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BLUE MOUNTAIN FOREST PARTNERS ADAPATIVE MANAGEMENT FRAMEWORK PHASE I REPORT

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Contents

Summary of recommendations

This report summarizes the results of nineteen interviews with Forest Service and Blue Mountains Forest Partners personnel involved in forest restoration on the Malheur National Forest. It is organized around three questions: 1. How can the Forest Service and BMFP better engage with one another to improve planning outcomes? 2. What sorts of agreements are most useful? 3. What information gaps, if filled, would improve NEPA planning?

How can the Forest Service and BMFP better engage to improve planning outcomes?

Discuss National Environmental Policy Act (NEPA) planning.

Interviewees generally thought BMFP-Forest Service engagement during pre-NEPA assessment is very effective. However, some BMFP interviewees recommended developing a more robust process for engaging during NEPA planning, when project alternatives are being developed and evaluated. Two had questions about how recommended NEPA efficiencies are being used by the Malheur National Forest and how well they are working. Three BMFP interviewees said that NEPA documents should contain less description and more explanation of the rationales and science behind Forest Service planning decisions. Recommendations included:

- Discuss project decision points and tradeoffs during NEPA planning.
- In NEPA documents, explain rationales and cite science behind decisions.
- Meet to discuss NEPA efficiencies being used and how well they are working.

Make the most of monitoring field trips.

Monitoring field trips are used to determine whether expectations were met for implementation and outcomes and if not, why not. While they think the monitoring field trips are currently effective, interviewees also made the following recommendations for improving them:

- Bring implementation records for each unit to be visited.
- Seek balanced representation, including environmental group and Forest Service participants.
- Take a landscape perspective of the project.
- View a representative sample of units.
- Ask what needs to change to improve outcomes in future.
- Keep written records of feedback and recommendations so learning gets carried forward.

Build a collaborative learning culture.

Interviewees described opportunities for making sure learning is shared among BMFP members, Forest Service employees, and the public and used to improve group process as well as management practices. Recommendations included:

- Regularly review the status of NEPA planning and BMFP agreements.
- Share modeling, analysis, and monitoring results.
- Capture and share emergent learning and adaptations.
- Tell the BMFP story to maintain institutional memory and build support for the work.
- Take personal responsibility for bringing others up to speed.

What sorts of agreements are most useful?

Issue-based zones of agreement

Interviewees were enthusiastically supportive of the zones of agreement documents. They also described some challenges to transitioning from prescriptive, project-specific agreements to more general recommendations. One Forest Service interviewee suggested balancing the need for issue-based zones of agreement and project-specific guidance by developing broad zones of agreement and, over time, including project-specific recommendations as examples within the zones of agreement documents. A BMFP member recommended not only providing management recommendations but also explaining the science and rationales behind the recommendations.

Project-specific agreements

Several interviewees said that in addition to issue-based zones of agreement, the BMFP needs to give clear feedback on its level of support for specific projects and specific activities within projects. Some people referred to these as "project-specific zones of agreement" that should be developed for each new project. There is a need for more discussion between BMFP and the Forest Service to clarify the need for and level of specificity desired in project-specific agreements.

What information gaps, if filled, would improve NEPA planning?

Science synthesis and zones of agreement

Interviewees said BMFP should continue its work on riparian, aspen, and goshawk science synthesis and zones of agreement, and several recommended developing issue-based zones of agreement for moist mixed conifer restoration, post-disturbance salvage, and road management. A few expressed interest in zones of agreement on other topics, including using wildfire as a management tool and changing smoke management regulations to support more prescribed burning.

New research and analysis

In terms of new science, interviewees said there is an abundance of both historical and current data on the Malheur National Forest, particularly with new Landsat and Lidar data, but there remain a number of unanswered questions. Interviewees were particularly interested in knowing the historic range of variation and/or current distribution of snags, large trees, and Management Indicator Species habitat. They also raised questions about the distribution of vegetation types and patches on the landscape, riparian area management, wildlife connectivity corridors, and the effects of treatments on wildfire behavior.

Future range of variation

Two interviewees discussed a need to focus on desired future conditions and the ability of the landscape to produce those conditions rather than basing management objectives primarily on historic range of variation.

Introduction

This report summarizes the results of Phase I of the Blue Mountain Forest Partners (BMFP) Adaptive Management Framework. The purpose of Phase I was to interview Malheur National Forest and BMFP personnel to determine:

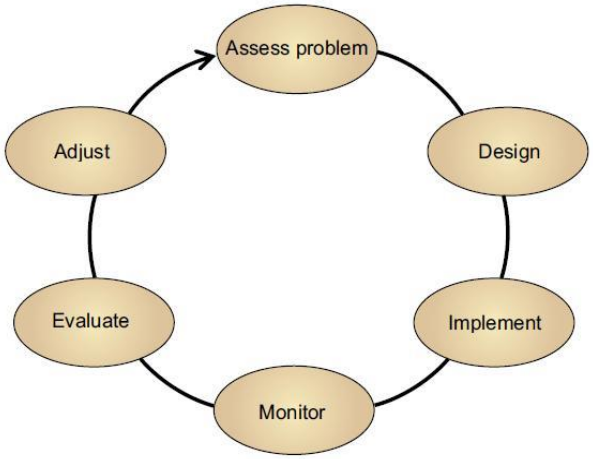
1. How can the Forest Service and BMFP better engage with one another to improve planning outcomes?
2. What sorts of agreements are most useful?
3. What information gaps, if filled, would improve NEPA planning?

