, transparency, and the means to reach consensus; and even then, not everyone will be able or willing to join. If stakeholders prefer to collaborate with those who share their vision and disposition, collaboratives would need to better hone their missions beyond generalities, develop and use stricter rules of engagement, and reinforce or establish new membership and participation criteria to bound their culture and processes. This could help avoid their misrepresentation as bodies that stand for all stakeholders and deliver widespread social agreement, but risks fostering exclusivity and echo chambers. Importantly, the Forest Service must also address growing disenchantment with the collaborative process, and better reconcile stakeholder expectations with their own capacity and willingness to implement them. The broader vision of how forest collaboratives are defined and understood and their very capacity to achieve their goals is at stake.

Emily Jane Davis, Ph.D., is an assistant professor and extension specialist in the Department of Forest Ecosystems and Society and the Forestry and Natural Resources Extension Program at Oregon State University. Her research and technical assistance focus on collaborative natural resource management, policy, and practice.

Lee Cerveny, Ph.D., is a Research Social Scientist with the U.S. Forest Service Pacific Northwest Research Station in Seattle, Washington.

Dr. Cervený's research focuses primarily on socio-spatial approaches to understanding human-ecological interactions and aspects of forest governance, including collaboration and partnerships. She also is interested in issues related to environmental justice, with work focusing on gender and inclusion in wildland fire-fighting and on homelessness on national forests and grasslands.

Donald Ulrich earned his M.S. in Forestry from Oregon State University with a focus on collaborative natural resource management. Prior to graduate school, Donald worked with the U.S. Peace Corps in the Philippines on coastal resource management projects where he focused on community outreach and policy development. His time there informed much of his thesis work and after graduating, Donald applied his interest in community development around natural resources to forest collaboratives in the northwest U.S. as a Faculty Research Assistant. Currently, Donald is continuing his work on forest policy, now in the high deserts and pine forests of northern New Mexico.

Meagan Nuss has a diverse history across the field of forest management, including researching the efficacy of collaborative efforts on national forests, providing educational resources to non-industrial private forestland owners, identifying ecosystem services on industrial agroforestry properties, and documenting biomass stakeholders' willingness to develop harvesting guidelines. Currently Meagan manages project development for a leading biomass energy design firm that specializes in community-scale heating, combined heat-and-power, and district energy applications. She holds a master's degree in forest ecosystems and society from Oregon State University and a bachelor's degree in environmental studies from Lewis & Clark College.

Acknowledgments This research was supported by the USDA Forest Service Pacific Northwest Research Station (JVA #14 JV 11261985 064).

References

- Antuma, Jesse, Bryce Esch, Brendan Hall, Elizabeth Munn, and Frank Sturges. 2014. "Restoring Forests and Communities: Lessons from the Collaborative Forest Landscape Restoration Program." Masters project, School of Natural Resources and Environment, University of Michigan, Ann Arbor.
- Baker, Mark, and Jonathan Kusel. 2003. *Community Forestry in the United States: Learning from the Past, Crafting the Future*. Washington, DC: Island Press.
- Bartlett, Gina. 2012. "Developing Collaboration and Cooperation." Pp. 81-88 in *Managing Sierra Nevada forests. General Technical Report PSW-GTR-237*, edited by M. North. Albany, CA: U. S. Department of Agriculture, Forest Service, Pacific Southwest Research Station.
- Beierle, Thomas C., and David M. Konisky. 2000. "Values, Conflict, and Trust in Participatory Environmental Planning." *Journal of Policy Analysis and Management* 19(4):587-602.
- Blue Mountains Biodiversity Project. 2015. "Collective Statement on Collaborative Group Trends." Retrieved November 1, 2017, (<https://bluemountainsbiodiversityproject.org/collective-statement-on-collaborative-group-trends/>).
- Blue Mountains Forest Partners. 2015. "Mission and History." Retrieved May 28, 2018, (<http://www.bluemountainsforestpartners.org/about/>).
- Bosak, Laura Caplins, and Jill M. Belsky. 2013. *Southwestern Crown of the Continent Collaborative Forest Landscape Restoration Project: Report on Findings from a Social Assessment in the SWCC Area to Support Social Monitoring Responsibilities of the CFLRP*. Department of Society and Conservation, University of Montana, Missoula.

