

THESIS

ASSESSING FOREST PLAN REVISION UNDER THE 2012 PLANNING RULE:  
UNDERSTANDING POLICY IMPLEMENTATION AND ORGANIZATIONAL LEARNING

Submitted by

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In partial fulfillment of the requirements

For the Degree of Master of Science

Colorado State University

Fort Collins, Colorado

Summer 2017

Master's Committee

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## ABSTRACT

### ASSESSING FOREST PLAN REVISION UNDER THE 2012 PLANNING RULE: UNDERSTANDING POLICY IMPLEMENTATION AND ORGANIZATIONAL LEARNING

In 2012, under the National Forest Management Act (NFMA), the U.S. Forest Service promulgated a new planning rule that was a significant change from past planning regulations. For example, the concepts of ecological integrity and climate change adaptation were introduced as important management priorities. This research identified lessons learned, innovations, and best practices under the 2012 planning rule and characterized how organizational learning occurred during times of policy transition and implementation. I used learning frameworks to identify types of learning occurring. In addition, early policy implementation is a critical time for an organization to experience learning, but there has been relatively little literature that looks at how learning occurs during this period. The policy implementation literature discusses both top-down and bottom-up variables impacting implementation, and I considered how these may also affect learning. We collected qualitative data from the 2016 Planners' Meeting in Fort Collins, Colorado held by the Forest Service and conducted 25 semi-structured, follow-up interviews with planning staff to understand what types of learning were occurring during early implementation of a new policy, determine how the factors that affect policy implementation affect learning, and identify how the agency could better support learning throughout the implementation of the 2012 planning rule. This study revealed that although the Forest Service is displaying some characteristics of a learning organization, such as creating social learning networks, the agency needs structural and cultural changes to reach their goals and overcome barriers. Much of the learning that is occurring happens at the individual level, and a critical

challenge is how to improve diffusion and consolidation of the knowledge being gained.

Therefore, the agency will need to create entirely new structures to capture their knowledge and lessons learned to better encourage continual learning. This could include improving trainings and workshops and offering mentoring opportunities but may also require reorganization and dedication of new staff positions to support more effective organizational learning.

## ACKNOWLEDGEMENTS

I would like to thank my advisor, Dr. Courtney Schultz, for this opportunity and all her encouragement, guidance, and support during my graduate studies. I would like to also thank Dr. Monique Rocca and Dan Williams for their participation on my committee. I would like to thank Warner College of Natural Resources and the Department of Forest and Rangeland Stewardship for the wonderful experiences. I would like to thank the U.S. Forest Service for the opportunity to conduct this study and to all those who participated. Finally, I would like to express my appreciation for my family and friends including Pam Huntress, Elizabeth Huntress, Alexander Ricco, and Maddy Ricco for encouraging me, and Paden Gatlin for keeping me sane the past 2 years.

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## THESIS OVERVIEW

Requirements for forest planning are at the heart of the National Forest Management Act (NFMA) of 1976, which is the guiding legislation for management of the national forests. In 2012, new planning regulations under the NFMA were introduced, and all forests will have to undergo plan revision under the 2012 planning rule. As national forests are beginning this process, it is important to investigate how the agency can successfully and efficiently undertake this process and adjust its organization structure and behavior as necessary. We designed a research project to address two primary research objectives. These were to: 1) identify lessons learned, innovations, and best practices under the 2012 planning rule, and 2) characterize how organizational learning occurs during policy transition and implementation in the Forest Service in the context of the 2012 planning rule.

This study took place in two stages. In May 2016, the U.S. Forest Service held a Planners' Meeting in Fort Collins, Colorado. Plan revision team members, supporting staff, and Federal Advisory Committee members gathered to share lessons learned, innovations, best practices, and recommendations concerning the 2012 planning rule. Our research group, led by my lead advisor and me, gathered data from small and large group discussions during this meeting regarding early implementation of the 2012 planning rule. I synthesized this information into a report. I then conducted in-depth, follow-up interviews to further explore questions around innovations, lessons learned, best practices, and organizational learning surrounding policy implementation. I examined institutional factors that promote or impede policy implementation and organizational learning, and how the agency can overcome long-standing barriers. I further explored and identified the tools, best practices, and recommendations from forest planning team members, based on findings from the May 2016 meeting, to foster successful plan revision. This

study aided in increasing organizational learning for the Forest Service regarding effective and efficient processes concerning implementation of the 2012 planning rule across the National Forest System.

This was an applied project and the information gathered in this study was utilized to create two deliverables. These two documents follow and form the body of my thesis. Chapter 1 is a manuscript we are preparing for a peer-reviewed publication, such as *Journal of Landscape and Urban Planning* or *Public Administrative Review*, to contribute to the literature on policy implementation and organizational learning. Chapter 2 consists of a practitioner's working paper prepared for the Forest Service capturing our findings of lessons learned, innovations, best practices, and additional tools and recommendations identified at the workshop and in interviews. The 2016 National Planners' Meeting Agenda is provided in appendix A. In addition, the interview guide for the in-depth, follow-up interviews with planners is provided in appendix B. Finally, appendix C includes more detail on the coding methodology used for this research.

## CHAPTER 1

### ASSESSING FOREST PLAN REVISION UNDER THE 2012 PLANNING RULE: UNDERSTANDING POLICY IMPLEMENTATION AND ORGANIZATIONAL LEARNING

#### **1. INTRODUCTION**

##### **1.1 Problem Statement**

Organizational learning is the building of knowledge that leads to shifts in an organization's practices and culture (Brown and Squirrell, 2009). Learning is distinct from copying or mimicking of behaviors, as it implies an improved understanding of policy problems and objectives. This includes the ability to draw lessons learned, recognize best practices, and embed those practices within the organization (May, 1992). For continual success of an organization, learning is an integral process. A learning organization promotes learning of all its members and continually transforms itself to meet changing demands (Dodgson, 1993). Understanding how learning occurs and the challenges that hinder it from taking place at an organizational level are important for supporting it across an institution, as it is not merely a sum of each member's learning (Fiol and Lyles, 1985). Implementation of a new policy is a crucial time for learning, but there has been relatively little literature that looks at how learning occurs during the initial stages of policy implementation (Fernandez and Rainey, 2006; McLaughlin, 1987). Much of the policy implementation literature emphasizes both top-down and bottom-up variables that affect implementation and may affect learning as well (Sabatier, 1986).

In 2012, the U.S. Forest Service promulgated a new planning rule under the National Forest Management Act (NFMA) that diverges substantially from previous rules. For instance, ecological integrity, restoration, and climate change are important, new concepts in the context

of the planning rule that require complex interpretation and action at multiple scales. Our research looked at the case of the U.S. Forest Service and its new regulations to investigate organizational learning during implementation of a new policy within a multi-level agency. We specifically explored how the Forest Service approaches its land management planning under NFMA and identified persistent challenges and barriers to organizational learning during early implementation of the new policy. We wanted to understand what types of learning were occurring during early implementation of a new policy, determine how the factors that affect policy implementation affect learning as well, and identify how the agency could better support learning throughout the implementation of the 2012 planning rule. We use this case study to speak to the broader literature on organizational learning and return to this topic at the end of our paper.

## **1.2 Background Information**

### **1.2.1 Organizational learning and policy implementation**

Peter Senge (1990) defines a learning organization as a place “where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together” (p. 1). Fiol and Lyles (1985) definition of learning within an organization is, more simply, “the development of insights, knowledge, and associations between past actions, the effectiveness of those actions, and future actions” (p. 811). To successfully navigate unpredictable and uncertain futures, change and learning within an agency is essential so that organizational structure, behavior, and institutions support organizational goals.

There are several prominent definitions in the environmental governance literature of what constitutes learning, each with its own set of terms that often describe similar processes (Brown and Squirrel, 2009; Dodgeson, 1993; Fiol and Lyles, 1985; Fiorino, 2001; May, 1992). For each type of learning, there are different indicators that such learning is occurring (see Table 1). In this paper, we adopt definitions from Pahl-Wostl et al. (2007), who makes distinctions about learning in terms of single- and double-loop learning, in addition to triple-loop learning, which is less relevant for our work. Single-loop learning refers to an instrumental change in strategy within the constraints of the overall norms and beliefs that already exist within an organization. Double-loop learning is characterized as more substantial changes in the underlying values and beliefs in an individual or population. While these types of learning might be at the individual level, any study on organizational learning requires language to describe learning that gets embedded within a community of practice. Therefore, we also draw from Reed et al. (2010), who explain that “social learning” is defined as a change in understanding that goes beyond the individual to become situated in wider communities of practice through social interactions between actors with social networks. Social learning can be supported by collaborative processes, in which individuals and organizations with differing goals and knowledge sets come together to share ideas and responsibilities to create innovative strategies to reach management objectives (Reed et al., 2010). Importantly, while learning can occur at the individual level, “social learning,” as defined by these authors, involves both the capture and diffusion of knowledge within an organization or network. Therefore, in the literature, “social learning” has been defined as both a process that supports learning and an outcome that results in knowledge retention and management within an organization or community of practice. In this paper, we define organizational learning as the social learning that occurs through the capture

and exchange of knowledge within an organization that leads to shifts in management practices through the diffusion of innovation; it is therefore both a process and an outcome.

Table 1: Types of organizational learning and evidence of occurrence

Label	Author	Definition	Evidence of learning
Single-loop learning	Pahl-Wostl et al. 2007	Instrumental change in strategy within the constraints of the overall norms and beliefs that already exist within an organization.	Use of new approaches or tools to carry out existing goals; this might include incorporation of new scientific information, providing additional guidance, adding capacity, designing support tools, etc.
Double-loop learning	Pahl-Wostl et al. 2007	More substantial changes in underlying values and beliefs in a population.	An alteration of the basic principles underlying a policy, such as a change in management priorities or goals, the incorporation of new actors in decision-making processes, or redesigning organizational structures and strategies in novel ways to support achievement of goals
Social learning	Reed et al. 2010	Change in understanding going beyond individual to become situated in wider communities of practice through social interactions between social networks.	Knowledge being disseminated through informal or formal networks and relationships and becoming embedded within the organization as a lesson learned or best practice

Factors that can facilitate or impede organizational learning include both cultural and structural influences (Moynihan and Landuyt, 2009). Learning from a cultural perspective is facilitated by shared norms and derives from a collective understanding experienced by organizational actors. Learning from a structural perspective focuses on how individual learning is acquired and utilized by the organization. Moynihan and Landuyt (2009) claim that all

learning occurs at an individual level, and organizational learning occurs by either the collective learning of its members or ingesting new members with knowledge the organization did not previously possess. We would add to this that structural and cultural factors can influence whether individual learning occurs and also whether it is captured and diffused throughout an organization. While some competing theories believe that learning emerges due to either the culture or structure of the organization, Moynihan and Landuyt (2009) argue that both structural and cultural components are important and are in fact intertwined with one another to impact learning throughout an agency. They state that Giddens (1984) structuration theory is a relevant concept, which looks at how culture and structure together influence the social forces that facilitate and impede learning. Structuration theory argues that norms and interpretations shape behavior, but rules and resources are also key factors to social action. Moynihan and Landuyt (2009) therefore emphasize the role that human agency has in reframing the norms that shape behavior in addition to existing cultural and structural factors to influence learning. This indicates that, therefore, to understand whether an agency has the conditions that will support learning, one must consider both structural and cultural variables and the role of individuals in reconstructing social norms to determine the successes or barriers that impact implementation and learning.