Between May and August 2015, 10 BMFP members and nine Forest Service employees were interviewed. Interviewees were asked about their experiences with BMFP-Forest Service engagement in project planning, monitoring, evaluation, and adaptation as well as BMFP agreements and NEPA information gaps. Preliminary findings were discussed with the Malheur National Forest Leadership Team (FLT) at their July meeting. Feedback and recommendations from interviewees and FLT meeting participants are summarized below.

BMFP involvement in adaptive management

Adaptive management is an iterative process of assessing conditions, planning actions, implementing those actions, monitoring and evaluating outcomes of actions taken, and applying what was learned by making adjustments to future planned activities. It is often depicted as a cycle, as shown in Figure 1.

Figure 1. The adaptive management cycle



Interviewees described a number of mechanisms by which BMFP and the Malheur National Forest engage in the adaptive management cycle, including field trips, meetings, subcommittee work, science workshops, and one-on-one interactions between individual BMFP members and Forest Service planners, resource specialists, and line officers.

Assessment and project design

Interviewees said that much of BMFP's input to Forest Service projects takes place in the assessment phase, before National Environmental Policy Act (NEPA) planning begins, through field trips and meetings where possible project areas and treatment needs are discussed. The process typically begins when the Forest Service shares a draft purpose and need for a given area. BMFP gives feedback on that purpose and need, including management recommendations, which the Forest Service uses to develop its proposed action and alternatives.

Project design occurs during NEPA planning, which is done by Malheur National Forest planners and resource specialists. Project design is informed by input that Forest Service personnel obtained from pre-NEPA field trips and meetings and from one-on-one conversations between individual BMFP members and Forest Service planners and resource specialists. As one interviewee said,

> I think that we have a lot of input to the Forest Service by them listening to our discussions, even if we don't agree on something. They can know where there's a lot of people who have opposition, or whether it's marginally objected to. … They get a better sense of their active, engaged public, the public that may or may not litigate. … So they know which issues I'll go to the mat on, and which ones I don't like but I won't go to the mat over. *BMFP*

The primary vehicle for BMFP input to project design, however, is its written zones of agreement. In the past, zones of agreement were developed for individual projects and contained management recommendations for specific project areas. Due to the increased pace and scale of project planning, BMFP is transitioning to developing more general zones of agreement documents that apply to different forest types and management designations but not specific sites. Forest Service interviewees generally agreed that the zones of agreement documents are some of the most useful input that BMFP provides and that these documents are regularly used during NEPA planning.

> Those [zones of agreement] documents help us know where the collaborative stands on an issue. If we're doing our jobs right we've already incorporated those things before we go to them with our proposed action and alternatives. *Forest Service*

Zones of agreement and NEPA planning also are informed by science input from BMFP members and science forums organized by BMFP. The forums typically are one-day workshops, sometimes with field trips, where invited scientists provide an overview of the state of science related to a particular forest type or resource. BMFP and Forest Service interviewees said that the science is important for building a common knowledge base for discussion, reducing conflict, and moving discussions forward, and that science input has been used in the zones of agreement and agency prescriptions. When discussing science, interviewees said:

> I don't necessarily agree with all the science. But I think it's important when we all have the same background, all have some level of base knowledge, that's really helpful. That's why when we can get someone in that the industry side respects and that the environmental community respects – if that person tells us all the same things it's much harder for us to disagree moving forward. *BMFP*

> Having scientists from different disciplines on project field trips helps move discussions forward and reduces disagreement. Things go more quickly. … Whenever there's disagreement or controversy science can inform the discussion. *BMFP*

> As long as it's a scientific study and science-based that provides common ground to begin a discussion. We can disagree with the outcome of the study or the interpretation of the data but as long as it's scientifically based it gets people off their position. *Forest Service*

> Doing what we're doing now with … synthesizing a bunch of science [on goshawk] – I think that's really good. That's extremely helpful, because you know we can have dueling scientists. So now we can have the body of science and say here are the parts we can agree on and we still don't know about these other ones, and that's OK. I think we're getting there with goshawks. *BMFP*

> One individual's PhD project they shared some data… They had data at the Forest scale but they were willing to share [their plot data] for the project area. We were looking for specific things to supplement our information. … Probably the most useful part was that they could put it in the context of how this project area fit in relation to the rest of the Forest. *Forest Service*

Monitoring and evaluation

The primary vehicle for monitoring and evaluating projects is multiparty monItoring field trips where BMFP and the Forest Service jointly evaluate management results. As interviewees describe the multiparty field trips:

> We go back to treated areas and there's formal notes taken on what people are seeing: Did we do what we said we were going to do? Do people like what they're seeing? There are several of those trips a year, either right after things have been prepped, or during actual implementation, or post implementation. *Forest Service*

> [The purpose of the monitoring field trips is to ask:] Is it high quality work? Is it not high quality work? Is it what we talked about? And if it's not what we talked about why isn't it what we talked about? *BMFP*

> There have been some a-ha moments: "Wow, we agreed to that prescription and that didn't turn out the way we thought it would. We needed to take these other trees in addition the ones we did to really meet our intent." That's adaptive management at its heart. *Forest Service*

In addition to the multiparty monitoring field trips, Forest Service resource specialists and sales administrators inspect some treatment areas to make sure they met contract specifications and mitigation measures. The Malheur National Forest also conducts trend monitoring of certain resource conditions, such as Management Indicator Species and stream conditions.