- Butler, William Hale. 2013. "Collaboration at Arm's Length: Navigating Agency Engagement in Landscape-Scale Ecological Restoration Collaboratives." *Journal of Forestry* 111(6):395–403.
- Charnley, Susan. 2006a. "The Northwest Forest Plan as a Model for Broad-Scale Ecosystem Management: A Social Perspective." *Conservation Biology* 20(2):330–340.
- Charnley, Susan [tech. coord.]. 2006b. "Northwest Forest Plan – the First 10 Years (1994–2003): Socioeconomic Monitoring Results." *General Technical Report. PNW-GTR-649* Volume 1, Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station.
- Cheng, Antony S., and Victoria E. Sturtevant. 2012. "A Framework for Assessing Collaborative Capacity in Community-Based Public Forest Management." *Environmental Management* 49(3):675–89.
- Conley, Alexander, and Margaret A. Moote. 2003. "Evaluating Collaborative Natural Resource Management." *Society & Natural Resources* 16(5):371–86.
- Daniels, Steven E., and Gregg B. Walker. 1995. "Managing Local Environmental Conflict Amidst National Controversy." *International Journal of Conflict Management* 6(3):290–311.
- Daniels, Steven E., and Gregg B. Walker. 2001. *Working Through Environmental Conflict: The Collaborative Learning Approach*. Westport, CT: Praeger.
- Davenport, Mae A., Jessica E. Leahy, Dorothy H. Anderson, and Pamela J. Jakes. 2007. "Building Trust in Natural Resource Management within Local Communities: A Case Study of the Midewin National Tallgrass Prairie." *Environmental Management* 39:353–368.
- Davis, Emily Jane, Eric M. White, Lee K. Cervený, David Seesholtz, Meagan L. Nuss, and Donald R. Ulrich. 2017. "Comparison of USDA Forest Service and Stakeholder Motivations and Experiences in Collaborative Federal Forest Governance in the Western United States." *Environmental Management* 60(5):908–21.
- Davis, Emily Jane, Lee K. Cervený, Meagan L. Nuss, and David Seesholtz. 2015. "Oregon's Forest Collaboratives: A Rapid Assessment." Retrieved September 16, 2016, (https://ir.library.oregon-state.edu/concern/technical_reports/6t053h28v?locale=en).
- DuPraw, Marcelle Elise. 2014. "Illuminating Capacity-Building Strategies for Landscape-Scale Collaborative Forest Management Through Constructivist Grounded Theory." PhD dissertation, Department of Conflict Resolution Studies, Nova Southeastern University, Fort Lauderdale.
- Flitcroft, Rebecca L., Lee K. Cervený, Bernard T. Bormann, Jane E. Smith, Stanley T. Asah, and A. Paige Fischer. 2017. "The Emergence of Watershed and Forest Collaboratives." Pp. 116–130 in *People, Forests, and Change: Lessons from the Pacific Northwest*, edited by D. H. Olson and Beatrice Van Horne. Washington, DC: Island Press/Center for Resource Economics.
- Goldstein, Bruce Evan, and William Hale Butler. 2010. "Expanding the Scope and Impact of Collaborative Planning: Combining Multi-Stakeholder Collaboration and Communities of Practice in a Learning Network." *Journal of the American Planning Association* 76(2):238–49.
- Hansis, Richard. 1995. "The Social Acceptability of Clearcutting in the Pacific Northwest" *Human Organization* 54(1): 95–101.
- Idaho Department of Labor. 2017. "Lemhi County." Retrieved October 25, 2017, (<https://labor.idaho.gov/publications/lmi/pubs/LemhiProfile.pdf>).
- Irvin, Renee A., and John Stansbury. 2004. "Citizen Participation in Decision Making: Is