Early policy implementation, which often involves interpretation of new and untested policy approaches and mandates, is a valuable and important time for an organization to experience learning. According to Matland (1995), policy implementation scholars focus on two general areas of investigations: top-down and bottom-up variables that influence implementation. Top-down scholars consider the policy designers as the key actors, and focus on factors such as clear policies and efforts to meet legally mandated objectives that can be controlled at the central

level to impact policy outcomes (Matland, 1995; Sabatier, 1986). Top-down factors also include the leadership, organizational incentives, and communication that are agency-wide and come from the top-down (Koontz & Newig, 2014; Sabatier & Mazmanian, 1980). Bottom-up theorists emphasize the role of local agents in the implementation of policy and maintain the importance of contextual factors in interpreting and implementing successful programs (Matland, 1995). For instance, non-statutory variables impacting implementation include: local socioeconomic conditions and technology, media attention, public support, attitudes and resources of interest groups, and the commitment and leadership skills of implementing officials (Sabatier, 1986). Scholars such as Lipsky (2010) describe the importance of street-level bureaucrats and their role in the enforcement of public laws and regulations. Policy transitions are critical points for organizational learning to occur to support successful implementation. We suggest that likely both top-down and bottom-up factors affect learning during implementation. Successful policy implementation increases when objectives are clear and consistent and, at the same time, when local level implementers are given the freedom to adapt programs to local conditions (Matland, 1995; Sabatier, 1986). Learning is more likely to occur when learning is articulated as a clear objective, when there are incentives to promote learning, and when organizational structures are designed to support learning.

In summary, we can explore the types of learning that are occurring within an organization during early policy implementation. This could be specific examples of single- or double-loop learning or social learning, which would be learning on an organization level. To understand what supports different types of learning, we can look at structural and cultural variables to determine whether the organization is set up to learn. In addition, there is little research on how the factors that affect policy implementation impact the occurrence and process

of learning of an organization. Top-down and bottom-up factors that impact implementation may also be aspects of organizational structure and culture that influence learning.

### **1.2.2 Forest Service and Planning Rule**

Because this study focuses on learning in the context of implementation of planning regulations, some background on the history of forest planning is necessary. The United States Forest Service has undergone several shifts in management purposes and practices throughout its history. It was originally created to maintain the national supply of timber and to protect watersheds as mandated in the Organic Act of 1897 (Nie, 2004). Gifford Pinchot, the first Chief of the Forest Service, believed that wise use and preservation of forest resources were compatible goals, and resource planning under this era combined both utilitarian and protective frameworks. Pinchot relied on planning to manage the national forest lands, focusing on timber and range, as these were the primary activities occurring on national forests, and plans were written separately for separate aspects of forest management. As national forest land use by multiple interests began to grow, due to increased demands for timber and other resources such as recreation, wilderness preservation, and biodiversity protection, Forest Service planners began to coordinate resource planning rather than create separate management plans for all resources. The pressure from single-interest groups to use large areas of land solely for a single-use, and accusations of overuse of forest resources, led to the passage of the Multiple Use and Sustainable Yield Act (MUSYA) of 1960. This act declared the multiple use principle for National Forests to prevent potential future overuse and protect against impairment of land productivity (Wilkinson and Anderson, 1987). MUSYA made it necessary to create integrated land management plans to manage the forests for various purposes such as recreation, range, wildlife, along with timber. Plans created under this act represented the Forest Service's first systematic attempt to resolve

issues surrounding conflicting uses of forest resources. However, MUSYA did not define the spatial scale of multiple use consideration, and the lack of specificity of the multiple use mandate has been used to defend everything from logging as an exclusive use on the Tongass National Forest, to roadless protection across a third of the National Forest System (Nie, 2004).

In response to mounting controversy over the management of the national forests, the National Forest Management Act (NFMA) was passed in 1976 and is the primary statute governing forests today. The purpose of NFMA is to establish limitations on the extraction of timber on the national forests to protect forests from unsustainable practices, while supporting multiple uses through the implementation of a land management plan. Under NFMA, the Forest Service created a three-tiered, regulatory approach to planning that involves national-level regulations governing the development and revision of second-tier forest plans, which in turn govern the site-specific plans for projects and other activities. NFMA requires that the agency write regulations to guide the law's implementation. The planning regulations provide detailed direction for meeting the standards that the Forest Service must include when creating management plans. After convening a Committee of Scientists to interpret NFMA, in 1979, a planning rule was promulgated that provided further guidance on how to develop and implement land management plans; this rule was finalized three years later and is known as the 1982 planning rule. Land management planning also must take into consideration other preexisting environmental policies.

Currently, the forests in the National Forest System are being managed almost exclusively by plans created under the 1982 planning standards. From 1982 to the 2012 planning rule, the agency underwent significant changes in their management goals and priorities. In the 1990s, ecosystem management emerged as a primary conceptual goal of forest planning,

particularly during and subsequent to the Clinton administration. Ecosystem management expands the traditional approach of multiple use as it emphasizes the integration of ecological, social, and economic goals and the maintenance of diversity of life forms, ecological processes, and human cultures (Gorte, 1999). This represented a broad shift, compelled largely by public pressure, away from the resource optimization approach of prior management planning under the 1982 planning rule, to a more sustainable and conservation based approach. However, in 2012 a new planning rule was promulgated successfully, after failed attempts by the previous two administrations, that incorporates the idea of ecological integrity and restoration as central elements and goals of planning. All forests eventually must revise their plans under the 2012 planning rule.

The 2012 planning rule has important implications for forest policy and planning efforts. This rule is unique as it increases the role and importance of public participation throughout the revision process. It also presents new biodiversity considerations and introduces the concept of ecological integrity, which the rule establishes as the primary concern of forest management (Schultz et al., 2013; Wurtzebach & Schultz, 2016). Other concepts in the 2012 planning rule include a stronger emphasis on monitoring programs to ensure the plan is meeting its goals and objectives (36 CFR §219.12 [2012]). The rule identifies restoration and watershed protection as agency priorities and emphasizes the contributions of sound forest management to ecological, social, and economic sustainability (36 CFR §219.8 [2012]). It also requires the use of “best available scientific information to inform the planning process” (36 CFR §219.3 [2012]). The agency also faces additional pressures in implementing the rule, such as the expedited three to four-year timeline promised by agency leadership, limited budgets, and increasingly limited capacity to get work done (Moseley & Charnley, 2014). The external environment that the

agency must deal with has also changed, and expectations for collaboration and ecosystem-based approaches are higher than in previous management plans (Butler et al., 2015, USDA Forest Service, 2012).

Due to the major policy and management shifts of the 2012 planning rule, there is a substantial learning curve the agency must undergo. Continued learning across the organization will be very important in the successful implementation of this policy. As forests across the National Forest System begin to undergo plan revision, it is critical that the agency and its planning teams capture and diffuse lessons learned and knowledge across the agency as this process evolves to create more efficient and successful implementation processes.

### **1.3 Summary and Research Objectives**

In summary, this study utilized the opportunity of early implementation of the 2012 planning rule to understand organizational learning during a time of new policy implementation.

This research had three objectives:

- 1) To understand what types of organizational learning are occurring across the Forest Service;
- 2) To determine what structures and processes affect organizational learning, with a specific look at how top-down and bottom-up factors that we know affect policy implementation also affect organizational learning; and
- 3) To identify ways in which the Forest Service could better support learning throughout the agency, with an eye towards informing the broader literature on learning in public organizations.

## 2. METHODS

This research study used qualitative methods to gain insights and opinions from Forest Service employees concerning learning during early implementation of the 2012 planning rule. We were invited by Ecosystem Management Coordination staff in the U.S. Forest Service, who oversee forest planning throughout the agency, to conduct this project independently, but with their support, to characterize organizational learning in the Forest Service in the context of the 2012 planning rule. Due to this collaboration, we were given unusual access to gather this information. This involved data collection from the 2016 Forest Service Planners' Meeting, which brought together planners from all forests revising their plans under the 2012 rule, and in-depth, follow-up interviews with Forest Service planners and planning team members. The Planners' Meeting was primarily a participant observation opportunity; our six-person research team observed and took detailed notes on the various topics on all large- and small-group discussions at the meeting. The information collected included lessons learned, best practices, and challenges associated with plan revision; these topics were foci of the meeting as the second author was invited to help with meeting design in order to meet study objectives. We also identified any present tools and innovations that National Forests were currently utilizing to promote success, learning, and efficiency across the agency. The 85 individuals at this meeting included forest planning team members from throughout the agency, along with staff from Ecosystem Management Coordination, Rocky Mountain Research Station, Enterprise units, Federal Advisory Committee Act (FACA) members, Office of the General Counsel, and researchers from Colorado State University.

We then used a purposive sampling method to target interviewees based off their involvement in forest planning under the 2012 Planning Rule. From this initial set of

interviewees, we used snowball sampling, based on recommendations from Forest Service staff for additional interviewees until we reached a saturation of information and the amount of new information from interviewees was minimal. We interviewed 25 Forest Service employees between July 2016 and February 2017 about their experiences and opinions concerning forest planning, with questions focused on organizational learning. Interviewees included Forest Service employees across different management levels including forest-level planners and planners at the Regional and Washington Offices. During this research, we were unable to speak with every planning team lead or regional planner revising their forest plan. Due to maintaining confidentiality of interviewees, specific forest names were omitted and we identify interviewees based on forest, regional, or national positions. Semi-structured interviews were conducted over the phone using an interview guide (See Appendix B for interview guide). Some specific additional topics, such as what activities to include in a pre-assessment phase or programmatic NEPA, were of interest to the agency and were included in our interview guide; however, we primarily focused on learning strategies; investigating how the agency can promote organizational learning through mentoring, capturing and sharing lessons learned; and identifying best practices.

Interviews were transcribed using a transcription service. We completed coding and analysis of all transcriptions with NVivo software. We utilized a systematic coding process in which we created initial themes based on our research objectives and interview questions and developed themes that emerged from the collected data. From the agreement with the Forest Service, specific topics were coded to identify themes specific to the 2012 planning rule. We also identified and labeled recurring themes specific to our research objectives. We then created coding memos in which we summarized key findings from the interviews. We organized these

based off the main research themes to analyze the findings throughout the course of data analysis. For this project, we obtained Institutional Review Board approval for human subjects research, and we maintained individuals' confidentiality throughout the process.

### **3. RESULTS**

This section presents data on each of our research questions in turn. We discuss the instances of learning occurring across the agency, the top-down and bottom-up factors that influence the structures and processes within the U.S. Forest Service, and ways in which planners felt the agency could foster and support learning.