Starting in 2013, the Forest Service and contractors have been doing effectiveness monitoring of projects within the Southern Blues Restoration Coalition Collaborative Forest Landscape Restoration Project (CFLRP) boundaries. The Southern Blues Restoration Coalition includes the BMFP and a second collaborative group, the Harney County Resource Collaborative. The CFLRP effectiveness

monitoring includes several components: fire effects and forest vegetation, invasive species, aspen, white-headed woodpecker, riparian restoration, fish passage, watershed condition, and socioeconomics. Some interviewees were optimistic that the CFLRP monitoring results will be useful for joint learning and adaptive management:

> The more formal CFLR monitoring will be useful too in that it's an exercise to compare effects of treatments with non-treated areas. Results will be more quantitative measures of changes. Were specific treatment types doing what we thought we would do? Did specific treatment areas change the way we thought they would? *Forest Service*

> I think [the CFLRP monitoring] will be great, I'm all for it. I think it will be very important. We're answering questions that we've all wanted answered for a long time. *BMFP*

Adjustments

Implementation is the responsibility of the Forest Service, and adjustments to future proposed actions happen through changes written into NEPA documents, prescriptions, and contracts. However, several local contractors are BMFP members and BMFP members provide feedback on and input to prescriptions and contract specifications through their efficiencies committee and individual communication.

> As far as I work, I'm constantly tweaking contracts… We're constantly out looking on the ground at how things are going, what makes sense, what doesn't make sense, what's clear, what's not clear, and trying to fix it. It's continual. *Forest Service*

> [BMFP has] come up with some great ways to be more efficient with contracts and we're trying to build those into our programs, so that's good. *Forest Service*

> As we go through NEPA we can't always incorporate the newest information, but our hope is to adaptively manage and work on that next NEPA project using the newer, better science and learning from past projects. *Forest Service*

How can the Forest Service and BMFP better engage with one another to improve planning outcomes?

Interviewees appreciated the science input, pre-NEPA field trips and meetings, and zones of agreement work that occurs during pre-NEPA assessment and the monitoring field trips that are used to evaluate project implementation and outcomes. They saw room for improvement in BMFP-Forest Service engagement during NEPA project design and in sharing learning that occurs during project implementation and monitoring. Interviewees also had recommendations specific to the zones of agreement documents; these are discussed in the next section (pages 14-16).

Improve NEPA planning

Discuss project decision points and tradeoffs during NEPA planning

Although several interviewees lauded the agency's willingness and ability to glean input from field trip and meeting discussions, some BMFP members said they were sometimes frustrated by final NEPA documents that did not reflect input shared at meetings or on pre-project field trips:

> Something that seems to be missing sometimes is we'll go on a field trip, we'll give them our input on a project, and then we don't see that give-and-take, we get the draft EA and it's not exactly what we talked about. Where it might have been good to have a little more information, to have been a little more involved before that was hard verbage in a plan. *BMFP*

> I think the Forest Service does a pretty good job of using the zones of agreement. [But sometimes] when they get further into NEPA, with multiple resource specialists sitting around the ID team table, things change. ... Once NEPA scoping starts and formal NEPA is underway the Forest Service pretty much goes into black box mode. *BMFP*

> I would personally like more discussion at BMFP meetings. I would like to get into discussion points, where Forest Service needs help, rather than just updates. *BMFP*

In other words, these BMFP members were asking for more opportunities to discuss and provide input to development of proposed actions and alternatives. Forest Service staff suggested addressing this concern by focusing project updates at BMFP meetings on changes that have occurred during NEPA analysis. One said,

> Give-and-take happens in that black box. It's also crunch time, when we're getting our NEPA documents ready. But letting the collaborative be part of that give-and-take would make our projects better. *Forest Service*

In NEPA documents, explain rationales and cite science

In addition to more input to the development of proposed actions and alternatives, some BMFP interviewees said there is a need for more explanation of the rationales and science behind Forest Service planning decisions in the NEPA documents themselves. Two BMFP members suggested that the Forest Service focus NEPA documents on management decisions and controversial aspects of the project and include less description of conditions and proposed actions.

> I don't think the Forest Service does a very good job of explaining when and why things change. It's usually because there are resource conflicts, but they don't explain it. … They need to explain and justify what they are doing in their NEPA documents. *BMFP*

> They need to provide rationales for why they are making the decisions they make in their NEPA documents. They should state the decision clearly, explain why the decision was made, and then provide references to data and science that supports the decision. *BMFP*

Forest Service interviewees also observed that BMFP has asked the agency to cite the science behind decisions in their NEPA documents.