- It Worth the Effort?" *Public Administration Review* 64(1):55–65.
- Kemmis, Daniel, and Matthew McKinney. 2011. "Collaboration and the Ecology of Democracy." *Human Dimensions of Wildlife* 16(4):273–85.
- Koontz, Tomas M., and Craig W. Thomas. 2006. "What Do We Know and Need to Know about the Environmental Outcomes of Collaborative Management?" *Public Administration Review* 66(s1):111–21.
- Lachapelle, Paul R., and Stephen F. McCool. 2012. "The Role of Trust in Community Wildland Fire Protection Planning." *Society and Natural Resources* 25(4):321–335.
- Lemhi Forest Restoration Group. 2012. "Group Process, Structure, and Function." Retrieved May 28, 2018, (<https://www.lemhiforest.org/>).
- Levesque, Vanessa R., Aram J.K. Calhoun, Kathleen P. Bell, and Teresa R. Johnson. 2017. "Turning Contention into Collaboration: Engaging Power, Trust, and Learning in Collaborative Networks." *Society and Natural Resources* 30(2):245–260.
- Mack, Natasha, Cynthia Woodsong, Kathleen M. MacQueen, Greg Guest, and Emily Namey. 2005. *Qualitative Research Methods: A Data Collector's Field Guide*. North Carolina: FLI USAID.
- Margerum, Richard D. 2002. "Evaluating Collaborative Planning: Implications from an Empirical Analysis of Growth Management." *Journal of the American Planning Association* 68(2):179–193.
- Margerum, Richard D. 2011. *Beyond Consensus: Improving Collaborative Planning and Management*. Cambridge, Mass: MIT Press.
- McLain, Rebecca Jean, Kristen Wright, and Lee K. Cerveney. 2015. "Who is at the Forest Restoration Table? Final Report on the Blue Mountains Forest Stewardship Network, Phase 1." Retrieved October 1, 2017, (http://pdxscholar.library.pdx.edu/cgi/viewcontent.cgi?article=1099&context=iss_pub).
- Monroe, Ashley S., and William H. Butler. 2016. "Responding to a Policy Mandate to Collaborate: Structuring Collaboration in the Collaborative Forest Landscape Restoration Program." *Journal of Environmental Planning and Management* 59(6):1054–1072.
- Nelson, Michael Paul, Hannah Gosnell, Dana R. Warren, Chelsea Batavia, Matthew G. Betts, Julia I. Burton, Emily Jane Davis, Mark Schulze, Catalina Segura, Cheryl Ann Friesen, and Steven S. Perakis. 2017. "Enhancing Public Trust in Federal Forest Management." Pp. 259–274 in *People, forests, and change: Lessons from the Pacific Northwest*. Island Press.
- Oregon Forest Resources Institute. 2013. "Grant County." Retrieved November 11, 2017, (http://knowyourforest.org/sites/default/files/documents/OFRI_CountySheet_Grant.pdf).
- Quigley, Thomas. M., and Sylvia J. Arbelbide. 1997. "An assessment of Ecosystem Components in the Interior Columbia Basin and Portions of the Klamath and Great Basins: volume 1." *General Technical Report PNW-GTR-405*. Portland, OR: US Department of Agriculture, Forest Service, Pacific Northwest Research Station.
- Salmon-Challis National Forest. 2016. "Final Environmental Impact Statement: Upper North Fork HFRA Restoration Project." Retrieved November 11, 2017, (http://a123.g.akamai.net/7/123/11558/abc123/forestservic.download.akamai.com/11558/www/nepa/72518_FSPL_T3_2067340.pdf).
- Schuett, Michael A., Steve W. Selin, and Deborah S. Carr. 2001. "Making It Work: Keys to Successful Collaboration in Natural Resource Management." *Environmental Management* 27(4):587–593.