#### **3.1 Evidence of learning within the U.S. Forest Service**

Several interview questions focused on specific instances of learning and opportunities for sharing lessons learned and innovations under the 2012 planning rule. We saw evidence of single-loop learning in several arenas. There were specific lessons learned that planning teams identified around preparing for plan revision, managing the process, and acquiring necessary capacity. One person said, “[D]ata readiness came up... and the idealized revision team...[and] the need for a collaboration specialist.” In other words, planning teams realized the importance of having the data ready and available to support planning and also discovered what types of staff members they needed on their teams to conduct plan revision successfully. Another planner stated that their regional planner was preparing “to start some NEPA training” to help staff navigate the NEPA process during planning more effectively. Other lessons included doing a “better job of just overall project management planning, having a realistic timeline, and push the understanding [with planning team members] of all the steps that are going to be required.” Leadership stated that they were considering alterations in funding patterns based off recommendations from Forest planners, such as providing more funding upfront so forests could

better prepare for upcoming plan revisions. These specific instances of individual learning about the planning process were examples of single-loop learning, which we identified as learning about the tools needed to carry out implementation such as capacity, additional guidance, or timeframe of implementation, without fundamental restructuring of problem conceptualization.

We saw some examples of what may be double-loop learning, a question that we return to in the discussion. As the planning rule includes new emphasis about the role of science in planning to inform management priorities and new concepts like ecological integrity, planners were designing new approaches to comply with these requirements. Interviewees believed that the 2012 rule created changes in policy goals and that there was support internally to encourage this shift. Several planners described the 2012 planning rule as having “a lot of paradigm shifts in it...no one of them is earth shattering or brand new, but collectively implementing the rule is basically leading each forest through a series of paradigm shifts.” Planners in the Pacific Southwest utilized a science synthesis to support planning that was conducted by the Pacific Southwest Research Station of the Forest Service (USFS, 2014); planners in the Pacific Northwest region were planning to do the same. This science synthesis took the previous decade of scientific research on the topics associated with plan revision and compiled the best available peer-reviewed scientific literature for the Sierra Nevada mountain range (USFS, 2014). The identification of the need for a science synthesis and use of it may be an example of double-loop learning, where planners are re-conceptualizing the role of science in the planning process. Another person explained that the new planning rule caused shifts in the way planners approached the monitoring requirements, saying “Monitoring was one of those last-minute things... put together near the end” but now are looking at monitoring “really from the beginning and thinking about monitoring at the same time as plan components.”

Although collaborative planning is nothing new within the Forest Service, planners cited an increase in the emphasis on public engagement and collaboration, which is a central management consideration in the 2012 planning rule. Some forests emphasized the importance of working with collaborative groups, and one interviewee noted “a lot of contentiousness involved with planning is being reduced by trying to work out a lot of these issues up front through these groups.” One stated that they learned that creating a robust public engagement strategy led to higher “likelihoods for success when we implement the plan because folks would have been along every step of the way.” To increase this engagement, planners were using new strategies such as “using social media in new ways” to reach the public and finding innovative ways to target urban populations in public meetings. Another new approach was to use the Washington Office’s Collaboration Cadre, a group created to help national forests and communities organize for collaboration; one planner felt this was very helpful and that the practice should become more common within the agency. In this arena, we saw a combination of single-loop learning, where individuals were improving upon existing practices using new tools, but also double-loop learning, where individuals were changing their understanding of the value of collaboration and partners’ role in the planning process and the agency was restructuring internal capacity to support collaboration.

To the extent these lessons learned were shared at the planners’ meeting or through other venues and adopted by other planning teams, these lessons learned also represent organizational learning. Most interviewees cited the 2016 Planners’ Meeting held in Fort Collins, CO as a major facilitator in diffusing knowledge across planning teams and as an opportunity to build relationships and create informal networks. One regional planner felt that it provided a platform for forest planners in their region to start “interacting with forests in other regions and sharing

ideas that they may not be thinking about.” Most planners felt having this face-to-face opportunity was critical to providing a forum where specific lessons learned and knowledge could be captured and spread at an organizational level, rather than at an individual, or forest-level. For example, planners shared that through this meeting they considered utilizing a “regional planning team that does more of the work” rather than other forms of planning team organization. Already established networks within the agency also contributed to the diffusion of knowledge and innovations as forests exhibited instances of learning from one another. One example included planning team members in Region 6 stating that they “saw the value of [Region 5’s science synthesis], so we initiated one with Region 6 for the Pacific Northwest in preparation for those revisions.” Therefore, we saw evidence of both social learning processes and outcomes within the organization.

## **3.2 Top-down and bottom-up impacts on structure and culture of learning**

### **3.2.1 Top-down factors**

Top-down factors in our interview data that were relevant to learning included overall structures and processes in place in the agency such as leadership support, policy guidance, communication, and available capacity. Formal guidance issued by the Washington Office was a form of top-down structure meant to communicate clear objectives to inform policy implementation. To complete plan revision, leadership at the Washington Office released a national Land Management Planning Handbook, or “directives,” to guide forests. According to forest and regional planners, their main source of guidance came in the form of the planning rule and planning directives. Many forest planners found the directives to be challenging in terms of prioritizing requirements within time and resource constrictions. However, according to most forest and regional planners, planners at the Regional Offices reviewed these directives and

provided more specific guidance to the forest, relevant to that region. This included trainings and workshops for forest planners on certain topics, such as programmatic NEPA, to ensure that technical information was being diffused consistently and appropriately to planning team members. According to interviewees, these trainings and workshops provided an opportunity for planning teams to better understand the new and complex concepts. Forest planners stated that this also helped to prioritize time to focus on topics and processes that the Regional Office considered important. For greater efficiency with revision, planners felt that increased guidance from the Washington Office on difficult and contentious topics such as Species of Conservation Concern (SCC) would be beneficial and help increase organizational knowledge.

Although there are specific planning requirements each forest must follow, the Washington Office stated that, at the same time, they supported a culture of creativity and innovation in implementation across the National Forest System. Planners at the Forest and regional-level, however, shared a fear of formal public objections to their plans and felt they spent too long trying to meet all planning requirements from leadership, leaving little room to try to implement innovative ideas, given the expectation to plan on expedited timelines. Planners also stated that an important facilitator of trying innovative approaches and sharing these ideas was having “adequate support from leadership.” Forest and regional planners stated they needed assurance that even if innovations were not executed to the intended effects, there would not be negative repercussions associated with failure. Therefore, to support innovation, in addition to the culture that leadership felt it was communicating, planners also needed time and a sense of safety to try innovative approaches as part of learning through implementation.

Interviewees were asked to discuss the networks that planning team members used to communicate and share information. On an agency-wide scale the Forest Service provides

structures to support the sharing of lessons through networks and other platforms such as SharePoint sites, the 2016 Planners' Meeting, and monthly early-adopter and regional phone calls. According to planners, much of the learning associated with plan revision came from these networks, and planners described them as highly valuable. Interviewees shared that the monthly phone calls between regional planners allowed them to communicate across regions to discuss lessons learned, innovations, and challenges. Strengthening these relationships through face-to-face opportunities such as the Planners' Meeting was widely viewed as helping create more extensive networks and a culture of sharing knowledge to influence behaviors and practices. At the same time, planners said that some platforms, like SharePoint sites, could be cleaned up and updated to be more useful.

Planners said the top-down pressure to meet planning deadlines also hinders the ability of planners to gather and capture lessons learned. Planners agreed that the major barrier to capturing and sharing information included access to structural resources and a "lack of time, resources, and capacity." Many planners felt that "things are moving so fast and we're trying to meet the rules intended for creating streamlined documents in a short amount of time, but taking the time to really capture lessons learned in a written format is hard for us to do." Interviewees explained that forests and regions must draw from the same employee pool to do both plan revision and forest-level projects, making it difficult to complete land management plans efficiently. Regional and forest-level planners agreed that the organizational structure of the Forest Service created difficulties in making plan revision a top priority due to a lack of resources and being understaffed. Some aspects of organizational structure were helpful such as the added capacity at the national level of the Collaboration Cadre.

### **3.2.2 Bottom-up factors**

Bottom-up theories emphasize the role of local agents in the implementation of policy and the importance of contextual factors in interpreting and implementing successful programs; both of these arose in conversations about learning during our interviews. The fact that leadership left room for innovation at the local level under the 2012 planning rule provides an opportunity for innovation at a local scale and gives considerable freedom to regions and forests to develop their own revision processes and strategies; in theory, this could support learning. During revision, individual initiative and risk tolerance were factors impacting successful planning processes and the room for innovation. Some forest- and regional-level planners noted that on-the-ground employees sometimes exhibited aversion to change and stated that employees were often more comfortable trying to implement policies and plan revision based on past practices and experiences and were less willing to try new approaches. Planners felt this cultural norm, where it existed, created a barrier to altering practices and behaviors on a local context to meet the intent and principles of the new rule. At the same time, however, some forest-level planning team members did develop innovative approaches contributing to better planning practices and increasing learning across the agency. These included innovations such as the science synthesis, hiring a collaboration specialist to aid in the public engagement processes, or utilizing new methods to engage the public or undertake wilderness evaluations.

One major factor that impacted policy implementation is the influence of local partners and relationships on forests and regions. As collaboration and public engagement are important considerations in the 2012 planning rule, individual land management plans are targeted to the unique local communities associated with the forests, according to forest planners. Planners agreed that local partnerships influenced practices and plan revision. For example, throughout

plan revision efforts in Region 5, local partners helped with processes such as the development of the SCC list, and planners created a Living Assessment Wiki page where the public could contribute scientific information to inform the assessment phase. Some forests described needing stronger public engagement processes where contentious issues were more prevalent, when there was “polarizing members of the public,” or if the forests were trying to build stronger community relationships. These forests cited utilizing innovative practices such as opening their interdisciplinary plan revision meetings to the public. In regions that had decreased capacity to create robust local partnerships, planners felt that they were “doing way less innovative approaches than other forests” as they were focusing on meeting directive requirements within time and resource constraints. These differences coming from the bottom-up created considerable variances across forests undergoing plan revision.

### **3.3 Other ways the agency can improve organizational learning in the future**

Multiple respondents indicated that to support and encourage learning, it would be important, as one person said, “to incorporate learning better throughout the entire process.” The Washington Office felt that by changing the structure to “centralize more parts of planning to a regional, geographic, or national approach” this would create more opportunities to both increase capacity and promote organizational learning, by creating processes to allow for information exchange, capture individual learning, and diffuse lessons learned throughout the organization across the National Forest System. Leadership also believed that encouraging and creating opportunities to build informal networks was important to building learning forums throughout the agency. According to planners across forests and regions, at present, learning was occurring on individual teams but not being disseminated on a large-scale. Some planners felt as though, in terms of capturing lessons learned, there was “not a formalized way of adapting management

based on that stuff that we've learned because the agency doesn't do a good enough job of tracking it and then sharing it." Planners stated that this process "has to be systematic. There's no way for us to do adaptive management, including in planning, and change the way we're managing things if we don't have a system that actually supports our ability to do that." This would require top-down structural changes that create the time to capture lessons learned, assign people to track these lessons, and develop better processes for doing so.

Finally, while staff generally said they needed time and support to learn and innovate, they also felt leadership could provide increased direction to promote better planning practices. Forest planners stated, in the future, that having successful examples of planning documents from other forests, identified by leadership, was beneficial to create more efficient and effective documents. Planners also suggested the agency offer additional agency-wide trainings and guidance for planning teams and create a mentorship program for plan revision. By providing additional support and guidance, planners felt that they would be able to create better land management plans with greater efficiency, benefitting from the lessons that others had learned, and also having the time to try new approaches with more confidence about expectations from above. Again, these would involve top-down structural changes that planners believed would support more of a learning culture inside the agency.