Revisit NEPA efficiencies

Two BMFP interviewees expressed frustration that they do not know how the Forest Service is using available NEPA tools to make NEPA planning more efficient. One said,

> The Forest Service has tried to tackle NEPA efficiencies but I'm not sure those are being incorporated. For instance, the Malheur National Forest was designated as a Disease and Insect Area under the 2012 Farm Bill designation, but I have not seen the Forest Service use

> any of the new tools and authorities that came out with that bill. I would personally like to see the Forest Service doing more CEs [and not] investing in huge, 1200-page NEPA documents. Start being more efficient in how they present information to people. … There has been work done by the Shipley Group for the Malheur on how they can do things better and faster. … I don't know if any of those recommendations are being used at the project level. … Are they working, are they not working? … I think they are being used, but the Forest Service is not forthcoming on how. They are still working on and getting projects out in under a year – I would like to know how they're doing that, what's working. *BMFP*

A Forest Service interviewee said,

> We're trying some new tools. One thing I'll say is, even though we're going through collaboration we're still receiving objections and potentially some litigation on some projects… So even though we try to work toward efficient processes and documents we're still having to do a pretty high level of documentation and right now our project records, the level of analysis we're doing, we have to gear toward going to court. So it's a balancing act. Some people associate document size or length with efficiency. I don't see that being true. You're still having to do that level of analysis, whether or not you put it in the NEPA document. The part where I do agree with the group is trying to keep our documents as short as possible so they're fairly clear but even then it's hard because when you're talking about science, best available science, conflicting science, trying to address all the things that are required based on previous litigation. It's hard… We're trying to please so many people: we want things at a level where the Region will support us, we want our collaborative to support us, and ultimately we want a judge to support us if we go that far. *Forest Service*

Others agreed that more dialogue would be useful to help BMFP members understand and provide feedback on Forest Service use of NEPA efficiencies.

Make the most of monitoring field trips

Monitoring field trips are used to determine whether expectations were met for implementation and outcomes and if not, why not. Several BMFP and Forest Service interviewees said field trips are one of the most important tools they have for constructive communication, mutual education, and making adjustments based on what has been learned. While they think the monitoring field trips are currently good, interviewees also made the following recommendations for improving them.

Bring implementation records

One Forest Service interviewee said that the Forest Service needs to come on the field trips prepared with all the details of what happened during implementation on each unit visited, so if outcomes are different than originally described, the group can have an informed discussion of why.

Seek balanced representation

For an accurate multiparty assessment, it is important to have a discussion among people with diverse backgrounds and perspectives. Interviewees said this isn't always the case:

> In an ideal situation you'd have representation from all parties... But a lot of times we have no environmental community representatives, so we get timber-side assessment. *Forest Service*

> The problem is, there isn't always good Forest Service representation there. … The Forest Service has to make it a priority to be on the monitoring field trips. That's where we make the decisions about whether what we did is what we wanted. *BMFP*

Take a landscape perspective

Because of project sizes and time constraints, monitoring field trips are necessarily limited to a few pre-selected treatment units. This makes it difficult to do an overall project assessment and may lead to reviews that do not reflect the effects of unvisited units and untreated sections of the project area. As one interviewee put it, "We don't have a helicopter, we don't get to look at how all the units fit together." Others recommended addressing this challenge by being careful to select units that are representative of different vegetation conditions and to begin field trips by looking at the whole project area on maps or satellite images. One said:

> Monitoring in general is tough because at any specific spot, everyone wants to see everything – all the habitat, the gaps. We did a field trip earlier this year where we walked a big loop and then talked. And it worked better. … We started just recently [starting field trips by] flying it on Google Earth [to get] the big picture [before we] go in the woods. … I'm going to push to continue that trend, because it is effective. *BMFP*

Visit a representative sample of units

Interviewees also said monitoring field trips should be designed to include the full range of treatment types and outcomes:

> It's hard to see the full breadth and depth of an issue on a field trip. … Sites [should] be selected to be representative of different situations. *Forest Service*

> You need to be careful that you expose all of the units that have been treated, not just the ones that worked. The ones that didn't work we need to look at. *BMFP*

Ask what needs to change

Interviewees said it is important not to stop at identifying successes and problems encountered, but to then discuss what practices the group would like to see continue and what should change to improve outcomes in the future. As one put it, "Because of what we saw, what are we going to do in the future? How would we do it differently, knowing what we've seen?" Another said:

> It's moving beyond a conversation, moving beyond the realization that it wasn't exactly what you wanted into making it what you wanted. Sometimes there are walls in the way – contractual walls, legal walls, and those things need to be pushed through so the projects we make are truly what we're trying to design. Sometimes we go out [in the field] and we hear all the excuses about why it didn't get to where we wanted it to be but we don't change that. [We need to ask,] "What do we have to do to make this work?" That's the biggest hurdle that I see. [We need to be] constantly asking ourselves, "Do we always have

> to do it like this?" Just because we've always done it this way does not mean we have to do it this way. *BMFP*

Keep written records of discussions and recommendations

To achieve adaptive management – making changes based on what has been learned – it is important to keep an accurate written record of feedback provided and particularly specific recommendations and agreements made. Several interviewees mentioned a need for written records of field trip discussions to make sure learning gets carried forward. For example, one said:

> The biggest flaw is that there's no formal feedback system to the Forest Service and even within the group. We have a great discussion and the people who are there get a lot out of if but I'm not sure there's detailed documentation. … We have to get someone recording those [discussions], and we need formal feedback to the Forest Supervisor, Rangers, key project people. And then there should be a record, documents on the web site. *BMFP*

Build a collaborative learning culture

One interviewee recommended taking an adaptive management approach to BMFP-Forest Service communication and decisionmaking by drawing on organizational learning practices. Others described opportunities for making sure learning is shared among BMFP members, Forest Service employees, and the public and used to improve group process as well as management practices.