- Schultz, Courtney A., Dana L. Coelho, and Ryan D. Beam. 2014. "Design and Governance of Multiparty Monitoring Under the USDA Forest Service's Collaborative Forest Landscape Restoration Program." *Journal of Forestry* 112(2):198–206.
- Selin, Steve W., Michael A. Schuett, and Debbie Carr. 2000. "Modeling Stakeholder Perceptions of Collaborative Initiative Effectiveness." *Society and Natural Resources* 13(8):735–745.
- South Gifford Pinchot Collaborative (SGPC). 2018. "About Us." Retrieved May 28, 2018, (<http://southgpc.org/about-us/>).
- Spies, Thomas A., and Sally L. Duncan. 2009. "Searching for Old Growth." Pp. 3-11 in *Old Growth in a New World: A Pacific Northwest Icon Reexamined*, edited by Thomas A. Spies and Sally L. Duncan. Washington, D.C.:Island Press.
- Stankey, George H., Bernard T. Bormann, Clare Ryan, Bruce Shindler, Victoria Sturtevant, Roger N. Clark, and Charles Philpot. 2003. "Adaptive Management and the Northwest Forest Plan: Rhetoric and Reality." *Journal of Forestry* 101(1):40–46.
- Stern, Marc J., and Timothy Baird. 2015. "Trust Ecology and the Resilience of Natural Resource Management Institutions." *Ecology and Society* 20(2):14[online].
- Stern, Marc J., and Kimberly J. Coleman. 2015. "The Multidimensionality of Trust: Applications in Collaborative Natural Resource Management." *Society and Natural Resources* 28(2):117–132.
- Summers, Brent M. 2014. "The Effectiveness of Forest Collaborative Groups at Reducing the Likelihood of Project Appeals and Objections in Eastern Oregon." Presentation, Dynamic Ecosystems and Landscapes Lab, Portland State University.
- USDA Forest Service. 2016. "Gifford Pinchot National Forest." Retrieved November 11, 2017, (<https://www.fs.usda.gov/gifford-pinchot/>).
- Vaske, Jerry J., James D. Absher, and Alan D. Bright. 2007. "Salient Value Similarity, Social Trust and Attitudes toward Wildland Fire Management Strategies." *Human Ecology Review* 14(2):217–2226.
- Walker, Peter A., and Patrick T. Hurley. 2004. "Collaboration Derailed: The Politics of 'Community-Based' Resource Management in Nevada County." *Society and Natural Resources* 17(8):735–751.
- Walpole, Emily, Eric Toman, Robyn Wilson, and Melanie Stidham. 2017. "Shared Visions, Future Challenges: A Case Study of Three Collaborative Forest Landscape Restoration Program Locations." *Ecology and Society* 22(2):35[online].
- Washington Employment Security Department. 2015. "Skamania County Profile." Retrieved November 11, 2017 (<https://for-tress.wa.gov/esd/employmentdata/reports-publications/regional-reports-county-profiles/skamania-county-profile>).
- White, Eric M., Emily Jane Davis, Drew E. Bennett, and Cassandra Moseley. 2015. "Monitoring of Outcomes from Oregon's Federal Forest Health Program." Ecosystem Workforce Program Working Paper #54, University of Oregon, Eugene, Oregon.
- Wynsma, Barry. 2014. "U.S. Forest Service Collaboration Process: Solution or Sham?" Retrieved October 25, 2017 (<https://www.evergreenmagazine.com/u-s-forest-service-collaboration-process-solution-sham/>).
- Yaffee, Steven L., and Julia M. Wondolleck. 2000. "Making Collaboration Work: Lessons from a Comprehensive Assessment of over 200 Wide Ranging Cases of Collaboration in Environmental Management." *Conservation* 1(1):17–24.

Yin, Robert K. 2016. *Qualitative Research from Start to Finish Second Edition*. New York, NY: The Guilford Press.