#### **4. DISCUSSION**

We saw all types of learning in the context of planning, both about planning but also about how to become a more effective learning organization. We discuss these findings below and also reflect on the influence of both top-down and bottom-up variables on learning during policy implementation.

## 4.1 Types of Learning

Instances of single-loop learning include utilizing social media, developing innovative outreach approaches to better engage communities, and incorporating technology to meet planning requirements. Much of the single-loop learning we identified is individual learning about planning and how to create better planning processes. This is expected as new staff enter the agency to complete tasks like forest planning that have been stalled or moving at a slow pace since forests completed their first plans under the 1982 planning rule. The agency, seen as a group, in these cases may not be learning new information concerning processes like project management and capacity needs, but this learning is new to individual employees. The question is how to capture this individual learning through a process or organizational learning so that planning processes can move more efficiently and build off early lessons learned. The objective of being a learning organization is to help individuals learn faster and capture and diffuse lessons learned, rather than having every individual relearn this every time someone new enters forest planning. We return to this issue of organizational learning in section 4.3.

Double-loop learning is mainly represented at the policy level through the rule itself. The 2012 planning rule includes a new role for science, new approaches to biodiversity planning, the incorporation of new concepts such as climate change adaptation and ecological integrity. These new paradigms were introduced top-down rather than from the bottom-up; therefore, this shift is coming from leadership rather than from local implementers, although local staff had an opportunity to provide input during the rulemaking process. The result is a need for on-the-ground employees to engage in double-loop learning to support the understanding of these new objectives to embrace these paradigm shifts. According to the literature, for double-loop learning to occur, radical changes in underlying values and beliefs and shifts in behaviors from

individuals and organizational processes need to occur (Pahl-Wostl et al., 2007; Argyris, 1977). We saw both resistance to these new concepts and also individuals realizing the need for a paradigm shift and supporting these changes. Where people were undertaking new practices like the science synthesis, it is difficult to say whether this was a result of paradigmatic shifts in understanding or just a confluence of events and opportunities; understanding whether double-loop learning truly occurred would likely require a different methodology, such as process tracing or longitudinal work to understand the motivations and variables that surround the adoption of new practices. In addition, for double-loop learning to occur, a certain degree of stability is needed for actors to shift their expectations regarding future decisions (Pahl-Wostl et al, 2007). Therefore, since learning requires time for individuals to process, the agency should create the space for people to deliberate about these new concepts to promote better support in the long-term.

Social learning involves knowledge sharing processes and subsequently knowledge becoming embedded in wider communities of practices through social networks (Reed et al., 2010). Social learning is supported by creating informal learning forums, encouraging a culture of learning (Moynihan and Landuyt, 2009). The creation of informal networks is a way in which the agency is bridging the gaps created by a decentralized structure and share information across forest and regional boundaries. Events such as the 2016 Planners' Meeting provided an organized and systematic forum in which planners across the National Forest System could share their knowledge while also building and strengthening networks and relationships. Monthly early-adopter and regional planners phone calls also strengthened communication and helped disseminate knowledge on an agency-wide scale. Although we identified a certain level of social learning occurring among planners, as many reported experiencing increased relationships and

communication, many regions remained insular with most networks taking place across forests within a region. The Forest Service will need to overcome this gap in information sharing to encourage learning across the organization rather than among regions or forests. We also saw some evidence that forests were adopting new practices; however, our observations were primarily of social learning processes rather than outcomes.

#### **4.2 Tradeoffs between top-down and bottom-up factors that affect learning**

Within the implementation of the 2012 planning rule, there is a tension between the need for top-down guidance and space for bottom-up innovation. Leadership expressed interest in creating a more centralized agency structure but also a strong commitment to local innovations. The result is that the agency must strike a balance between top-down guidance and support that also creates create space for local innovation. Sabatier proposes that successful top-down processes include actions from the central government that are consistent with and meet policy objectives (Sabatier, 1986). We observed that the Forest Service is creating some structures to meet the objectives of the 2012 planning rule, like providing policy guidance. Top-down support is appreciated and necessary to achieving objectives, but it needs to be coupled with time, capacity, and resources to successfully incorporate this guidance on-the-ground. Leadership is also communicating to the field the value of innovation, but this message gets muddled if planners feel rushed. Particularly for more contentious and complex topics such as Species of Conservation Concern or wilderness evaluations, planners felt less comfortable with using innovative approaches and wanted more centralized guidance to complete these plan components.

Top-down structures also allowed for some diffusion of lessons learned through the organized networks the agency has in place, including events and workshops to encourage

learning and sharing among staff. These factors that are implemented on an agency-wide level allow for learning to become institutionalized and embedded into the structural processes of the organization. Bottom-up variables that were discussed included local implementers who innovated and aided in the capture and sharing of learning. Sabatier notes that one criticism from a top-down framework includes overlooking the role of actors outside the central government (Sabatier, 1986). Across the Forest Service, local actors are important to creating sub-cultures that foster the sharing of knowledge and information. These sub-cultures allowed for learning to become rooted in the underlying culture of the organization as learning on a more localized level, which also lead to an increase in innovative ideas. Bottom-up approaches helped to create networks of learning among Forest Service staff and also among communities. These strengthened relationships allowed forests to reach goals on a more local context.

#### **4.3 Becoming a more effective learning organization**

The Forest Service is gathering and disseminating knowledge about the 2012 planning rule, while also “learning to learn,” a process which also involves all types of learning. The agency is utilizing some single-loop learning tools such as offering workshops and additional guidance. To better meet organizational learning objectives, the agency will need to focus on improving some of these single-loop learning tools such as creating more functional and accessible websites, offering additional guidance, workshops, and trainings on complex topics, providing successful examples, and changing the organizational structure of support. This would help overcome barriers to organizational learning such as lack of time and resources.

The Forest Service is potentially also experiencing double-loop learning in their underlying values and beliefs. Although we would need to further investigate how people are thinking of these issues, we saw double-loop learning in that staff were considering new

structures the agency might put into place to promote learning and making learning a key objective throughout the planning process. To further support this change, the agency will need to create entirely new structures to better encourage this continued learning. For instance, one idea was to offer more trainings to help staff understand the changes in management objectives. Other ideas included creating centralized planning teams to offer more consistent structures and processes, and offering a mentoring program and create new positions devoted to learning to help lessons learned become embedded across the agency rather than on an individual level.

To be successful, the agency may need to make additional changes to reach its goals to become a more effective learning organization. Centralized planning teams with time devoted to capturing and sharing lessons learned also would be helpful. These types of top-down changes, coupled with adequate time, money, and capacity, would support a greater culture of learning at the field-level too, leaving more room for bottom-up innovation. In addition to existing processes, planners had suggestions for improved networks, training, and mentoring opportunities; these changes to current structures would promote a culture of learning as well. To build a stronger infrastructure for the sharing of knowledge agency-wide, the agency needs to encourage communication across regions at a forest-level rather than solely at a regional-level. Moynihan and Landuyt (2009) discuss how structure and culture work together to influence learning. They state that the norms and interpretations, along with rules and resources, shape behavior and lead to social action. The Forest Service illustrates that both the structure, including the regulations and resource availability, interacts with the insular nature of many forests and regions to prevent knowledge from becoming institutionalized across the agency. By making learning a priority from the start of revision, leadership can ensure that lessons learned,

innovations, and best practices are being captured and shared despite the lack of capacity of forest and regional planners.

Finally, we must note that the agency is already engaging in social learning with regard to becoming a learning organization. They contracted the authors to host conversations on precisely this topic at the Planners' Meeting, to share lessons learned, and to conduct the interviews that formed the basis of this paper to help the agency understand potential avenues for improving learning. This information can support organizational learning if the information is shared and somehow embedded in the organization.

## **5. CONCLUSION**

Policy transitions are a critical time for an agency to experience organizational learning. To create more efficient and effective practices, the Forest Service needs to foster organizational learning across the agency to grow and meet their changing management priorities. Top-down and bottom-up variables are important considerations to understanding the barriers and challenges that exist with successful implementation and subsequent learning associated with new policies. When implementing new policy, redesigned structure and processes to better support, capture, and diffuse learning across the agency are needed to foster continual growth and success. The promotion of social learning through stronger networks and connections will increase the opportunities for learning forums to form and for knowledge to be transferred and shared across regions and forests. The capturing and diffusion of lessons learned, innovations, and best practices needs to be a priority from the beginning, particularly when implementing new policies that will require significant learning. Agencies also need to embrace the social learning process of "learning to learn."

Further research concerning how and whether agencies operationalize learning during times of policy transition would be important to compare these findings across organizations. There is also potential for researching the connections between types of learning and how different types are impacted by structural and cultural factors. Ascertaining specific barriers related to structure and how those barriers impact implementation would be useful, as would investigating how specific beliefs and values underlying the culture of the agency impact these processes. By identifying areas of weaknesses and also areas of learning up front, it will be important to follow the future implementation of land management plans and revision processes throughout the Forest Service. This would help to assess whether these lessons and innovations are becoming embedded within the best practices of the agency, and whether the structure and culture changes to better support successful implementation.

### **5.1 Limitations to this study**

Some limitations of this research include being unable to track long-term progress of the lessons learned and best practices we identified, as our study focused on early implementation of the Forest Service's 2012 planning rule. We do not know whether these practices that the agency is utilizing to support learning are truly resulting in learning. For instance, it is difficult to understand whether the networks that are set up are resulting in learning, or are they just opportunities to share information among planners? If you have those networks do people adopt what others learned, or do they need to learn it themselves? Therefore, further research will be necessary to better understand the extent to which learning is occurring throughout the implementation of this planning rule. Although we reported suggestions from planning staff and offered recommendations, it is unclear if these practices will work or what it would look like or mean if they did work. There is also an issue in understanding if the double-loop learning we

identified was true double-loop learning and new understanding, or if it was just some individual trying an innovation for unknown reasons, such as pressure from the research station rather than a major reconceptualization of the problem.

## CHAPTER 2

### LESSONS LEARNED, INNOVATIONS, AND BEST PRACTICES AMONG EARLY REVISION EFFORTS IN FOREST PLANNING: SUMMARY OF INTERVIEW FINDINGS

#### **1. EXECUTIVE SUMMARY**

In partnership with the US Forest Service, Colorado State University (CSU) has been investigating how the plan revision process under the 2012 planning rule is proceeding and how to best facilitate organizational learning across the agency. In May 2016 the Forest Service held a meeting in Fort Collins, Colorado to bring together forest planning team members to share experiences and lessons learned during plan revisions under the 2012 planning rule. We helped to plan, facilitate, and document the information shared at this meeting; in June 2016 we produced a report summarizing the presentations and discussions from the planners' meeting. This subsequent report summarizes our findings from 25 interviews we conducted after the planners' meeting with regional and forest planners from early-adopter and second-round adopter forests to delve deeper into specific topics of interest that we identified with Ecosystem Management and Coordination (EMC) who oversee forest planning efforts across the agency. Below we list the key topics we investigated in our interviews and our primary findings under each topic.