Regularly review the status of NEPA planning and BMFP agreements

BMFP members and Malheur National Forest personnel recommended regularly reviewing the planning and decisionmaking processes of both the Forest Service and the collaborative. In particular, some interviewees recommended that at every meeting and field trip the group check in on where the project is in terms of the NEPA process:

> We … need to tell over and over and be as crystal clear as we can: how the NEPA process works. Everybody who's old hat totally gets the NEPA process, but we still hear, "that's not fair; you didn't give us a chance to comment" so we have to tell them about the pre-scoping field trips, public meetings, scoping, [the] open comment period for DEIS… We need to really make clear over and over again how the NEPA process works and where we are within it for every single project. The people who are up to speed will roll their eyes, but we need to do it for the others on every field trip, at every meeting. *BMFP*

Similarly, interviewees said there is a need to regularly check where BMFP is in terms of reaching agreement on proposed projects and specify which project activities have been agreed to and which have not.

> I think the collaborative acknowledges that's an area for improvement – to capture agreements that are made, decisions that are made, how you do that. All the little-d decisions that lead to the big-d Decisions – you have to make sure they're clear and captured accurately and then [through] the feedback loop presented back to the full group. *Forest Service*

Share modeling, analysis, and monitoring results

Interviewees said BMFP is not always aware of trend monitoring, landscape-level modeling, and other analyses conducted by the Malheur National Forest. One Forest Service interviewee said, "Do we come to BMFP with specific agency monitoring data that might be applicable to them? I'm not aware that we've done that." Another said:

> We used to implement a project and then move on to the next project. But to a degree, because we are starting to do larger landscape modeling of our activities, we are going back into those areas and putting in sample plots and so on to characterize the areas. We are starting to look at more of a landscape, the entire Malheur National Forest, to characterize the entire landscape. It's largely driven by questions of how we're affecting fire activity across the landscape, and also … a push to look at and model wildlife habitat at the project level. … We could make our data analysis products more accessible… things like GIS data, modeling exercise results, resource analysis reports themselves. We could put them on the Forest's web site; some Forests are starting to do that. *Forest Service*

Similarly, most BMFP members and Malheur National Forest staff interviewed were not familiar with the full array of CFLRP monitoring being conducted, and some expressed skepticism that the results would be relevant to project planning. Both BMFP and Forest Service interviewees said there was a need for more of a feedback loop between the people doing the CFLRP monitoring and the people working on projects. Some mentioned an annual monitoring seminar where the people doing the monitoring would explain what they've done, what the interim results show, and how the results might be applicable to work on the ground. Interviewees also identified a need to share which CFLRP monitoring data are archived in Forest Service corporate databases and how data that are archived elsewhere will be accessible to Forest Service planners and the two collaborative groups involved in the CFLRP.

> The Forest Service has tons of data they don't do anything with – it gets filed away and forgotten about. So I just hope [the CFLRP monitoring] gets documented, used, shared – whatever it is that needs to happen. *BMFP*

> The vision for the annual monitoring seminar is to, at the very least, have each program present its questions, methods, and what data they've got so far, so people can be aware of what's being done and what's being learned. Ideally Forest Service planning staff will be part of that, learning lessons alongside the collaborative group members. *Forest Service*

One interviewee said that it is the role of the collaborative groups involved in the CFLRP to make sure monitoring results are interpreted and used by project planners:

> The two collaboratives have the strength to feed lessons learned to the Forest Service and see that the Forest Service implements changes based on monitoring results and lessons learned on the ground. ID team members are often new to the Forest and are so focused on ambitious targets that they don't have the time to look back at what happened in the past and make changes. The collaboratives have the institutional memory, especially with all the Forest Service turnover, and they have a lot of power to help implement changes. *Forest Service*

Capture and share emergent learning and adaptations

Forest Service personnel, particularly contracting officers, make operational changes based on lessons learned during implementation and post-treatment field trips. Often, however, that learning is retained in individual memories, not recorded and shared, and risks being lost with personnel turnover. Interviewees recommended periodically holding meetings to discuss recent lessons learned, innovations, and adaptations, and keeping a record of those changes so they can be shared and referred to on future projects.

> It's hard to carry information and shared knowledge forward, even when it's fairly obvious lessons learned. People's experience and lessons learned in the field lives in their memories and shared conversations, but does not get carried forward. *BMFP*

> The Forest Service doesn't do a good job of keeping track of contract and prescription improvements and adaptations. It would be helpful to have periodic meetings where that's the focus – to capture and carry forward major contract changes. *Forest Service*

Tell the BMFP story

Interviewees said BMFP also could help maintain institutional memory and make planning discussions more efficient by continually "telling the story" – reviewing and sharing past successes, lessons learned, and the processes that BMFP uses to give input to project planning. As one interviewee envisions it:

> The history has to be part of the culture as well. … At meetings, especially when facing contentious issues, have old timers stand up and put the current debate in context. Introduce the discussion with some kind of background: "Here's how we got to having this issue on the table. When we first started this collaborative there was absolutely no agreement about x and y and z, and then through this project we agreed on x, etc. etc. So it's really through people working carefully together that we come to agreement on these things. And now we're talking about whether we can move on." … Retell the story regularly enough that people are sick of it, say 3-4 times a year. So everybody agrees on where our history is. Keep it a part of the living tradition. So everybody knows where we've been, new people get a sense of the cultural context they're stepping into. … There also needs to be a clear place on the web page that tells the history and has links to developing documents, operations manual, etc. *BMFP*