#### **1.1 Critical activities that need to occur in a pre-assessment phase**

According to planners, a well-designed pre-assessment phase provides an opportunity for planning teams to create a more efficient and successful assessment process. This includes:

- Creating a project management plan to help planners understand upcoming staffing needs, prepare contracts, establish timelines and expectations;

- Initiating a strong relationship with the public upfront and creating a public engagement strategy;
- Having the core planning team on board ahead of time in order to establish a shared understanding of the overall plan revision strategy and to ensure that the necessary personnel are available; and
- Ready and updating data for plan revision.

## **1.2 Identifying innovative approaches and ideas utilized during revision**

The 2012 planning rule provides opportunities for regions and forests to consider innovative approaches and ideas in order to meet the requirements and intents of planning. Some innovations that are being utilized across the agency include:

- Inviting the public to open interdisciplinary (ID) team meetings;
- Providing an interactive Living Wiki for public engagement and assessments;
- Hiring a collaboration specialist to be part of the core planning team;
- Conducting a regional science synthesis;
- Performing a bio-regional assessment; and
- Utilizing a question-based approach to and providing executive summaries of assessments.

## **1.3 Examining the design and utility of regional programmatic NEPA trainings**

Programmatic NEPA is an important aspect of the 2012 planning rule. Planners understand that plan-level NEPA documents cover much larger areas and timeframes and are often more qualitative in nature than project-level NEPA analyses. To support planners in writing effective programmatic EISs, the agency can help by:

- Locating current guidance and support to planning teams for the programmatic NEPA process from the regional offices to use across the agency;
- Providing more workshops and NEPA trainings nationally to ensure that guidance is consistent across the national forest system;
- Making current examples of successful programmatic NEPA documents available and easily accessible; and
- Creating templates to help ease the pressure on individual forests to complete programmatic NEPA and make NEPA documents more consistent across forests.

#### **1.4 Investigating how knowledge is learned and shared across the agency**

Successfully revising and implementing land management plans under the 2012 planning rule requires learning and knowledge sharing across the agency. This can be supported through:

- Utilizing current guidance offered by the agency such as SharePoint sites and monthly early-adopter phone calls;
- Improving peer-to-peer networks within the agency;
- Exploring the value of a formalized mentoring program for new planners by connecting them with planners who are ahead in the process; and
- Prioritizing capture and diffusion of lessons learned.

#### **1.5 Summary**

We have found that many forests are using innovative approaches to planning under the 2012 rule. Planners feel that although they have experienced challenges, existing and future plan revision efforts will be successful, particularly if the agency captures and diffuses lessons learned. Key steps going forward include:

- Prioritizing and outlining key components of a pre-assessment phase in order to accomplish assessment more efficiently;
- Increasing communication, networks, and mentoring across regions and levels of the agency;
- Providing more planning specific trainings on topics such as programmatic NEPA and offering a plan revision primer;
- Creating greater consistency in guidance across the agency; and
- Formalizing a process to capture lessons learned.

## **2. INTRODUCTION**

National forest plan revisions under the 2012 planning rule are underway across the country. The eight early adopter forests include the Sierra, Sequoia, Inyo, Chugach, Cibola, El Yunque, Francis Marion, and Nez-Perce Clearwater National Forests. A number of second-round-adopter forests are also undergoing revision, for a total of 24 forests currently in revision as of September 2016. It is important to capture and share innovations and lessons learned from the forests currently implementing the new planning rule in order to understand how to improve the planning process in the future. The Forest Service Ecosystem Management Coordination (EMC) staff partnered with Colorado State University (CSU) to help with this task.

In May 2016 the Forest Service held a meeting in Fort Collins, Colorado for planners to share experiences and lessons learned during plan revisions under the 2012 planning rule and to identify innovative approaches, best practices, and challenges that planning teams are facing during plan revision. Along with a team of students, we helped plan, facilitate, and record information from the 2016 planners' meeting. In June 2016 we delivered a report to EMC summarizing the presentations and discussions from this meeting.

This second report summarizes findings from interviews we conducted after the planners meeting to dig deeper into key topics. With EMC, we developed focal areas for interviews based on issues of emergent importance at the planners' meeting. These focal areas included:

- Characterizing the critical activities that need to occur in a pre-assessment phase;
- Identifying innovative approaches and ideas utilized during revision;
- Examining the design and utility of regional programmatic NEPA trainings; and
- Investigating how the agency can promote organizational learning through mentoring, capturing and sharing lessons learned, and identifying best practices.

Over the Summer of 2016, we conducted 25 interviews with forest planners and regional planning staff. We identified potential interviewees at the 2016 planner's meeting and based on recommendations from Forest Service staff involved closely with plan revisions. Interviews were recorded and confidential in accordance with CSU's Institutional Review Board for Human Subjects Research. We coded interviews in a systematic fashion, utilizing standard techniques for qualitative data analysis. The remainder of this report summarizes our findings.

### **3. PRE-ASSESSMENT**

Plan revisions include three primary phases: assessment, development of the forest plan, and monitoring during plan implementation. Although a pre-assessment phase is not a required part of the planning process under the 2012 planning rule, most forests have stated that conducting certain activities prior to formal plan revision is necessary in order to complete revisions, and specifically to support the assessment phase. Staff stated that when a region or forest is anticipating beginning plan revision, there are several important activities that need to occur to meet the timelines of the revision process.

### 3.1 Key activities for pre-assessment

According to interviewees, a well-designed pre-assessment phase provides an opportunity for planning teams to create a more efficient and successful assessment process. Forest planners identified in interviews several key activities that are important to begin or complete during a pre-assessment phase in order for the planning team to complete the assessment phase on time. These activities, each of which is discussed in more detail below, included:

- Creating a project management plan to establish timelines and clarify expectations;
- Beginning the public engagement process and developing a public participation strategy;
- Ensuring the core planning team is in place; and
- Preparing and readying the data needed for plan revision (e.g. information for wilderness evaluations and preliminary lists of Species of Conservation Concern (SCCs)).

### 3.2 Project management

According to planners, developing a project management plan prior to beginning formal plan revision increases efficiency and effectiveness of the subsequent phases and helps planning teams better understand upcoming processes. **A project management plan helps planners understand upcoming staffing needs, know when to prepare contracts, determine who needs to be involved and when, establish timelines, and create a public engagement strategy.** Planners also suggested that establishing a filing structure and naming convention, such as abbreviations used, helped create a shared understanding among the team members and made information gathering more organized and accessible.

One challenge planners sometimes faced in developing a project management plan included not fully understanding the time commitment for each process and not allocating

enough time for key activities, such as responding to public comments. More generally, according to planners, although it may delay a forest's overall revision schedule, it is important to allot enough time and resources upfront so as not to prolong the process further by having to revise documents later.

### **3.3 Public engagement**

The 2012 planning rule emphasizes public engagement and collaboration. According to forest planners at both the regional and forest level, **the pre-assessment phase is critical to initiating a strong relationship with the public and creating a public engagement strategy.** According to interviewees, public engagement strategies establish expectations and timelines of engagement, helping communities understand the revision process by identifying the type of public input needed throughout the process and involvement opportunities during each phase. Planners discussed the importance of helping members of the public understand the time commitment associated with each phase and their overall role in the revision process. Some planners said that the major benefit of beginning this process early is to foster relationships with the communities rather than to merely inform or gather information from them. Specific strategies for achieving this are discussed below on pp. 43-45.

Public engagement during plan revision differs from the level of engagement during project level activities. Therefore, a key aspect of early engagement is helping the public to better understand what is included at a plan-level versus project-level process. Many early-adopter planning teams stated that staff struggled to understand the meaning of collaboration in the context of the planning rule. Another struggle included determining the forest's existing capacity to implement different levels of public engagement activities.

### 3.4 Core planning team

**One key recommendation from planners is to have the core planning team on board ahead of time in order to establish a shared understanding of the overall plan revision strategy and to ensure that the necessary personnel are available.** Some planners emphasized the importance of including certain positions and specialists on the core planning team. This included hiring or contracting a collaboration specialist to aid in the development of a public participation strategy and to begin the public engagement process early in the pre-assessment phase. Other important positions to have in place included hiring, detailing, or contracting a writer/editor to create templates ahead of time to optimize efficiency in later phases. If the team is on board and working together early, they can build a project management plan together and agree upon expectations.

A major challenge to this is funding, and often forests said they did not have adequate funding prior to formal plan revision to hire the necessary personnel. Also, planners stated that the hiring process in the agency is a time constraint. Another challenge was high turnover of team members on some planning teams that further slowed down the revision process. Some forests also did not have the resources to have planning teams fully dedicated to the plan revision process.

### 3.5 Data readiness

A key activity for ensuring a successful process is readying the data, according to interviewees. **This involves understanding what data the forest will need, determining if any gaps exist, cleaning up current data, and making sure the data is up-to-date.** Sometimes data will need to come from outside of the agency; this issue should be identified as soon as possible. Planners explained it is important that team can find and access data easily. For

instance, planners emphasized the importance of developing a system to store data in one easily-accessible location so that planning team members do not have to spend time searching for the relevant information. Planners acknowledge that agency information is not kept up-to-date consistently, and once a forest is gearing up for plan revision there is often a scramble to update datasets.

At both the regional and forest-level, GIS datasets need to be readied in order to prepare for the upcoming assessment phase. At the regional level, planners found it useful to prepare and update regional datasets. This includes data that are applicable across multiple forests. Regional planners stated that forests can then supplement regional data with more local data when necessary during the assessment phase. According to some regional planners, this regional data includes climate change vulnerability assessments, as well as vegetation, insect, and disease data. At the forest level, some planners stated that determining key ecosystem characteristics upfront and considering how to integrate them with ecosystem services will help to increase efficiency in the assessment phase. Another important dataset at the forest level includes information on infrastructure, such as roads and trails.

Many planners said that beginning other processes prior to formal plan revision saves time during assessment. These processes include wilderness inventory and evaluation, identifying potential wild and scenic river eligibility, timber suitability evaluations, and preliminary development of the Species of Conservation Concern (SCC) list. Planners said that, at the least, planning teams early on should prepare and summarize the methods that will be used for gathering data and making determinations in these processes to share with the public. This helps to increase transparency and allows the public to understand the input that will be needed in the future.

### 3. 6 Challenges

Some forests stated that they had had inadequate resources and capacity to complete critical pre-assessment activities prior to receiving funding, and, therefore, had to complete these activities in tandem with the assessment phase. **In essence, it forests said they need funding to do a pre-assessment phase in order to accomplish assessment efficiently; since 2015, the agency has responded to this challenge by providing additional funding for forests to complete these critical activities during the pre-assessment period of revision.**

### 4. INNOVATIONS AND LESSONS LEARNED

The 2012 planning rule provides opportunities for regions and forests to consider innovative approaches and ideas in order to meet the requirements and intents of planning. By taking new approaches to certain topics and issues in plan revision, planners can work to increase the overall effectiveness and success of the plan.

We asked planners about processes or tools they employed during planning that they felt were especially innovative or useful. Some ideas that forests and regions have developed include:

- Inviting the public to open interdisciplinary (ID) team meetings;
- Providing an interactive Living Wiki for public engagement and assessments;
- Hiring collaboration specialists;
- Using detailers and contractors to fill in knowledge gaps;
- Utilizing a question-based approach to assessments;
- Creating executive summaries for assessments;
- Directly relating findings from the assessment with need-for-change statements;
- Conducting a science synthesis;

- Performing a bio-regional assessment; and
- Developing regional revision strategies.

#### **4.1 Public engagement innovations**

Due to the diversity and differences of publics across the national forest system, regions and forests utilize different approaches to meet the collaborative intent of the rule. **Although meaningful public engagement is viewed as a time-intensive endeavor by many planners, interviewees also felt that effective public engagement helps create less contention throughout plan revision and can lead to more success, because the public feels informed and involved in the decision-making and is more likely to be satisfied with the final plan.**

Many forests worked with the agency's Collaboration Cadre to create a public engagement strategy. This cadre is a network of people who help forests and stakeholders organize for the collaborative process. Planners felt generally satisfied with this group and believed working with the Cadre increased overall success. Alternatively, some forests worked with groups such as the National Forest Foundation or the Colorado Forest Restoration Institute to help build their collaborative processes. **Some planners also highly recommended hiring a collaboration specialist to be part of the core planning team to ensure that this expertise and need is being met and maintained throughout the entirety of plan revision.** Planners emphasized the importance of having the collaboration specialist on board as soon as possible. This person can then build a public engagement strategy and start public engagement early to build and strengthen relationships with the associated communities.

**Another innovation, employed by the Nantahala-Pisgah National Forest, is offering open interdisciplinary (ID) team meetings.** This allows for increased transparency of Forest Service meetings while also allowing the public to be more informed and involved in the

conversations. By being open with information and internal dialogue, and allowing the public to be involved in these steps, forest staff believed they had an increased likelihood of success with plan implementation, because stakeholders were included in the decision-making process. In open ID team meetings, the forest invites certain interested stakeholders to attend, at first as just a member of the audience, and increases that level of involvement until they are participating in the meetings alongside Forest Service ID team staff. On the plan revision website, the forest invites interested individuals to sign up for notifications about these meetings, and the forest requires the public to RSVP to these events. One important factor for stakeholder participation is that the forest asks the public to read background material on topics being discussed to ensure a more productive meeting. Interviewees said this has provided positive results and helped to strengthen relationships and trust between the forest and the community.

**Region 5 utilized several innovative approaches to public engagement; one example is their Living Wiki for assessments.** This allowed the public to contribute information for the assessment phase. The region put draft chapters of each assessment topic on the website and allowed the public to make edits and additions. The information cited by the public had to be based on science, with sources and citations. Some challenges included the time and capacity needed to maintain the website and reply comments, and that some members of the public participate more than others. Although planners felt that the approach could be improved, they also thought it was useful in allowing the public to engage early and increasing transparency. Region 5 is also unique in their proximity to urban centers, and the region decided to hold public meetings in urban areas, allowing them to reach audiences that traditionally do not participate in forest planning. Going forward, Region 5 planning team members suggest utilizing a variety of outreach methods and marketing techniques to attract a larger audience. This could include

reaching out to universities, using mailing lists of local groups such as the Sierra Club, or advertising a public forum as a chance learn about the Forest Service more generally. **Region 5 also used GIS data in order to identify underserved and underrepresented communities to understand where these groups live and to offer public meetings in these locations.**

Other approaches using webinars to reach a wider audience, creating plan revision websites to allow the public to see the documents being produced and the overall timeline of revision, and sending newsletters to a list-serve to update the public. In order to engage youth, several forests plan to partner with local schools to educate children about the importance of the forest and involve the students in monitoring projects. Although this is not directly beneficial to gathering input for plan revision, it helps build and strengthen relationships between the community and the forest for the long-run. **Interviewees also said these student programs also increase capacity for monitoring projects for later phases of revision and plan implementation.**

#### **4.2 Assessment Innovations**

Forests across the agency take different approaches to the assessment phase. **One key challenge that planners identified is maintaining focus throughout assessment documents rather than creating highly dense documents.**

**The Rio Grande National Forest emphasized creating more focused assessments in order to save time and resources and making these documents more easily understandable to the public.** To do this, the forest used a question-based approach to assessments, which included asking the public questions tied directly to the directives. One lesson learned was to increase simplicity of those questions and their accessibility to the public. For the assessment documents, the forest created executive summaries for each of the 15 topics. These synthesized

current conditions and trends seen in the assessment documents and translated these findings into a page-long document that summarized the information to be more easily understood by the public.

**Some forests suggested tying assessments more clearly and directly to the need-for-change statement.** This allows forests to explain how current trends and conditions relate to plan revision and why the current land management plan needs to change to meet desired conditions. Planners stated that this creates a clearer understanding for the public of the purpose and intent of the plan revision process. One challenge is that planners found staff did not understand the content of the current plan and what components needed to change to meet the requirements of the 2012 planning rule or meet new management goals.

**Region 5 focused on creating a regional strategy in order to provide background information to inform the assessment phase; this included conducting a science synthesis to meet requirements to access the Best Available Scientific Information.** During public meetings through the Sierra Cascade Dialogues, the public identified a need to update the scientific information on Sierra Nevada ecosystems. The science synthesis took the previous decade of scientific research on the topics associated with the 15 assessment topics and compiled all the best available peer-reviewed scientific literature for the Sierra Nevada mountain range. The region synthesized this information to draw new conclusions based on social, economic, and, ecological sustainability factors. Regional staff considered this highly successful, and Region 6 will be conducting their own science synthesis to prepare for upcoming plan revisions.

**Region 5 also conducted a bioregional assessment for the entire Sierra Nevada mountain range, which identified landscape-based issues that translated across the three**

**forests undergoing plan revision.** The region focused on this bioregional level because these forests are so closely connected and certain issues exist that affect all forests in the area.

#### **4.3 Regional coordination approaches**

Across the National Forest System, regions approached plan revision differently. Some have regional core planning teams, while others group forests within regions. **Region 5 used a unique approach as they have a core regional planning team and grouped forests together to maximize efficiency and capacity.** This core planning team focused solely on plan revision. Much pre-assessment work was done at a regional level, such as collecting ecosystem data and creating a public engagement strategy. During the NEPA process, a regional EIS was conducted for use by all three forests in plan revision to consolidate resources. This work was then tiered down to the specific forest level. Although much of the same information was used to inform plans, the plans were specific to each individual forest. Planners in Region 5 felt that the core regional planning team increased capacity and efficiency and alleviated the workload on forest planners. This allowed the forest-level planners to continue forest-level duties throughout the plan revision process. One challenge to this approach was that it provided less autonomy to the individual forests and created issues with the public, as there were unique issues and challenges across communities that the public wanted acknowledged.

**Other regions provided basic support but relied on core teams at the forest level.**

This created more forest-specific land management plans focused on a local scale. Some planners said they did not have enough support to manage both plan revision alongside project-level planning needs, as the core planning staff was not fully dedicated to plan revisions.

**Some regions had core planning teams that traveled to forests within the region providing increased support to the forest-level core planning teams.** This allowed some work to be completed at the regional level while still allowing for forests to address their unique issues.

#### **4.4 Detailers and Contractors**

Many forests hired detailers and contractors to fill in gaps in specialties or expertise. Some of the specialties associated with plan revision are not necessarily needed on a long-term basis but, rather, during certain phases or for specific processes. **Therefore, hiring detailers or contractors provided this skillset when needed and saved the forest funding that could be allocated elsewhere.** Hiring these individuals also took pressure away from planning team leads and increased capacity of the forest, allowing plan revision to cover more ground and delve deeper into certain topics than would have otherwise been possible.

#### **4.5 The Challenge of Innovating**

**Some planners said they wanted more support from leadership when trying new approaches.** Planners described conflicting guidance from leadership to finish plans within an expedited timeframe, while also being thorough and innovative. Also, some planning team members with experience with previous planning rules, according to interviewees, were less inclined to accept innovations or new concepts laid out in the 2012 planning rule.

### **5. PROGRAMMATIC NEPA**

Forest plan NEPA documents are programmatic rather project-specific. This is challenging, as the experience of most Forest Service staff is writing NEPA documents at the project level. This emerged as a key topic of interest at the planners' meeting. Therefore, in interviews we asked questions about the current guidance or training methods utilized at the

regional or forest-level to prepare planning teams to successfully meet programmatic NEPA standards.

### **5.1 What “Programmatic NEPA” means to planners**

Some stated that programmatic NEPA means looking at the overall impacts to forest programs, such as investigating the ability of a forest to achieve the objectives or desired conditions set forth in the plan. Some planners stated that the NEPA analysis involved considering whether or not alternatives will allow the forest to achieve desired conditions.

**Planners felt that programmatic NEPA involved looking at a broader landscape level and utilized more qualitative data than is generally relied upon for project-level NEPA processes.**

### **5.2 Current guidance**

**Some regions provide guidance and support to planning teams for the programmatic NEPA process from the regional offices.** Both Regions 1 and 3 utilized workshops in order to train staff to conduct a programmatic NEPA analysis. This included educating each forest planning team in the region as they begin to prepare for plan revision. Other regions have utilized these resources, which included products such as PowerPoints, in order to train their own planning teams as well. However, these are not widely or consistently utilized across the agency. Another source of guidance forest planners used to understand programmatic NEPA requirements is the CEQ guidance concerning this topic and conversing with Forest Service staff across forests or regions who have previous planning experience.

### **5.3 Moving forward**

Planners suggested several recommendations on future guidance and ideas to improve programmatic NEPA planning. This included:

- Providing workshops and NEPA trainings nationally rather than on a regional or forest basis to ensure that guidance is consistent across the national forest system;
- Making current examples of successful programmatic NEPA documents available and easily accessible; and
- Creating templates to help ease the pressure on individual forests to complete programmatic NEPA and make NEPA documents more consistent across forests.

## **6. BEING A LEARNING ORGANIZATION**

Successfully revising and implementing land management plans under the 2012 planning rule will require the agency to exhibit characteristics of a learning organization. This includes strong communication and adaptability in order for the agency to capture knowledge, disseminate that knowledge, and change internal practices to the extent needed to support organizational goals. To investigate how organizational learning is occurring and to understand where more support is needed to meet these goals, we asked interviewees to identify the current guidance they are utilizing, how knowledge and lessons learned are shared across forests and regions, and challenges that planners have experienced in revision that impede learning and change.

### **6.1 Utility of current guidance and opportunities**

Most written guidance comes from the planning rule and the directives. Planners rely on this guidance to understand expectations from the Washington Office. However, although most planners appreciate the guidance provided by the directives, many felt encumbered by the density of this guidance and the amount of requirements in the directives. Planners said there is tension between completing revision efficiently and meeting expectations laid out in the planning directives. Planners found many strategies currently in use to be helpful, including:

- SharePoint sites to share lessons learned, document examples, and guidance;
- Early-adopter calls to share experiences and discuss challenges and innovations; and
- National planners' meetings and workshops to provide a forum to share and capture lessons learned, challenges, and best practices and strengthen networks across the agency.