Several interviewees emphasized telling the BMFP story beyond collaborative group meetings. They recommended advertising the work of the collaborative through op-ed articles in the newspaper, on TV, and on Coffee Time on the radio:

> There is a huge gap between local public perception and what BMFP actually does. A huge need for communicating with the local community. *BMFP*

> They need to tell their story, and they're not. They're the most effective collaborative probably in the nation, and nobody knows that. …what does it mean that the Malheur National Forest has been working with BMFP for 8 years and hasn't been litigated on a veg project? How has that happened? That's rare. … And it's still predominantly local people trying to manage their forest. Tell their story – largest expansion in the history of the CFLR

> program just happened. They need to celebrate that! There's no way we could do what we've done without them, no way. *Forest Service*

> Look at the trajectory – the history of the Malheur National Forest, how many projects there were, how big the planning acres, how many projects they complete a year, how much volume we put out. All of the changes 2006 to now didn't just happen by accident. *BMFP*

Take personal responsibility for bringing others up to speed

Interviewees discussed a need to bring new BMFP members and Forest Service employees up to speed on group processes and past agreements. They identified the annual Forest Service collaborative orientation sessions as important and something that should continue. Forest Service interviewees talked about peer responsibility for educating others on past agreements and practices, and BMFP interviewees talked about the need for individual members to respond to people they hear expressing misinformation about BMFP or the Forest Service:

> ID team and district rangers need to understand those zones of agreement to answer questions new employees may have: "Here's where we stand on these topics, these are the general agreements with the collaborative, here's the ones we're hard and fast on that probably aren't going to change much, here are the ones where we're still working it out…" They need to set those expectations. … And [then] it's us as team members being supportive of that leader and making it clear that new ideas are welcome but here's where we need to go with the general direction of the NEPA project. Helping hold each other accountable to that. *Forest Service*

> Maybe even a direct one-on-one mentorship thing for new members who are clearly coming in to stay. Give them the core documents, tell them what they have to read, bring them in. … For the people who don't come [to meetings] and are very involved [in national forest management], it's individual outreach. Environmental community to environmental community, industry to industry... It will be a case-by-case basis. *BMFP*

Others said it is important to invite new Forest Service employees and new BMFP members to ask questions and make suggestions regarding past agreements:

> You have to have those ongoing discussions. Otherwise, how do new members feel they have a voice and are empowered to be a part of the group and having whatever it is that they're representing be represented? It is about relationships. *Forest Service*

What sorts of agreements are most useful?

Interviewees were enthusiastically supportive of the zones of agreement documents. They also described some challenges to transitioning from prescriptive, project-specific agreements to more general recommendations. The range of opinions included:

> The zones of agreement have transitioned from specifics to a generalized conceptual approach. I expect the Forest Service to take those concepts and apply them at their discretion. *BMFP*

> What would help the Forest Service the most [is] general, landscape-level guidance. Management goals as opposed to practices. … Trying to be very prescriptive on a one-size-fits-all approach, it's too time consuming, ... there's too much variation on the land. *Forest Service*

> But even the 30,000-foot input [needs to be] couched within projects to see how they would play out. The zones of agreement are an easy starting point for conversation, a framework. But we still need to ask, "Does this work on this project?" and look at any unique sites. *BMFP*

> The more specific they can get the more useful it is. *Forest Service*

Issue-based zones of agreement

Provide general guidance and, over time, add specific scenarios

One interviewee suggested balancing the need for issue-based zones of agreement and project-specific guidance by developing broad zones of agreement and, over time, including project-specific recommendations as examples within the zones of agreement documents.

> You need to start at the top, get to the big major things to agree on first, and then kind of work your way down into the specific. One of the major things about the zones I would like to see [is to] discuss it in terms of general, broad agreements that can be applied over the whole subject area and [then] definitely document specific agreements for specific locations and situations, and as time goes on compile specific situations and scenarios and then you can start lumping those together for general agreements for the future. [So for example, in the riparian zones of agreement, you could] say, 'for this wet meadow in Big Mosquito…,' then move on to other wet meadow situations and that will get worked in. *Forest Service*

"Talk about the why"

One BMFP member discussed the importance of not only providing management recommendations but also explaining how the group reached those agreements:

> I would like to see more in the future the scientific papers that we're using to back up our conclusions and when we don't know the science, why we're making the calls we're making… Write that language as clearly as we can so NEPA planners can simply lift that information, including scientific citations and reasons for making a decision, and just copy and paste it straight into their NEPA. … [Then] when we change things, explain what the position was before, why it was that position before, and what information made us change. Talk about the why. [What we need is] not just a document that says "This is what we agreed to" but "this is where we used to be and this is why we changed." …. As we bring in new members we'll have a lot of people with those older understandings. It's important to acknowledge we all used to believe that too and then show how things progressed, how we got to a new place. I hope that will make people feel it's easier for them to come along, they won't just see us as a group of people with a rogue interpretation of the same science. *BMFP*

Forest Service staff also said they appreciate having science referenced in the zones of agreement documents.

Treat them as working documents

Several interviewees said they expect zones of agreement to be amended and revised over time, as new science becomes available and the group works on different projects.