## **6.2 Improving knowledge sharing and ideas for mentoring**

We asked interviewees to describe their level of support from other planners at both the regional and forest levels. We also asked how the agency could better support these connections and ability to share and receive knowledge. Although some planners felt as though they had adequate access to communicate with other planners, the network availability is not consistent across forests. For example, depending on the amount of personal connections a planner has within the agency, some planners do not have the same access to other planning teams across regions. **Building stronger connections between planners and planning team members who have already undergone plan revision phases and those starting out would further increase the diffusion of knowledge across the organization.**

Mentoring and peer network opportunities appealed to planners in order to help diffuse information and learning throughout the agency. This might include lists of planners or planning team members with similar job responsibilities and areas of expertise to use as a peer network for advice and support. Some indicated it would be helpful to be part of a cohort of forests (3-4) going through plan revision so they could rely on counterparts on other forests for support along the way. Planners also said increase mentoring could be useful in order to get up to speed, discuss ideas and lessons learned, and understand the expectations of leadership. The following list summarizes ideas from interviewees:

- Increasing communication networks with planners who are ahead in the process and with planners who are in the same phase of revision;
- Promoting peer-to-peer networks by providing a list of individuals who are helpful to talk to in different areas of plan revision and are willing to provide communication and support to those who have questions;
- Connecting planners with mentors who have similar experience; and
- Sending regional planners on visits to other regions to better understand different strategies and approaches.

### **6.3 Capturing lessons learned**

Many planners stated that capturing and sharing lessons learned is difficult as it is a time consuming process that takes away from their other planning duties. However, some feel as though it should be made a priority despite the added work efforts as it is important to help forests across regions create more timely and efficient processes. Many planners stated that although they do not have time to write up summaries for themselves about lessons learned, they appreciate events such as the planners meeting and follow-up interviews in order to be able to share their current experiences, challenges, and suggestions.

### **6.4 Suggestions moving forward**

In order to understand how the agency can better support future planning processes, planning teams were asked to suggest areas moving forward that could strengthen the diffusion of lessons learned across the agency. These included:

- Targeting early-adopter phone calls to provide helpful examples and topics that forests want to discuss;

- Developing a one-stop-shop planning website for successful planning document examples;
- Increasing involvement across regions in document review by providing a list of Forest Service staff willing and capable of reviewing sections of documents or entire documents;
- Continuing the annual planners' meeting to discuss lessons learned, challenges and best practices in further detail; and
- Developing a training program for planning teams preparing to enter the revision process to better understand the content and requirements of the planning rule and directives.

## **7. CONCLUSION**

Although forests are experiencing difficulties in completing plan revision within the timeframe, most felt confident that future forests will be able to implement the lessons learned from early adopters and be more successful. In order to create better planning processes across the forest system, communication should increase across the organization both across forests and regions and across leadership levels. Planners want lessons learned and successful examples provided in an easily accessible platform that they can use during revision. According to planners, planning is not a well-understood discipline. Therefore, it is important for the agency to communicate the mission of the land management plans in order to create more successful processes.

As new forests enter revision, it would be helpful to determine to what extent innovations from early-adopters have been utilized and gauge satisfaction with knowledge sharing and any mentoring or peer-networking opportunities. Ultimately forest plans should help the agency be more successful in doing the day-to-day work of managing disturbance, achieving collaborative

restoration, supporting sustainable recreation, and providing key ecosystem services. It would be valuable to investigate how forest planning support more efficient planning, management, and decision-making. Some planners also want to engage in a forward-looking process to create strategies for improving forest planning and its utility in the decades to come.

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## APPENDIX A

### 2016 Planners' Meeting Agenda

#### **2012 Planning Rule Implementation**

#### **A Learning EVENT**

**May 17 – 19, 2016**

Natural Resource Research Center, Buildings A and B

2150 Center Ave.

Ft. Collins, CO

#### Overview

#### **Objectives**

- Provide a forum for forest planners to come together in person to dialogue, share lessons learned, problem solve, and improve their knowledge networks within the organization.
- Identify challenges and successes thus far in the process of revising forest plans.
- Identify topic areas amenable to synthesis of best practices and begin this synthesis.
- Capture knowledge gained so far in forms that can be easily shared.

#### **Outcomes**

- Identification of innovative approaches used to conduct plan revisions.
- Group deliberation on future innovations to address the most pressing challenges.
- Increased network connections among FS planners.

#### **Products**

- Detailed notes and summaries of meeting content, hosted on internal web pages.
- A synthesis and summary of findings – a compilation of key lessons learned and potential innovations for planning.
- A peer-reviewed paper, produced by CSU faculty and grad students, focusing on organizational learning and innovation.

#### Tuesday, May 17

#### **Welcome & Introductions**

Location: **Building B - Sweetgrass Room**

Topic Lead: **Bruce**

**800 - 815:** Welcome and House-Keeping (Bruce)

**815 – 845:** Opening Remarks (Chris, Ann or Tracy)

**845 – 900:** Agenda Review, Introduction of facilitation team (Bruce)

**900 - 915:** Historical Perspective (Courtney Schultz)

**915 - 945:** Introductions and Ice-breaker (Peri, Debbie, Michelle)

## **Break**

## **Public Engagement**

**Objectives:** Efficiently collect ongoing public engagement effort information (data) around what we are required to do (key rule and directive requirements). What worked well? What were the challenges? What would we do differently in the future?

Location: **Building B - Sweetgrass Room**

Topic Lead: **Timory Peel, Deb Whitall, Ashley Goldhor-Wilcock**

Note-Takers: **CSU (5) + WO EMC**

**1000-1030: Part I Intro—Public Participation Spectrum Primer and Introduce Plan Revision Public Engagement Census Activity** (Deb, Ashley, Timory)

Facilitators: Peri leads, Debbie assists

**1030-1145: Part II—World Café – Public Engagement Efforts Download** (Deb, Ashley, Timory)

Small group discussions around approaches and experiences with the multiple public engagement points supporting plan revision.

Each table has a CSU or WO-EMC note-taker and a host to guide the table discussions based on the four questions:

*What did we do? What worked well? What challenges did we face? What would we do differently in the future?*

Three 20-minute sessions

- Early engagement (outreach/communication/plan revision education/managing expectations/assessing capacity) (Timory Peel)
- Engaging underserved communities/youth (Ashley Goldhor-Wilcock)
- Developing strategic relationships with federal, state, local and tribal governments (Elaine Kohrman)
- SCC public engagement (–Deb Whitall)
- Wilderness/WSR public engagement (inventory/criteria/evaluation) (Sonja Lin)
- Assessment and BASI (Don Yasuda)
- Timber suitability and plan component development and sufficiency of BASI (Joe Krueger)
- Monitoring program and sufficiency of BASI (Michelle Tamez)

**1145-1230:** Report out and Q&A from the World Café

Facilitators: Debbie leads, Peri assists

**Lunch (12:30 – 1:30)**

**Location: Building B - Sweetgrass Room**

**1330-1430: Part III—Panel Discussion with Q&A**

Facilitators: Bruce leads, Debbie assists

Three panelists speak for 10 min each, followed by 30 min Q&A

- Strategically Planning Public Engagement and Project Management for the Long Haul – Deb Whittall
- Collaboration and Power Dynamics: Forest Service as a Partner Model – Elaine Kohrman
- Monitoring the Progress of Collaborative Efforts: The Progress Triangle – Sharon Timko

**1430-1500: Part IV—Collaboration Tools (visit tables during the extended break)**

**Location: Building A - meeting rooms off of main lobby**

- emNEPA Tool Suite
- Talking Points Collaborative Mapping tool (Ashley Goldhor-Wilcock, Scott Dawson)
- R5 Public Involvement Guide (Michelle Tamez)
- National Collaboration Cadre (Sharon Timko and Timory Peel)

**Break (visit tools tables as desired)**

**Organizing for Success: Project Management Plans, Staffing, and Regional Support**

**Location: Building B - Sweetgrass Room**

Topic Lead: **Timory Peel**

Facilitators: Peri leads, Bruce assists

Note-Taker: CSU

**1500-1545: Part I— Building the Roadmap for Revision**

*Successful Sequencing through Project Management Planning—Panel Discussion and Q&A*

Three panelists sharing examples for 10 minutes each

- Lessons learned in R5 and preparation for next revisions (Sonja Lin)
- Lessons learned in R3/R10 (Mary Rasmussen)
- Project management planning examples from large scale planning efforts (Deb McGlothlin)

**1545-1615: Part II - Staffing for Both Revision (SO) and Oversight Responsibilities (RO)**

*What do forests need most from the RO to assist with revision efforts? —Panel presentations followed by discussion*

- How to provide redundancy to planning teams, so resources can be brought in from elsewhere when Forest personnel leave or are over their heads (**Joe Krueger**)
- How do you coordinate sufficient regional oversight and review of the concurrent planning efforts without unduly affecting individual forest timeline and targets? (**Matt Turner**)
- What is the sufficient “hard look” for a programmatic analysis?

## **Recap & Close-Out from Day 1**

Location: **Building B - Sweetgrass Room**

Facilitator: Courtney, with assistance from Ashley, Timory and Deb

Note-Taker: CSU

**1615 – 1700:** For each of the topics covered today, summarize the following with the group:

- What did we learn? (lessons learned<sup>1</sup>)
- What would we do again or what would we do differently? (best practices<sup>2</sup>)
- What are possible innovations and tools we could implement based on what we learned?

## **Evening Social**

<sup>1</sup> A lesson is an innovative approach or work practice that is captured and shared to promote repeat application and it could be an adverse work practice or experience that is captured or shared to avoid recurrence. A lesson is not a lesson learned until the organization and its personnel modify behavior to reflect their new knowledge and insights.

<sup>2</sup> An effective practice is a process, technique, or innovative use of resources, technology, or equipment that has a proven record of success in providing significant improvement to an organization. An effective practice does not become a best practice until it is compared against all available effective practices with the same object

Wednesday, May 18

## **Welcome Back & Overview of Day**

Location: **Building B - Sweetgrass Room**

Facilitator: Bruce Meneghin

Note-Taker: CSU

**8:00 – 8:20:** Quick review of Day 1, adjustments needed, and line out Day 2

## **Assessments**

**Objectives:** Efficiently collect ongoing assessment effort information (data) around what we are required to do (key rule and directive requirements). What worked well? What were the challenges? What would we do differently in the future?

Location: **Building B - Sweetgrass Room**

Topic Lead: **Linda Joyce / John Rupe**

Facilitators: Debbie leads, Peri assists

Note-Taker: CSU

**8:20 – 9:00:** Findings from FACA and WO review of Assessments: report and discussion

**9:00 – 10:00:** Innovations for Assessments: panel discussion followed by Q&A

**Erin Minks** – success of executive summary and transition to need-for-change

**Peter Rich** – explaining different scales and spatial niche in assessment

**Michelle Aldridge** – incorporation of public information into assessment

**Break**

**10:15 – 11:30** Small group, in depth discussions on Assessments

**Lunch (11:30 – 12:30)**

**Best Available Scientific Information and working with Research Stations**

**Objectives:** Efficiently collect ongoing use of BASI information (data) around what we are required to do (key rule and directive requirements). What worked well? What were the challenges? What would we do differently in the future?

Location: **Building B - Sweetgrass Room**

Topic Lead: **Linda Joyce, Mo Essen, Bill Connelly**

Facilitators: Peri leads, Bruce assists

Note-Taker: CSU

**12:30 – 1:30:**

**The Gnarly Topics**

**Objectives:** Efficiently collect ongoing efforts around what we are required to do (key rule and directive requirements). What worked well? What were the challenges? What would we do differently in the future?