> [Periodically] we need to review the zones of agreement. Do we still think these apply given what we've been looking at, given past projects, given new science? *BMFP*

Project-specific agreements

As noted above, several interviewees said that in addition to issue-based zones of agreement, the BMFP needs to give clear feedback on its level of support for specific projects and specific activities within projects. Some people referred to these as "project-specific zones of agreement" that should be developed for each new project.

> [What's most useful to the Forest Service is] when BMFP can come up with a clear statement about what we all agree on. … That happened clearly on Dads, Soda Bear, Elk 16 – it's all there in the zones of agreement document. … Big Mosquito was not as clear. Agreements were made orally and recorded in approximate terms in notes from the meeting. *BMFP*

> [We need to] come up with explicit zones of agreement for each project going forward. *BMFP*

However, there was some difference of opinion over how detailed to make the project-specific agreements:

> So we are having a discussion as a collaborative, when we agree to a project, is BMFP signing off on the [whole] project as presented by the Forest Service or are we [just] agreeing to the vegetative treatments that we agreed to within that project? And the two are very different things. *BMFP*

> I am trying to push them really hard, for a given project, to list out the points that the collaborative agrees to and pass the document around [so members can say that they] approved it. It's a contract within the collaborative with a statement at the end saying, yes we agreed. *Forest Service*

> You can't foolproof [a NEPA document] by getting item-by-item agreement. *Forest Service*

> It would be helpful to have people sign off on and commit to projects, but it would be very difficult and not foolproof. … In the 12 to 18 months between that agreement and the final Forest Service decision people can change. *BMFP*

One BMFP member suggested that instead of developing separate, project-specific agreements, BMFP should develop a process that helps both the BMFP and Forest Service apply the issue-based agreements at a project level. There is a need for more discussion between BMFP and the Forest Service to clarify the need for and level of specificity desired in project-specific agreements.

What information gaps, if filled, would improve NEPA planning?

Interviewees identified new zones of agreement that they think would be helpful for future NEPA planning and questions that could be answered through new research or analysis.

Science synthesis and zones of agreement

Interviewees said BMFP should continue its work on riparian, aspen, and goshawk science synthesis and zones of agreement, and several recommended developing issue-based zones of agreement for moist mixed conifer restoration, post-disturbance salvage, and road management. A few expressed interest in zones of agreement on other topics, including using wildfire as a management tool, changing smoke management regulations to support more prescribed burning, and rangeland management.

Post-disturbance salvage

Several interviewees identified zones of agreement for post-fire harvest as a priority for BMFP. One said this would require science synthesis to answer a number of questions, such as: "Historically, how did these areas burn, [and is the current] burn pattern similar to historical or more intense? What are the habitat needs of primary cavity excavators? What's the reburn potential after trees fall down? Is it possible to restore and reduce reburn potential through salvage?" Based on the science synthesis and discussions, the group could then develop a matrix of where and how BMFP considers salvage appropriate, given forest conditions and burn severity.

Moist mixed conifer

Several interviewees recommended that BMFP develop moist mixed conifer zones of agreement. One suggested a science workshop with Pacific Northwest Research Station scientists who recently wrote a moist mixed conifer science synthesis report. Others said that the group should revisit the project-specific moist mixed conifer prescription from Big Mosquito once it has been implemented.

Road and travel management

Several interviewees discussed a need for zones of agreement on roads, particularly the effects of road density on wildlife and water quality but also management options beyond road closures, such as water bars, seasonal closures, and partial closures.

Using wildfire as a management tool

Two Forest Service interviewees emphasized a need for more discussion of managing wildfire for restoration purposes. This would include determining where to strategically place treatments to be able to better manage wildfire in future, particularly in mixed conifer where treatments leave denser stands. One Forest Service interviewee recommended a science workshop with fire ecologists and managers from other places: "There are Forests that have been managing with wildfire for a while, like the Gila. Those guys could at least say how they've been doing it."

Smoke management

Two interviewees – a Forest Service employee and a BMFP member – raised smoke management as an area where BMFP might be able to have some influence.

> The Forest Service has hundreds of thousands of acres of backlogged [prescribed fire treatments] but the regulations are so constraining that there are too few days when you can do it. But there are no regulations on wildfire, which can burn hotter and bigger and create more smoke. So how do you change the state regulations so you may get a little more smoke under prescribed fire but it's more beneficial than a wildland fire? *BMFP*

Rangeland management

One interviewee asked whether it was time for BMFP to tackle rangeland management zones of agreement:

> What's the desired future conditions for range ecology, what's feasible, and how do you manage for the DFCs? They're right to be cautious about taking on too much, but this is something the Forest Service is left to deal with. *Forest Service*

Science library

One person suggested that the Forest Service and BMFP could work together to compile a library of science that the BMFP considers credible and supports.

New research and analysis

In terms of new science, interviewees said there is an abundance of both historical and current data on the Malheur National Forest, particularly with new Landsat and Lidar data, but there remain a number of unanswered questions. Interviewees were particularly interested in seeing more analysis of existing data to better characterize historical and current conditions. A few raised questions that would require new research.

Large trees and snags

Several interviewees discussed a need for a spatial inventory of large trees, old trees, and snags on the landscape. Others raised questions about managing for more snags and large trees.