Location: **Building B - Sweetgrass Room**

Topic Lead: **Jessica Rubado**

Note-Taker: CSU

### **1:30 – 2:30: Species of Conservation Concern**

Facilitators: Debbie leads, Peri assists

Three panelists speak for 10 minutes each, followed by 30 minutes Q&A

**Regis Terney** – the intent of Rule and Directives; **Mike Goldstein, R10** – the short list; **Don Yasuda, R5** – the longer list

- Report on SCC policy deliberations + other related topics around SCCs

### **Break**

### **2:45 – 3:30: Wilderness**

Facilitators: Bruce leads, Debbie assists

- Additions to “Advice on conducting wilderness evaluations”
- How to move from evaluation -> analysis and developed alternatives from the high quality results + feedback received after sharing evaluation results + preparation of wilderness appendix and guidelines for it

**3:45- 4:30:** Small group discussions around the following two topics - each group will have a facilitator and note-taker.

Location: **Building A – both rooms**

- Group 1: How are forests identifying "key ecosystem characteristics" and "ecosystem integrity" **Regis Terney, Courtney Schultz** facilitate
- Group 2: Approaches to identifying and assessing contributions to “key ecosystem services” and "social and economic sustainability"? **Bill Connelly, Debbie McGlothlin** facilitate

### **Recap & Close-Out from Day 2**

Location: **Building B - Sweetgrass Room**

Facilitator: Courtney Schultz, with assistance from Linda, Mo, Bill and Jessica

Note-Taker: CSU

**4:30 – 5:00:** *With a focus on the assessment phase*, summarize the following with the group:

- What did we learn? (lessons learned<sup>1</sup>)
- What would we do again or what would we do differently? (best practices<sup>2</sup>)
- What are possible innovations and tools we could implement based on what we learned?

Thursday, May 19

### **Welcome Back & Overview of Day**

Location: **Building B - Sweetgrass Room**

Facilitator: Bruce Meneghin

Note-Taker: CSU

**8:00 – 8:20:** Quick review of Day 2, adjustments needed, and line out Day 3

### **Building Integrated Plan Components**

**Objectives:** Efficiently collect ongoing efforts around what we are required to do (key rule and directive requirements). What worked well? What were the challenges? What would we do differently in the future?

Location: **Building B - Sweetgrass Room**

Topic Lead: Bruce Meneghin

Facilitator: Bruce leads, Peri assists

Note-Taker: CSU

**8:20 – 10:00: Small group discussions**

**Group 1 :** Integrating fire delineations into plan (**Don Yasuda**)

**Group 2:** Plan components for sustainable recreation (**Lis Novak**)

**Group 3:** Plan components that contribute to social and economic sustainability (**Susan Winter**)

**Group 4:** Standards and guidelines vs. Desired conditions for wildlife (**Mary Morrison**)

**Break**

### **Objection Process**

**Objectives:** Efficiently collect ongoing efforts around what we are required to do (key rule and directive requirements). What worked well? What were the challenges? What would we do differently in the future?

Location: **Building B - Sweetgrass Room**

Topic Leads: **Peri and Debbie** Facilitator: **Bruce**

Note-Taker: **CSU**

**10:15 – 11:00** Plan-level objection process: key messages and lessons learned

### **Broad Scale Monitoring**

**Objectives:** Efficiently collect ongoing efforts around what we are required to do (key rule and directive requirements). What worked well? What were the challenges? What would we do differently in the future?

Location: **Building B - Sweetgrass Room**

Topic Lead: Courtney Schultz

Facilitator: Peri leads, Debbie assists Note-Taker: CSU

**11:00 – 11:30** R2/R3 coordinated effort on broad scale monitoring – Courtney Schultz

Lunch (11:30 – 12:30)

Demonstration of Map Projection system for public meetings by Place Matters – Building A

**12:30 – 2:30 World Cafe**

Facilitators: Bruce, Peri and Debbie as needed

Topic leads: Assigned as needed, based on subject matter

NEPA & Agency/Tribal Consultations

- How is tribal input integrated into the plan development especially those aspects that are in conflict with other public input?
- Addressing public comment on the DEIS = methods of organizing, depth of response, when is it critical (threshold) to address comments through changes in the analysis? How long does this stage take?
- Planning Rule and Programmatic NEPA-Considerations - Discussion to assist in awareness of what is to be expected to meet the hard look requirements
- Management areas and geographic areas and how they are used across different plans. What is the best utility of these tools or areas?

### **Organizational Learning and Adaptive Management**

**2:30 – 3:30** Small group discussions on how we will monitor our planning performance, and how we will learn from each other. (Courtney Schultz, Mo Essen, Bruce Meneghin, Tracy Tophooven)

- What types of training have you received or given?
- How do we disseminate the results of this EVENT?
- What are the biggest gaps in ID Team knowledge? How do we fill those gaps?

### **Recap & Close-Out of Day 3**

Location: **Building B - Sweetgrass Room**

Facilitator: Courtney, with assistance from Bruce, Peri, Debbie, and other topics leads from Day 3

Note-Taker: CSU

**3:30– 4:00:** For each of the topics covered today, summarize the following with the group:

- What did we learn? (lessons learned<sup>1</sup>)
- What would we do again or what would we do differently? (best practices<sup>2</sup>)
- What are possible innovations and tools we could implement based on what we learned?

Discuss next steps

### **Workshop Review**

Location: **Building B - Sweetgrass Room**

Facilitator: Courtney

Note-Taker: CSU

**4:00 – 4:45:** Discuss overall impressions of the workshop, +/- ▲ list, etc.

Discuss next steps

## APPENDIX B

### Interview Guide

#### Introduction:

1. What is your current position?
2. What is your level of knowledge of forest planning and past experience?

#### Innovations:

1. What have been your most valuable innovations thus far in your planning process?
  - a. How did you come up with and develop these ideas?
  - b. Is there anything you would change?
  - c. Could this translate to other forests and across the forest system?
2. What factors do you think supported innovation? Did you benefit from detailers? Contractors? Mentors? Other ways to identify innovations?
3. What are some major challenges you faced in the planning process?
  - a. Are there any resources that would help to overcome these challenges?
  - b. Were there any specific barriers to your innovations?

#### Pre-assessment: We are interested in understanding what needs to occur during pre-assessment.

1. Did you undertake any activities during pre-assessment that were valuable?
2. Did you run into any gaps or obstacles during assessment that could have been solved with more upfront work?
3. What would you do during pre-assessment if you could do it all over again?
4. Review if needed: What are the critical activities that should be included in a pre-assessment phase for all forests?

#### Programmatic NEPA

1. Did your region provide any specific tools or guidance to help you keep EIS work focused on the programmatic level?
  - a. What were specific materials or approaches?
  - b. How could these be improved?
  - c. (if at the forest level) How were these materials used in your planning process and were they helpful?
2. Do you have any other lessons learned or guidance you would share about programmatic NEPA?

#### Learning and Knowledge Sharing:

1. When preparing to begin revisions, is there adequate guidance available to start the process?
  - a. Where do you get the information?
  - b. Are there networks available for planning team members to communicate?
  - c. Have you sought guidance from outside your forest or region?
  - d. Are there any gaps in information?

2. In what ways does the agency capture and share lessons learned?
  - a. Did you get valuable information from contractors or detailers? SharePoint sites, etc.?
  - b. What has been your interaction with other planners to share information?
  - c. Are there other ways the agency supports sharing of lessons learned?
  - d. What more is needed in this area? Are lessons learned being both captured and shared?
3. Is there currently enough guidance for planners to be successful throughout this process?
4. Do you feel Forest Service employees understand the intent of the rule?
5. Does the Forest Service support or reward innovative approaches or ideas?

Mentoring: We are interested in understanding what a mentoring program might look like.

1. Would a mentoring program be useful?
2. Are there any individuals or groups within the Forest Service you have found to be a particularly helpful mentor?
3. What would you like to see in a mentorship program?

Closing:

1. Do you have any other suggestions for leadership at the RO or WO levels and how forest planning could be better supported?
2. Any closing thoughts before we conclude?

## APPENDIX C

### Coding Methodology

All recorded interviews were transcribed and analyzed using a process of open coding (Creswell 2008). Initial codes were linked to research objectives identified by the U.S. Forest Service and utilized for both analyzing participant observation data from the 2016 Planners' Meeting and follow-up interviews. After the initial coding, I conducted axial coding and additional codes were created during data analysis where I used constant comparison to identify key themes across interviews. The second phase of coding provided additional insight into our research objectives emerging from the data, including identifying what types of organizational learning are occurring across the Forest Service, determining what structures and processes affect organizational learning, and identifying what top-down and bottom-up factors that we know affect policy implementation also affect organizational learning. I then further investigated these findings based on the patterns discovered through the process of coding. I have included my explanation for codes in the tables below. The same codes were used to analyze the follow-up interviews with planning team members, and multiple codes often applied to single quotations. Table 2 and 3 below provide examples of the codes used during analysis of this research as well as an explanation of each category's intent.

<b>Table 2: Initial transcript codes and associated explanations</b>	
<b>Codes</b>	<b>Explanation of Use in Transcripts</b>
<b>Innovations</b> <ul style="list-style-type: none"> <li>• Examples</li> <li>• Facilitators</li> <li>• Barriers</li> </ul>	Identifying innovations, and facilitators and barriers planners experience in utilizing innovative approaches to planning.
<b>Pre-assessment</b> <ul style="list-style-type: none"> <li>• Lessons learned</li> <li>• Best practices</li> </ul>	Identifying the key activities planners view as necessary for preparing for plan revision through lessons learned and best practices.
<b>Programmatic NEPA</b> <ul style="list-style-type: none"> <li>• Sources of information</li> <li>• Lessons learned</li> <li>• Best practices</li> <li>• Recommendation</li> </ul>	How the forest or regions approached conducting programmatic NEPA processes.
<b>Mentoring</b>	Opinions on whether a mentorship program for plan revision would be a useful tool and examples of what such a program might look like in operation.
<b>Learning</b> <ul style="list-style-type: none"> <li>• Instances of learning</li> <li>• Sources of information</li> <li>• Facilitators</li> <li>• Barriers</li> </ul>	Where learning is occurring, what sources of information are being used during revision, the facilitators and barriers that exist to learning and knowledge sharing.
<b>Recommendations</b> <ul style="list-style-type: none"> <li>• Moving forward</li> </ul>	Suggestions that planning team members had for leadership to support plan revision.
<b>Table 3: Axial transcript codes and associated explanations</b>	
<b>Codes</b>	<b>Explanation of Use in Transcripts</b>
<b>Learning</b> <ul style="list-style-type: none"> <li>• Social learning</li> <li>• Single-loop learning</li> <li>• Double-loop learning</li> </ul>	Classifying the types of learning that occurred.
<b>Structural factors</b>	Rules and organizational resources used to meet agency objectives.
<b>Cultural factors</b>	The shared norms and collective understanding experienced by agency staff.
<b>Top-down processes</b>	Factors related to policy and guidance from leadership, such as the requirements under the planning rule and meeting legally mandated objectives.
<b>Bottom-up processes</b>	Factors related to interpreting and implementing successful programs such as the role of local agents, local conditions, public support, and the commitment and knowledge of implementing officials.