> [We need to know] whether or not there's sufficient large and old structure on the forest, particularly in terms of snags. *BMFP*

> The Forest Service should have done a snag analysis Forest-wide a long time ago. Same thing with old growth. … They haven't analyzed them. Statistically, they can do it, by species. *BMFP*

> What is the appropriate amount of snags? How do we create conditions to start moving back toward the right amount of snags, set the natural process in motion? … How do we set out processes so in 20, 40, 60 years the right recruitment system is coming in? *BMFP*

> Where on the Forest should we manage for large young trees? *Forest Service*

Historic extent and habitat needs of MIS species

Several people raised questions specific to wildlife habitat management, particularly pine marten and pileated woodpeckers. Questions included:

> What are the effects of treatments in and around northern goshawk habitat? *Forest Service*

> [What are the habitat needs of pine marten? What are the effects of treatments in pine marten habitat?] *Forest Service and BMFP*
>
> [What are the habitat needs of] pileated woodpeckers? *BMFP*
>
> What was the historic range of variation for different [management indicator] species? [What are the current] populations and [what habitat] is really needed to support them? *BMFP*

Distribution of vegetation types and patches across the landscape

Four interviewees were interested in knowing the historical and current distribution of vegetation types and patches of denser vegetation.

> We need [information on] vegetation types, vegetation density, [and] snags … so when we're talking at the project level about, for example, leaving denser patches for wildlife, we know whether there's an adjacent wilderness area with higher density so we don't need the clumps/skids/gaps. We can't make an analysis without the bigger picture to look at what's on the forest and why we're designing projects. *BMFP*
>
> [In] more productive, moister, mixed-species sites, like Big Mosquito, [we] don't have a good handle on the historic or desired or appropriate mix of patch sizes… either historically or what we would need to meet management objectives for, say, wildlife habitat. There is not as much research on those areas… If someone was going to do a study to help inform Forest Service management in those areas, that would be one place to start: try to establish what was there historically as far as patch sizes and species composition in mixed fire regime forests, a good historic reference point. We could then look at what we have now and how things have changed, and then look at where we want to go from here. *Forest Service*

Riparian areas

A few individuals talked about needing information that could inform riparian area management, noting that the Forest Service expects to be doing more work in riparian areas in future. One Forest Service interviewee said, "We don't have historic range of variation of composition and structural configurations for riparian areas. We don't even have a good inventory of what riparian systems look like now." Another asked, "What was the role of fire in riparian areas historically? What's affecting … fire fuel risk [in riparian areas]?"

Wildlife habitat connectivity corridors

Three interviewees raised questions specific to wildlife habitat corridors described in Eastside Screens Amendment 2. They asked:

> There's a question whether they ever really existed, as written, in the drier sites in frequent fire forests in the first place. It would be nice to take a closer look at that in the forest [types] we have [and] the forest fire regimes we have and expect [and ask,] what was the distribution in LOS in the first place?" *Forest Service*
>
> What does a corridor look like? What species [use it]? What makes a good connectivity corridor? *BMFP*

Analysis of treatment effects on wildfire behavior

One person said,

> If we do get a large fire we need to spend the time to monitor the effects of that fire in areas they treated, like they did on the Deschutes, where the Pole Creek Fire burned into some of their treatments. But it takes an effort to do a good assessment of that. Our Region has offered, said if you get that call and we'll help, but I think it would be good for the collaborative to be involved in that. *Forest Service*

Desired conditions and future range of variation

Two interviewees discussed a general need to focus on desired future conditions and the ability of the landscape to produce those conditions rather than basing management objectives primarily on historic range of variation:

> We don't have a well-articulated and supported desired condition to produce different resources we want on the landscape. Some people refer to that as a future range of variation – that's the latest buzzword. What you're looking at is not what was there historically; we have more people, climate change, that sort of thing. Look at what can and should be there in the future. It's really something the Forest Service in general … never does a good job of, articulating that desired future condition. They don't do it because it's very hard. You have to start with what is it you want and then ask, what is the land capable of doing? It's an extremely big job, and a necessary one, because desired future condition is what drives what you do. One of the biggest things BMFP could do to impact management of the land over time [is] define desired future conditions and future range of variation. *Forest Service*

> What's driving the Forest's current management scheme is fire recurrence and the landscape being out of historical range of variation. They need to be careful with that. We're talking about today. It's what do we want today, what's going on with our species today, not what species were doing 100 years ago. What's limiting to species today? … It doesn't matter what HRV said. Is there a need for a current condition analysis? What are our current needs versus what was there historically, and if we move it to HRV what are we going to lose? *BMFP*

Next steps

The recommendations in this report will be reviewed and discussed at the October 15, 2015 BMFP full group meeting. After that discussion, it may be useful for the BMFP to:

1. Continue to make participation in multiparty monitoring field trips and developing zones of agreement a priority for BMFP members.
2. During NEPA planning, work with the Forest Service to structure full BMFP group meeting discussions around NEPA decision points.
3. Revisit what's needed in terms of project-specific agreements.
4. Organize a meeting of Malheur National Forest NEPA planners and line officers and BMFP members with an interest in NEPA planning efficiencies to discuss the Forest's current use of NEPA efficiencies and opportunities for further improvement.
5. Facilitate a prioritization process to identify which of the suggested zones of agreement should be tackled first.
6. Organize a meeting of BMFP and Malheur National Forest scientists to discuss and prioritize research and analysis needs.